

# HK Film Capacitor Limited

## About HK Film Capacitor Limited :

We specialize in designing and manufacturing **Power Electronic Capacitors** for AC and DC voltage power electronic applications. Quality is our prime consideration.

Our engineers design various types of film foil capacitors to suit for various applications. Their jobs not only concentrate on the capacitor electrical characteristic performance but also mechanical, mounting and electrical connection need. Different connections and mounting options are provided to increase your design flexibility.

Most of our Power Electronic Capacitors can meet high RMS Current and high Voltage requirement even at 105C.

**Our mission and goal** is to achieve customer satisfaction in terms of stable quality, design flexibility, lead time reliability and competitive price.



## Dry Construction : Epoxy Resin with Plastic Enclosure

### Advantage : Plastic Enclosure vs Metal Enclosure case :

- High Insulation Resistance
- High Insulation Voltage
- Ability to withstand vibration
- Flame Retardant - plastic enclosure and epoxy resin meet UL94-V0 rating
- Plastic Case will not oxidation and against corrosion by acid and alkaline
- Metal Enclosure Capacitors cannot withstand strong continuously vibration environment.
- Metal Enclosure Capacitors cannot withstand temperature higher than 85C. Most Metal Enclosure Capacitors can only be rated at 70C or even lower. Most of our plastic enclosure capacitors can be worked at 105C.
- Smaller capacitor size and lighter weight
- Longer Service Life
- For more details, please visit following link.

[http://www.filmcapacitor-st.com/HKFC\\_Power\\_Capacitors.htm#Advantage\\_of\\_Plastic\\_Enclosure\\_Capacitors](http://www.filmcapacitor-st.com/HKFC_Power_Capacitors.htm#Advantage_of_Plastic_Enclosure_Capacitors)

## Electrical Characteristics :

- Design Capacitor according to your application need and meet your Capacitance, Voltage, Testing Voltage, Dissipation Factor, ESR, Size, RMS Current, Discharge Current Capacity, Operating Temperature, Operating Lifetime, Capacitor Mounting & Connection requirement.
- Support Temperature up to 105C requirement.

## 105C Power Electronic Polypropylene Film Capacitors :

- It is important for Power Electronic Capacitors can withstand higher temperature.
- When capacitor current is increased, capacitor internal temperature will increase too.
- Higher temperature range, means the capacitors can be worked longer and more stable.
- Most of our capacitors can be worked at 105C.

## Electrical Connections :

Capacitors with different electrical connections and mounting options so as to increase your design flexibility.

- Terminations can be solder tags, single or double quick terminal, Stiff wire, Flexible wire, Twin-core cable, Tin plated copper lead wire (Box type only), heavy duty screw nuts and bolts
- Stiff wire, Flexible wire : UL #1015, 105C, AWG# 16, 18, 20
- Wire and Cable with receptacle, terminal or even power connectors
- Terminal type : Ring, Y or Pin terminal with various size
- Screw Bolt and Screw Nut with various size for heavy duty requirement.
- for more details, please refer to the Capacitor Package Configuration selection in our website.

## Other Options :

Thermocouple can be integrated into the capacitor body.

Output temperature signal can be used as one of the reference signals in the circuit and trigger other function

## Brand :

HKFC

HK Film Capacitor

# HKFC : Power Electronic Capacitors :

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## 1.1.1 GTO Snubber Capacitors :

STG series

### Applications :

GTO Snubbing and protection, Thyristor controlled rectifier circuits, High Current Snubber circuit, damping of voltage spikes on GTO-Thyristor.  
Traction application and Static Drive, Pulsed Lasers, Medium Frequency tuning  
High ripple current and high dv/dt application.

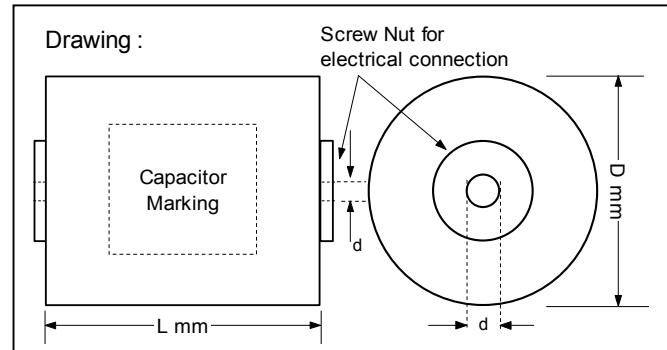


### Properties :

Very Low ESR, medium frequency range, High RMS Current Rating, High Pulse Current Rating dv/dt, High Voltage Capabilities, Temperature up to 105C, High Insulation Resistance and Flame Retardant Construction

### Electrical Characteristics :

Rated Voltage : 400Vdc - 6800Vdc / 160Vrms - 2400Vrms  
Capacitance range : 0.15 - 220uF ( can be customized )  
Ripple RMS Current up to 85A



### Other Electrical Characteristics :

Capacitance Tolerance : +/-5%; +/-10%

Operating Temperature : -25C - +70C

-25 - +85C

-40C - +105C ( depends on capacitor raw materials )

**Testing Voltage** Terminal to Terminal : Vsurge 10 sec ( can be customized )

**Testing Voltage** Terminal to Case : 4500Vac at 105C 1min.

Support higher voltage requirement

**Insulation Resistance** : 250Vdc +25C >= 300,000Mohm

250Vdc +85C >= 50,000Mohm

250Vdc +105C >= 5,000Mohm

Reference Standard : IEC61071

### Specifications and Size :

**STG-A Vndc = 400V / Vrms = 160Vac / Vpeak = 230V 10s / Vsurge = 650V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms max. 70C	Irms at max. temperature 85C	d (mm)
STG-A256J400D	25	65	45	2.1	25	40	1000	42	19	M6
STG-A306J400D	30	65	45	1.9	25	40	1200	47	21	M6
STG-A336J400D	33	65	58	2.2	38	25	825	45	21	M6
STG-A506J400D	50	90	58	1.8	38	25	1250	60	27	M8
STG-A756J400D	75	90	58	1.5	38	25	1875	70	33	M8
STG-A107J400D	100	90	58	1.6	38	25	2500	70	31	M8
STG-A117J400D	110	90	58	1.6	38	25	2750	70	34	M8
STG-A227J400D	220	90	96	1.9	80	12	2640	70	31	M8

**STG-A Vndc = 600V / Vrms = 220Vac / Vpeak = 310V 10s / Vsurge = 900V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms max. 70C	Irms at max. temperature 85C	d (mm)
STG-A126J600D	12	65	45	2.2	25	60	720	38	20	M6
STG-A156J600D	15	65	45	2.0	25	60	900	44	25	M6
STG-A226J600D	22	90	45	1.7	25	60	1320	52	37	M6
STG-A256J600D	25	90	45	1.6	25	60	1500	55	42	M8
STG-A336J600D	33	90	58	1.7	38	50	1650	47	25	M8
STG-A506J600D	50	90	58	1.6	38	50	2500	62	33	M8
STG-A107J600D	100	90	96	2.5	80	22	2200	57	30	M8

**STG-A Vndc = 700V / Vrms = 250Vac / Vpeak = 350V 10s / Vsurge = 1100V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms max. 70C	Irms max. 85C	Irms max. 105C	D (mm)
STG-A755J700D	7.5	65	45	2.2	25	80	600	35	26	19	M6
STG-A106J700D	10	65	45	2.0	25	80	800	44	33	24	M6
STG-A156J700D	15	90	45	1.6	25	80	1200	53	40	29	M6
STG-A206J700D	20	90	58	1.7	38	60	1200	46	35	25	M6
STG-A256J700D	25	90	58	1.6	38	60	1500	58	43	32	M8
STG-A336J700D	33	90	58	1.4	38	60	1980	62	47	34	M8
STG-A506J700D	50	90	96	2.6	80	25	1250	48	36	26	M8

For 105C, other Voltage and Current requirement, please contact our sales colleagues.

**STG-01A Vndc = 850V / Vrms = 320Vac / Vpeak = 450V 10s / Vsurge = 1300V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 45C	Irms 55C	Irms 70C	Irms max. 85C	d (mm)
STG-01A205J850D	2	65	50	1.5	11	800	1600	38	30	20	12	M6
STG-01A225J850D	2.2	65	50	1.5	11	800	1760	40	35	23	13	M6
STG-01A255J850D	2.5	65	50	1.2	11	800	2000	45	38	25	15	M6
STG-01A305J850D	3	65	50	1.2	11	800	2400	55	45	30	18	M6
STG-01A405J850D	4	65	50	1.0	11	800	3200	70	60	40	25	M6
STG-01A505J850D	5	65	50	1.0	11	800	4000	80	70	50	30	M6
STG-01A605J850D	6	65	62	1.0	15	440	2640	60	50	35	20	M6
STG-01A805J850D	8	65	62	0.8	15	440	3520	80	70	45	25	M6

**STG-A Vndc = 850V / Vrms = 330Vac / Vpeak = 470V 10s / Vsurge = 1300V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms max. 70C	Irms max. 85C	Irms max. 105C	d (mm)
STG-A605J850D	6	65	51	2.2	25	100	600	34	26	21	M6
STG-A805J850D	8	90	51	1.8	25	100	800	42	32	26	M6
STG-A106J850D	10	90	51	1.7	25	100	1000	50	40	33	M6
STG-A156J850D	15	90	62	1.7	38	80	1200	50	35	27	M6
STG-A206J850D	20	90	62	1.4	38	80	1600	50	47	36	M6
STG-A256J850D	25	90	62	1.6	38	80	2000	50	48	35	M6
STG-A606J850D	60	90	92	2.5	80	30	1800	55	41	30	M6

**STG-01A Vndc = 900V / Vrms = 280Vac / Vpeak = 400V 10s / Vsurge = 1440V 10s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STG-01A225J900D	2.2	65	47	2.2	20	720	1584	35	11	7	M6
STG-01A335J900D	3.3	65	59	2.4	20	400	1320	30	9	6	M6
STG-01A475J900D	4.7	65	59	2.3	20	400	1880	35	11	7	M6
STG-01A685J900D	6.8	65	67	2.0	20	300	2040	40	12	8	M6
STG-01A106J900D	10	65	67	1.9	20	300	3000	45	14	9	M8
STG-01A156J900D	15	65	77	1.7	20	250	3750	50	15	10	M8
STG-01A226J900D	22	90	165	2.0	35	250	5500	60	24	15	M8
STG-01A336J900D	33	90	225	2.0	23	250	8250	80	32	20	M8
STG-01A406J900D	40	90	225	1.7	23	250	10000	80	32	20	M8
STG-01A506J900D	50	90	275	1.9	18	250	12500	80	32	20	M8
STG-01A606J900D	60	90	275	1.7	18	250	15000	80	32	20	M8

**STG-01A Vndc = 1000V / Vrms = 300Vac / Vpeak = 450V 10s / Vsurge = 1600V 10s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STG-01A225J1000D	2.2	65	47	2.2	20	880	1936	35	11	7	M6
STG-01A335J1000D	3.3	65	59	2.4	20	490	1617	30	9	6	M6
STG-01A475J1000D	4.7	65	59	2.0	20	490	2303	40	12	8	M6
STG-01A685J1000D	6.8	65	67	2.0	20	400	2720	40	12	8	M6
STG-01A755J1000D	7.5	65	67	1.7	20	400	3000	45	14	9	M8
STG-01A106J1000D	10	65	77	1.7	20	300	3000	45	14	9	M8
STG-01A126J1000D	12	90	165	1.9	29	300	3600	50	20	13	M8
STG-01A156J1000D	15	90	165	1.9	29	300	4500	60	24	15	M8
STG-01A226J1000D	22	90	165	1.7	35	300	6600	70	28	18	M8
STG-01A256J1000D	25	90	225	1.9	23	300	7500	80	32	20	M8
STG-01A306J1000D	30	90	225	1.7	23	300	9000	80	32	20	M8
STG-01A336J1000D	33	90	225	1.7	23	300	9900	80	32	20	M8
STG-01A356J1000D	35	90	275	1.9	18	300	10500	80	32	20	M8
STG-01A406J1000D	40	90	275	1.7	18	300	12000	80	32	20	M8

**STG-01A Vndc = 1200V / Vrms = 390Vac / Vpeak = 550V 10s / Vsurge = 1800V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 45C	Irms 55C	Irms 70C	Irms max. 85C	d (mm)
STG-01A105J1200D	1	65	50	1.6	11	1200	1200	30	25	16.5	10	M6
STG-01A155J1200D	1.5	65	50	1.5	11	1200	1800	45	35	25	15	M6
STG-01A205J1200D	2	65	50	1.2	11	1200	2400	60	50	33	18	M6
STG-01A225J1200D	2.2	65	62	1.2	11	1200	2640	65	55	35	20	M6
STG-01A255J1200D	2.5	65	62	1.2	15	620	1550	70	35	23	13	M6
STG-01A305J1200D	3	65	62	1.0	15	620	1860	50	40	27	16	M6
STG-01A355J1200D	3.5	65	62	1.0	15	620	2170	55	45	30	18	M6
STG-01A405J1200D	4	65	62	0.8	15	620	2480	65	55	35	22	M6

For 105C, other Voltage and Current requirement, please contact our sales colleagues.

**STG-A Vndc = 1200V / Vrms = 440Vac / Vpeak = 630V 10s / Vsurge = 1800V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms at max. temperature 105C	d (mm)
STG-A255J1200D	2.5	65	58	1.8	25	300	750	45	40	24	M8
STG-A305J1200D	3	65	58	1.7	25	300	900	50	46	27	M8
STG-A505J1200D	5	90	58	1.6	25	300	1500	70	53	37	M8
STG-A605J1200D	6	90	58	1.5	25	300	1800	70	64	45	M8
STG-A805J1200D	8	90	65	1.4	27	250	2000	65	48	34	M8
STG-A106J1200D	10	90	65	1.4	27	250	2500	70	45	32	M8
STG-A126J1200D	12	90	65	1.3	27	250	3000	70	54	41	M8
STG-A206J1200D	20	90	92	1.3	65	160	3200	70	52	36	M8
STG-A256J1200D	25	90	92	1.6	65	160	4000	70	56	40	M8

**STG-01A Vndc = 1300V / Vrms = 400Vac / Vpeak = 580V 10s / Vsurge = 2100V 10s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STG-01A225J1300D	2.2	65	59	2.3	20	680	1496	30	9	6	M6
STG-01A335J1300D	3.3	65	67	1.7	20	520	1716	40	12	8	M6
STG-01A475J1300D	4.7	65	67	1.8	20	520	2444	45	14	9	M8
STG-01A685J1300D	6.8	90	165	2.2	25	520	3536	50	20	13	M8
STG-01A755J1300D	7.5	90	165	1.9	29	520	3900	50	20	13	M8
STG-01A106J1300D	10	90	165	1.9	35	400	4000	55	22	14	M8
STG-01A126J1300D	12	90	165	1.7	35	400	4800	60	24	15	M8
STG-01A156J1300D	15	90	225	1.9	23	400	6000	70	28	18	M8
STG-01A206J1300D	20	90	275	1.9	18	400	8000	80	32	20	M8
STG-01A226J1300D	22	90	275	1.7	18	400	8800	80	32	20	M8
STG-01A256J1300D	25	90	275	1.7	18	400	10000	80	32	20	M8

**STG-A Vndc = 1400V / Vrms = 500Vac / Vpeak = 700V 10s / Vsurge = 2100V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 55C	Irms 70C	Irms 85C	Irms max. 105C	d (mm)
STG-A125J1400D	1.2	65	53	2.1	8.5	530	636	22	18	16	7.5	M6
STG-A155J1400D	1.5	65	53	2.0	8.5	530	795	27	23	19	9	M6
STG-A225J1400D	2.2	65	53	2.0	8.5	530	1166	33	28	23	11	M6
STG-A255J1400D	2.5	65	53	1.8	8.5	530	1325	37	32	27	12	M6
STG-A305J1400D	3	65	53	1.8	8.5	530	1590	37	32	25	12	M6
STG-A405J1400D	4	65	53	1.5	8.5	530	2120	45	40	33	16	M6
STG-A505J1400D	5	90	53	1.4	8.5	530	2650	60	50	40	20	M6
STG-A605J1400D	6	90	53	1.2	8.5	530	3180	70	60	50	25	M8
STG-A705J1400D	7	90	53	1.1	8.5	530	3710	70	60	50	25	M8
STG-A805J1400D	8	90	53	0.9	8.5	530	4240	70	60	50	25	M8

**STG-02A Vndc = 1500V / Vrms = 300Vac / Vpeak = 430V 10s / Vsurge = 2250V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms at max. temperature 70C	d (mm)
STG-02A254J1500D	0.25	65	57	2.1	16	2400	600	40	M8
STG-02A304J1500D	0.3	65	57	1.6	16	2400	720	40	M8
STG-02A504J1500D	0.5	65	57	1.4	16	2400	1200	45	M8
STG-02A684J1500D	0.68	65	57	1.4	16	2400	1632	50	M8
STG-02A105J1500D	1	65	57	1.3	16	2400	2400	50	M8
STG-02A155J1500D	1.5	65	57	1.3	16	2400	3600	60	M8
STG-02A205J1500D	2	90	57	1.2	16	2400	4800	75	M8
STG-02A255J1500D	2.5	90	57	1.1	16	2400	6000	85	M8

**STG-01A Vndc = 1500V / Vrms = 450Vac / Vpeak = 640V 10s / Vsurge = 2400V 10s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STG-01A225J1500D	2.2	65	67	1.9	20	660	1452	35	11	7	M6
STG-01A335J1500D	3.3	65	67	1.7	20	660	2178	40	12	8	M6
STG-01A405J1500D	4	65	77	1.7	20	500	2000	40	12	8	M6
STG-01A455J1500D	4.5	65	77	1.7	20	500	2250	45	14	9	M8
STG-01A685J1500D	6.8	90	165	1.7	29	500	3400	55	22	14	M8
STG-01A755J1500D	7.5	90	165	1.8	35	500	3750	55	22	14	M8
STG-01A106J1500D	10	90	225	1.8	23	500	5000	70	28	18	M8
STG-01A126J1500D	12	90	225	1.7	23	500	6000	70	28	18	M8
STG-01A156J1500D	15	90	275	1.8	18	500	7500	80	32	20	M8
STG-01A186J1500D	18	90	275	1.7	18	500	9000	80	32	20	M8

For 105C, other Voltage and Current requirement, please contact our sales colleagues.

**STG-A Vndc = 1500V / Vrms = 500Vac / Vpeak = 700V 10s / Vsurge = 2300V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms at max. temperature 105C	d (mm)
STG-A205J1500D	2	65	58	1.6	25	450	900	37	28	20	M6
STG-A305J1500D	3	65	58	1.5	25	450	1350	47	33	26	M6
STG-A405J1500D	4	90	58	1.3	25	450	1800	63	44	35	M8
STG-A505J1500D	5	90	65	1.3	27	300	1500	70	49	39	M8
STG-A755J1500D	7.5	90	65	1.3	27	300	2250	75	49	38	M8
STG-A156J1500D	15	90	92	1.8	65	150	2250	65	42	33	M8

**STG-01A Vndc = 1600V / Vrms = 600Vac / Vpeak = 850V 10s / Vsurge = 2400V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 45C	Irms 55C	Irms 70C	Irms max. 85C	d (mm)
STG-01A504J3500D	0.5	45	116	8	30	400	200	10	17	11	6	M6
STG-01A684J1600D	0.68	65	50	1.6	11	1500	1020	25	21	14	8	M6
STG-01A105J1600D	1	65	50	1.5	11	1500	1500	35	30	20	12	M6
STG-01A125J1600D	1.2	65	50	1.5	11	1500	1800	45	35	25	15	M6
STG-01A155J1600D	1.5	65	50	1.5	11	1500	2250	55	45	30	18	M6
STG-01A205J1600D	2	65	62	1.2	15	840	1680	40	35	23	13	M6
STG-01A225J1600D	2.2	65	62	1.2	15	840	1848	45	35	25	15	M6
STG-01A255J1600D	2.5	65	62	1.0	15	840	2100	50	40	27	16	M6

**STG-01A Vndc = 1700V / Vrms = 530Vac / Vpeak = 750V 10s / Vsurge = 2720V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STG-01A225K1700D	2.2	65	80	1.2	25	1200	2640	50	37	25	M6
STG-01A255K1700D	2.5	65	105	1.3	35	680	1700	45	33	22	M6
STG-01A305K1700D	3	65	105	1.5	35	680	2040	45	33	22	M6
STG-01A405K1700D	4	65	120	1.5	40	520	2080	45	33	22	M6
STG-01A505K1700D	5	65	140	1.5	50	400	2000	45	33	22	M6
STG-01A605K1700D	6	65	140	1.3	50	400	2400	55	40	26	M6
STG-01A755K1700D	7.5	90	140	1.1	50	400	3000	60	45	30	M8

**STG-A Vndc = 1700V / Vrms = 650Vac / Vpeak = 920V 10s / Vsurge = 2600V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 55C	Irms 70C	Irms 85C	Irms max. 105C	d (mm)
STG-A125J1700D	1.25	65	53	2.1	8.5	845	1056	22	18	16	7.5	M6
STG-A155J1700D	1.5	65	53	1.9	8.5	845	1268	27	23	19	9	M6
STG-A205J1700D	2	65	53	1.9	8.5	845	1690	30	25	21	10	M6
STG-A225J1700D	2.2	65	53	1.7	8.5	845	1859	33	28	23	11.5	M6
STG-A255J1700D	2.5	65	53	1.5	8.5	845	2113	37	32	27	12	M6
STG-A305J1700D	3	65	53	1.3	8.5	845	2535	45	39	32	13	M6
STG-A405J1700D	4	90	53	1.1	8.5	845	3380	60	50	40	20	M6
STG-A505J1700D	5	90	53	1.0	8.5	845	4225	70	60	50	25	M8

**STG-02A Vndc = 1800V / Vrms = 350Vac / Vpeak = 500V 10s / Vsurge = 2700V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 55C	Irms 70C	Irms 85C	d (mm)
STG-02A254J1800D	0.25	65	57	2.1	16	3100	775	40			M8
STG-02A304J1800D	0.3	65	57	1.6	16	3100	930	40			M8
STG-02A504J1800D	0.5	65	57	1.5	16	3100	1550	45			M8
STG-02A684J1800D	0.68	65	57	1.6	16	3100	2108	50			M8
STG-02A105J1800D	1	65	57	1.4	16	3100	3100	55			M8
STG-02A155J1800D	1.5	90	57	1.3	16	3100	4650	60			M8
STG-02A205J1800D	2	90	57	1.2	16	3100	6200	75			M8

**STG-01A Vndc = 1800V / Vrms = 540Vac / Vpeak = 760V 10s / Vsurge = 2900V 10s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STG-01A225J1800D	2.2	65	57	1.9	20	800	1760	35	11	7	M6
STG-01A335J1800D	3.3	90	165	2.5	29	800	2640	45	18	11	M8
STG-01A475J1800D	4.7	90	165	2.0	35	620	2914	45	18	11	M8
STG-01A685J1800D	6.8	90	225	2.0	23	620	4216	55	22	14	M8
STG-01A805J1800D	8	90	225	1.8	23	620	4960	55	22	14	M8
STG-01A106J1800D	10	90	275	1.8	18	620	6200	80	32	20	M8
STG-01A126J1800D	12	90	275	1.7	18	620	7440	80	32	20	M8

For 105C, other Voltage and Current requirement, please contact our sales colleagues.

**STG-A Vndc = 1800V / Vrms = 600Vac / Vpeak = 850V 10s / Vsurge = 2700V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 45C	Irms 55C	Irms 85C	Irms max. 105C	d (mm)
STG-A405J1800D	4	65	92	5.0	55	300	1200	25	18	12	8	M6
STG-A475J1800D	4.7	65	92	5.0	55	300	1410	30	20	15	10	M6
STG-A605J1800D	6	65	92	4.5	55	300	1800	35	25	17	12	M6
STG-A805J1800D	8	65	92	4.5	55	200	1600	40	30	20	14	M6
STG-A106J1800D	10	90	92	4.0	55	300	3000	55	40	30	20	M6
STG-A126J1800D	12	90	92	4.0	55	260	3120	65	50	35	25	M6
STG-A156J1800D	15	90	127	4.0	80	170	2550	50	35	25	17	M6
STG-A186J1800D	18	90	127	4.0	80	170	3060	55	45	30	21	M6
STG-A206J1800D	20	90	127	3.5	80	170	3400	60	50	33	24	M6
STG-A226J1800D	22	90	127	3.5	80	170	3740	60	50	35	25	M6

**STG-01A Vndc = 2000V / Vrms = 650Vac / Vpeak = 920V 10s / Vsurge = 3000V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 45C	Irms 55C	Irms 70C	Irms max. 85C	d (mm)
STG-01A504J2000D	0.5	65	50	1.6	11	1880	940	22	18	12	7	M6
STG-01A684J2000D	0.68	65	50	1.5	11	1880	1278	30	25	17	10	M6
STG-01A105J2000D	1	65	50	1.2	11	1880	1880	45	35	25	15	M6
STG-01A125J2000D	1.2	65	62	1.6	15	1040	1248	30	25	16	10	M6
STG-01A155J2000D	1.5	65	62	1.5	15	1040	1560	35	30	30	20	M6
STG-01A185J1800D	1.8	65	73	2.2	15	659	1186	36	37	25	15	M8

**STG-02A Vndc = 2100V / Vrms = 400Vac / Vpeak = 570V 10s / Vsurge = 3200V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms at max. temperature 70C	d (mm)
STG-02A254J2100D	0.25	65	57	2.1	16	3900	975	40	M8
STG-02A304J2100D	0.3	65	57	1.9	16	3900	1170	40	M8
STG-02A504J2100D	0.5	65	57	1.8	16	3900	1950	45	M8
STG-02A684J2100D	0.68	65	57	1.6	16	3900	2652	60	M8
STG-02A105J2100D	1	90	57	1.2	16	3900	3900	65	M8
STG-02A125J2100D	1.2	90	57	1.1	16	3900	4680	70	M8

**STG-A Vndc = 2100V / Vrms = 750Vac / Vpeak = 1100V 10s / Vsurge = 3200V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 55C	Irms 70C	Irms 85C	Irms max. 105C	d (mm)
STG-A155J2100D	1.5	65	53	1.6	8.5	1120	1680	27	23	20	9	M6
STG-A205J2100D	2	65	53	1.5	8.5	1120	2240	35	30	25	12	M6
STG-A225J2100D	2.2	90	53	1.5	8.5	1120	2464	35	30	25	12	M6
STG-A255J2100D	2.5	90	53	1.3	8.5	1120	2800	45	39	32	13	M6
STG-A305J2100D	3	90	53	1.1	8.5	1120	3360	50	40	30	15	M6
STG-A355J2100D	3.5	90	53	1.0	8.5	1120	3920	50	40	30	15	M6

**STG-02A Vndc = 2500V / Vrms = 470Vac / Vpeak = 670V 10s / Vsurge = 3750V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms at max. temperature 70C	d (mm)
STG-02A254J2500D	0.25	65	57	2.2	16	5200	1300	40	M8
STG-02A304J2500D	0.3	65	57	2.0	16	5200	1560	40	M8
STG-02A504J2500D	0.5	65	57	1.8	16	5200	2600	50	M8
STG-02A684J2500D	0.68	90	57	1.4	16	5200	3536	60	M8

**STG-01A Vndc = 2500V / Vrms = 700Vac / Vpeak = 1070V 10s / Vsurge = 4000V 10s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STG-01A254J2500D	0.25	65	47	2.5	20	2650	662.5	20	6.0	4.0	M6
STG-01A504J2500D	0.5	65	59	2.4	20	1450	725	20	6.0	4.0	M6
STG-01A105J2500D	1	65	67	1.8	20	1100	1100	25	8.8	5.0	M6
STG-01A155J2500D	1.5	65	77	1.7	20	1100	1650	30	9.0	6.0	M6
STG-01A205J2500D	2	90	165	1.9	29	1100	2200	40	16.0	10.0	M6
STG-01A225J2500D	2.2	90	165	1.9	35	880	1936	40	16.0	10.0	M6
STG-01A335J2500D	3.3	90	225	1.9	23	880	2904	55	22.0	13.8	M8
STG-01A405J2500D	4	90	225	1.8	23	880	3520	55	22.0	13.8	M8
STG-01A505J2500D	5	90	275	1.8	18	880	4400	70	28.0	17.5	M8
STG-01A605J2500D	6	90	275	1.7	18	880	5280	70	28.0	17.5	M8

For 105C, other Voltage and Current requirement, please contact our sales colleagues.

**STG-A Vndc = 2500V / Vrms = 900Vac / Vpeak = 1270V 10s / Vsurge = 3800V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 45C	Irms 55C	Irms 85C	Irms max. 105C	d (mm)
STG-A225J2500D	2.2	65	92	5.0	55	530	1166	25	20	15	10	M6
STG-A335J2500D	3.3	65	92	4.5	55	530	1749	35	25	20	15	M6
STG-A475J2500D	4.7	90	92	4.0	55	530	2491	50	40	30	20	M6
STG-A685J2500D	6.8	90	92	4.0	55	530	3604	70	55	40	30	M6
STG-A805J2500D	8	90	127	4.0	80	300	2400	48	40	30	20	M6
STG-A106J2500D	10	90	127	3.5	80	300	3000	60	50	35	25	M6
STG-A126J2500D	12	90	127	3.5	80	300	3600	70	55	40	30	M6

**STG-A Vndc = 2600V / Vrms = 1000Vac / Vpeak = 1450V 10s / Vsurge = 3900V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 55C	Irms 70C	Irms 85C	Irms max. 105C	d (mm)
STG-A1755J2600D	1.75	65	81	2.5	11	1280	2240	30	25	21	10	M6
STG-A205J2600D	2	65	81	2.2	11	1280	2560	34	29	24	11.5	M6
STG-A225J2600D	2.2	65	81	2.2	11	1280	2816	36	30	25	12	M6
STG-A305J2600D	3	65	122	2.0	20	740	2220	36	30	25	12	M6
STG-A405J2600D	4	65	122	2.0	20	740	2960	40	34	28	13	M6
STG-A505J2600D	5	90	122	1.9	20	740	3700	45	40	35	16	M6
STG-A605J2600D	6	90	122	1.8	20	740	4440	55	50	40	20	M6
STG-A705J2600D	7	90	122	1.6	20	740	5180	70	60	50	25	M8
STG-A805J2600D	8	90	122	1.6	20	740	5920	70	60	50	25	M8

**STG-01A Vndc = 2700V / Vrms = 770Vac / Vpeak = 1100V 10s / Vsurge = 4350V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STG-01A205K2700D	2	65	150	1.6	50	1000	2000	35	26	17	M6
STG-01A225K2700D	2.2	65	150	1.3	50	1000	2200	35	26	17	M6
STG-01A255K2700D	2.5	65	173	1.6	60	800	2000	35	26	17	M6
STG-01A335K2700D	3.3	65	205	1.5	75	600	1980	35	26	17	M6
STG-01A405K2700D	4	65	205	1.3	75	600	2400	40	30	20	M6
STG-01A455K2700D	4.5	90	205	1.2	75	600	2700	45	33	21	M6
STG-01A505K2700D	5	90	205	1.1	75	600	3000	50	37	25	M8

**STG-02A Vndc = 3000V / Vrms = 550Vac / Vpeak = 780V 10s / Vsurge = 4500V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms at max. temperature 70C	d (mm)
STG-02A254J3000D	0.25	65	57	2.2	<=16	6500	1625	40	M8
STG-02A304J3000D	0.3	65	57	2.0	<=16	6500	1950	40	M8
STG-02A504J3000D	0.5	90	57	1.8	<=16	6500	3250	50	M8
STG-02A684J3000D	0.68	90	57	1.3	<=16	6500	4420	65	M8

**STG-01A Vndc = 3000V / Vrms = 700Vac / Vpeak = 1000V 10s / Vsurge = 4500V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 45C	Irms 55C	Irms 70C	Irms max. 85C	d (mm)
STG-01A224J3000D	0.22	65	50	2.0	11	2700	594	15	12	8	5	M6
STG-01A254J3000D	0.25	65	50	1.6	11	2700	675	18	13	9	6	M6
STG-01A334J3000D	0.33	65	50	1.5	11	2700	891	23	18	12	7	M6
STG-01A504J3000D	0.5	65	50	1.2	11	2700	1350	35	28	18	11	M6

**STG-A Vndc = 3000V / Vrms = 1100Vac / Vpeak = 1600V 10s / Vsurge = 4300V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 45C	Irms 55C	Irms 85C	Irms max. 105C	d (mm)
STG-A225J3000D	2.2	65	92	4.0	55	1180	2596	35	30	25	11	M6
STG-A335J3000D	3.3	65	92	4.0	55	1180	3894	50	45	40	17	M6
STG-A475J3000D	4.7	65	92	4.0	80	676	3177	45	40	30	15	M6
STG-A685J3000D	6.8	90	127	3.5	80	676	2596	60	55	45	20	M6
STG-A805J3000D	8	90	127	3.5	80	676	5408	70	60	50	25	M6

For 105C, other Voltage and Current requirement, please contact our sales colleagues.

**STG-01A Vndc = 3100V / Vrms = 900Vac / Vpeak = 1300V 10s / Vsurge = 5000V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STG-01A155K3100D	1.5	65	150	1.6	50	1320	1980	30	22	15	M6
STG-01A205K3100D	2	65	173	1.5	60	1000	2000	30	22	15	M6
STG-01A225K3100D	2.2	65	173	1.3	60	1000	2200	30	22	15	M6
STG-01A255K3100D	2.5	65	173	1.2	60	1000	2500	35	26	17	M6
STG-01A305K3100D	3	65	205	1.3	75	800	2400	35	26	17	M6
STG-01A335K3100D	3.3	90	205	1.2	75	800	2640	35	26	17	M6
STG-01A355K3100D	3.5	90	205	1.1	75	800	2800	40	30	20	M6

**STG-A Vndc = 3100V / Vrms = 1100Vac / Vpeak = 1650V 10s / Vsurge = 4650V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 55C	Irms 70C	Irms 85C	Irms max. 105C	d (mm)
STG-A125J3100D	1.2	65	81	2.5	11	1750	2100	25	21	17	8	M6
STG-A155J3100D	1.5	65	81	2.3	11	1750	2625	29	25	20	10	M6
STG-A255J3100D	2.5	65	122	2.3	20	1000	2500	29	25	20	10	M6
STG-A335J3100D	3.3	65	122	2.2	20	1000	3300	35	30	25	13	M6
STG-A405J3100D	4	90	122	2.1	20	1000	4000	45	40	30	16	M6
STG-A475J3100D	4.7	90	122	1.8	20	1000	4700	55	45	40	18	M6

**STG-01A Vndc = 3200V / Vrms = 780Vac / Vpeak = 1100V 10s / Vsurge = 4800V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 55C	Irms 70C	Irms 85C	Irms max. 105C	d (mm)
STG-01A204K3500D	0.2	45	85	9	18	400	80	11	8	4.8	2.7	M6
STG-01A254K3200D	0.25	65	93	4.5	32	1450	362	17	12.5	7.5	4	M6
STG-01A334K3200D	0.33	65	93	4.0	32	1450	478	17	12.5	8	4.5	M6
STG-01A504K3200D	0.5	65	93	4.0	32	1450	725	25	20	12	6.5	M6
STG-01A754K3200D	0.75	65	93	3.5	32	1450	1087	40	30	18	10	M6
STG-01A105K3200D	1	65	115	3.5	40	800	800	30	23	13.5	7.5	M6
STG-01A155K3200D	1.5	65	131	3.0	45	650	975	35	26	16	8	M6

**STG-01A Vndc = 3500V / Vrms = 920Vac / Vpeak = 1300V 10s / Vsurge = 5300V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 55C	Irms 70C	Irms 85C	Irms max. 105C	d (mm)
STG-01A154K3500D	0.15	65	93	5.0	32	1900	285	16	12	7	4	M6
STG-01A254K3500D	0.25	65	93	5.0	32	1900	475	16	12.5	8	4	M6
STG-01A334K3500D	0.33	65	93	4.5	32	1900	627	25	20	12	7	M6
STG-01A504K3500D	0.5	65	93	4.0	32	1900	950	40	30	18	10	M6
STG-01A754K3500D	0.75	65	115	3.5	40	1100	825	30	23	13	7.5	M6
STG-01A105K3500D	1	65	133	3.5	45	825	825	35	26	16	8	M6

**STG-01A Vndc = 3600V / Vrms = 1100Vac / Vpeak = 1600V 10s / Vsurge = 5760V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STG-01A155K3600D	1.5	65	193	1.6	70	1355	2032.5	35	24	16	M6
STG-01A205K3600D	2	65	225	1.7	85	1000	2000	35	25	17	M6
STG-01A255K3600D	2.5	65	265	1.6	100	800	2000	35	24	16	M6
STG-01A305K3600D	3	65	265	1.3	100	800	2400	40	30	20	M6
STG-01A355K3600D	3.5	90	265	1.2	100	800	2800	45	35	23	M6
STG-01A405K3600D	4	90	265	1.1	100	800	3200	50	35	23	M8

**STG-A Vndc = 4000V / Vrms = 1400Vac / Vpeak = 2000V 10s / Vsurge = 6000V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 45C	Irms 55C	Irms 85C	Irms max. 105C	d (mm)
STG-A125J4000D	1.2	65	92	4.5	55	1180	1416	25	20	17	7.5	M6
STG-A155J4000D	1.5	65	92	4.0	55	1180	1770	30	25	18	9.5	M6
STG-A225J4000D	2.2	65	127	4.0	80	676	1487	30	25	18	8	M6
STG-A335J4000D	3.3	65	127	4.0	80	676	2230	37	33	27	12	M6
STG-A475J4000D	4.7	90	127	3.4	80	676	3177	50	45	40	16	M6

**STG-01A Vndc = 4500V / Vrms = 1000Vac / Vpeak = 1450V 10s / Vsurge = 6800V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 55C	Irms 70C	Irms 85C	Irms max. 105C	d (mm)
STG-01A154K4500D	0.15	65	93	5.0	32	2460	369	20	17	11	3.5	M6
STG-01A254K4500DA1	0.25	65	115	5.0	40	1360	340	19	16	10	3.5	M6
STG-01A334K4500D	0.33	65	115	4.5	40	1360	448	24	20	13	4.5	M6
STG-01A504K4500DA1	0.5	65	132	4.0	45	1050	525	29	25	16	5	M6
STG-01A754K4500DA1	0.75	65	132	4.0	55	825	618	34	29	18	6	M6

For 105C, other Voltage and Current requirement, please contact our sales colleagues.

**STG-01A Vndc = 4500V / Vrms = 1350Vac / Vpeak = 1950V 10s / Vsurge = 7200V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STG-01A254K4500DA2	0.25	65	113	2.1	35	5000	1250	15	12	8	M6
STG-01A504K4500DA2	0.5	65	150	1.8	50	2900	1450	15	13	8	M6
STG-01A754K4500DA2	0.75	65	150	1.3	50	2900	2175	25	19	12	M6
STG-01A105K4500D	1	65	173	1.2	60	2200	2200	25	20	13	M6
STG-01A125K4500D	1.2	65	205	1.3	75	1700	2040	25	19	12	M6
STG-01A155K4500D	1.5	90	205	1.1	75	1700	2550	30	23	15	M6

**STG-A Vndc = 4500V / Vrms = 1700Vac / Vpeak = 2400V 10s / Vsurge = 6800V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 45C	Irms 55C	Irms 85C	Irms max. 105C	d (mm)
STG-A125J4500D	1.2	65	147	4.0	95	1050	1260	27	22	20	9	M6
STG-A155J4500D	1.5	65	147	4.0	95	1050	1575	35	30	25	11	M6
STG-A225J4500D	2.2	90	147	3.5	95	1050	2310	50	45	35	15	M6
STG-A335J4500D	3.3	90	147	3.0	95	1050	3465	65	60	55	22	M6

**STG-A Vndc = 4800V / Vrms = 1400Vac / Vpeak = 2000V 10s / Vsurge = 7300V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 55C	Irms 70C	Irms 85C	Irms max. 105C	d (mm)
STG-A125J4800D	1.2	65	142	2.1	13	2300	2760	34	30	24	11	M6
STG-A155J4800D	1.5	90	142	2.0	13	2300	3450	40	35	30	14	M6
STG-A205J4800D	2	90	142	1.8	13	2300	4600	55	50	40	18	M6
STG-A225J4800D	2.2	90	142	1.5	13	2300	5060	60	55	45	20	M8

**STG-01A Vndc = 5300V / Vrms = 1600Vac / Vpeak = 2300V 10s / Vsurge = 8500V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STG-01A254K5300D	0.25	65	113	1.6	35	7000	1750	19	14	9	M6
STG-01A504K5300D	0.5	65	150	1.3	50	3900	1950	21	16	10	M6
STG-01A754K5300D	0.75	65	205	1.6	75	2300	1725	19	14	9	M6
STG-01A105K5300D	1	90	205	1.2	75	2300	2300	25	19	12	M6

**STG-A Vndc = 5800V / Vrms = 2000Vac / Vpeak = 2850V 10s / Vsurge = 8700V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 55C	Irms 70C	Irms 85C	Irms max. 105C	d (mm)
STG-A224J5800D	0.22	65	96	3.30	8.5	4860	1069	28	24	20	9	M6
STG-A334J5800D	0.33	65	96	3.30	8.5	4860	1604	30	25	21	10	M6
STG-A474J5800D	0.47	65	142	3.10	8.5	3500	1645	30	25	21	10	M6
STG-A684J5800D	0.68	65	142	3.10	8.5	3500	2380	30	25	21	10	M6
STG-A105J5800D	1	90	142	2.90	8.5	3500	3500	50	45	35	18	M6
STG-A125J5800D	1.2	90	142	2.50	8.5	3500	4200	60	55	45	20	M8
STG-A155J5800D	1.5	90	142	1.80	8.5	3500	5250	70	65	55	25	M8

**STG-A Vndc = 6800V / Vrms = 2400Vac / Vpeak = 3400V 10s / Vsurge = 10200V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 55C	Irms 70C	Irms 85C	Irms max. 105C	d (mm)
STG-A204J6800D	0.2	65	96	3.5	8.5	7300	1460	25	21	18	9	M6
STG-A224J6800D	0.22	65	96	3.5	8.5	7300	1606	25	21	18	9	M6
STG-A254J6800D	0.25	65	96	3.3	8.5	7300	1825	25	21	18	9	M6
STG-A504J6800D	0.5	65	142	3.1	8.5	5100	2550	25	21	18	9	M6
STG-A684J6800D	0.68	90	142	2.9	8.5	5100	3468	40	35	30	14	M6
STG-A105J6800D	1	90	142	1.8	8.5	5100	5100	60	55	45	20	M8

For 105C, other Voltage and Current requirement, please contact our sales colleagues.

## 1.1.2 Snubber Capacitors :

### STP-01R series

This series of capacitors have been specially developed for medium frequency range, higher dv/dt, peak current carrying capability.

### Applications :

SCR Snubber and Commutation, Thyristor controlled rectifier circuits, Reduce or eliminate voltage or current spikes, Limit dv/dt and di/dt, Motor Speed Control and Static Drive, Harmonic Filter, Inverter and Converter.

### Properties :

Low ESR, Excellent Frequency Response, High RMS Current Rating, High Pulse Current Ratings dv/dt, High Temperature, High Insulation Resistance, Low inductive, Flame Retardant Construction, Easy Installation



### Electrical Connections :

STP-01R –Quick Terminals / Soldering tags or M6 Screw Threads

### Electrical Characteristics :

**Rated Voltage** : 1000Vdc - 2,600Vdc / 660Vrms - 1100Vrms ( can be customized )

**Capacitance range** : 0.1 - 1.5uF ( can be customized )

**Capacitance Tolerance** : +/-5%; +/-10%

**Ripple RMS Current** : up to 14A

**Equivalent Series Resistance (ESR)** : measured at 25C 100kHz

**Testing Voltage Terminal to Terminal** : Vsurge 10 sec ( can be customized )

**Testing Voltage Terminal to Case** : 4500Vac at 105C 1min.

**Insulation Resistance** : 250Vdc +25C >= 300,000Mohm

250Vdc +85C >= 50,000Mohm

250Vdc +105C >= 5,000Mohm

**Reference Standard** : IEC61071

**Operate Temperature** : -25C - +70C / -25C - +85C / -40C - +105C

**Expected Service Life** : 30,000 hours at rated Vac +85C / +105C

100,000 hours at rated Vdc +85C / +105C

**Accelerated Life** : 1.25 x rated AC voltage at +85C / +105C for 2,000 hours

### Specifications and Size :

**STP-01R V<sub>ndc</sub> = 1000V / V<sub>rms</sub> = 660Vac / V<sub>peak</sub> = 940V 10s / V<sub>surge</sub> = 1700V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L Mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 85C	Irms 105C
STP-01R474J1000D	0.47	30	55	7	40	620	291	7.5	3.3
STP-01R684J1000D	0.68	35	55	7	40	620	421	7.5	3.3
STP-01R105J1000D	1	35	73	7	50	480	480	14	6.0
STP-01R125J1000D	1.2	35	73	6	50	480	576	14	6.0
STP-01R155J1000D	1.5	40	73	6	50	480	720	14	6.0

**STP-01R V<sub>ndc</sub> = 1200V / V<sub>rms</sub> = 800Vac / V<sub>peak</sub> = 1130V 10s / V<sub>surge</sub> = 2000V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L Mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 85C	Irms 105C
STP-01R224J1200D	0.22	30	55	7	30	1300	286	7.5	3.3
STP-01R334J1200D	0.33	35	55	7	30	1300	429	7.5	3.3
STP-01R474J1200D	0.47	35	55	6	40	740	347	9	4.0
STP-01R684J1200D	0.68	35	73	6	50	570	387	9	4.0
STP-01R105J1200D	1	40	73	5	50	570	570	9	4.0

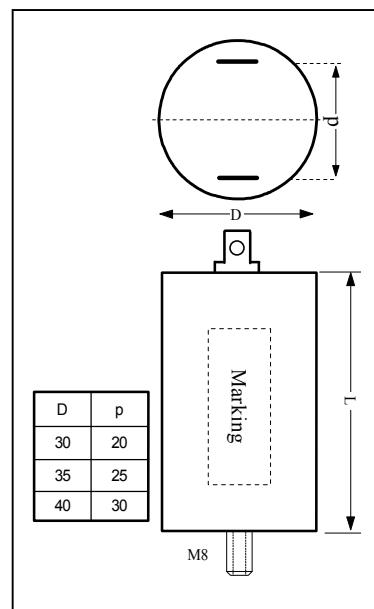
**STP-01R V<sub>ndc</sub> = 1350V / V<sub>rms</sub> = 900Vac / V<sub>peak</sub> = 1270V 10s / V<sub>surge</sub> = 2300V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L Mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 85C	Irms 105C
STP-01R104J1350D	0.1	30	55	7	30	1500	150	4	1.7
STP-01R154J1350D	0.15	30	55	7	30	1500	225	4	1.7
STP-01R224J1350D	0.22	30	55	8	40	850	187	5	2.1
STP-01R334J1350D	0.33	35	55	8	40	850	280	5	2.1
STP-01R474J1350D	0.47	35	73	6	50	660	310	8	3.5
STP-01R684J1350D	0.68	40	73	6	50	660	448	8	3.5

**STP-01R V<sub>ndc</sub> = 2600V / V<sub>rms</sub> = 1100Vac / V<sub>peak</sub> = 1550V 10s / V<sub>surge</sub> = 3900V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L Mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 85C	Irms 105C
STP-01R104J2600D	0.1	30	55	10	40	1200	120	6.2	2.7
STP-01R154J2600D	0.15	35	55	8	40	1200	180	6.2	2.7
STP-01R224J2600D	0.22	35	73	7	50	900	198	5.8	2.4
STP-01R334J2600D	0.33	40	73	6	50	900	297	5.8	2.4

The combination of Capacitance value, Voltage, Dimension, please contact us for a design suited to your application needs.



### 1.1.3 High Voltage Snubber Capacitors :

#### STP-01RN, STP-01RB series

This series of capacitors have been specially developed for medium frequency range, with higher RMS Current, higher dv/dt and higher peak current carrying capability.



#### Applications :

High Voltage SCR Snubber and Commutation, Thyristor controlled rectifier circuits, High Current Snubber circuit, Reduce or eliminate voltage or current spikes, Limit dv/dt & di/dt, Motor Speed Control & Static Drive, Harmonic Filter, Inverter, Converter and high RMS ripple Current application

#### Properties :

Low ESR, Excellent Frequency Response, High r.m.s. Current Rating, High Pulse Current Ratings (dv/dt), High Voltage Capabilities, High Temperature, High Insulation Resistance, Non inductive, Flame Retardant Construction, Easy Installation

#### Electrical Connections :

**STP-01RB** – with M6 / M8 / M10 Screw Threads

**STP-01RN** – with M6 / M8 / M10 Screw Nuts

#### Electrical Characteristics : ( can be customized )

**Rated Voltage** : 900Vdc – 5,300Vdc / 280Vrms – 1,600Vrms

**Capacitance range** : 0.15 - 60uF

**Capacitance Tolerance** : +/-5%; +/-10%

**Ripple RMS Current** : up to 80A

**Equivalent Series Resistance (ESR)** : at 23C 100kHz

**Testing Voltage Terminal to Terminal** : Vsurge 10 sec

**Testing Voltage Terminal to Case** : 4500Vac at 105C 1min.

**Insulation Resistance** : 250Vdc +25C >= 300,000Mohm

250Vdc +85C >= 50,000Mohm

250Vdc +105C >= 5,000Mohm

**Reference Standard** : IEC61071

**Operate Temperature** : -25C - +70C / -25C - +85C / -40C - +105C

**Expected Service Life** : 30,000 hours at rated Vac +70C / +85C / +105C

60,000 hours at rated Vdc +70C / +85C / +105C

**Accelerated Life** : 1.25 x rated AC voltage at +85C / +105C 2,000 hours

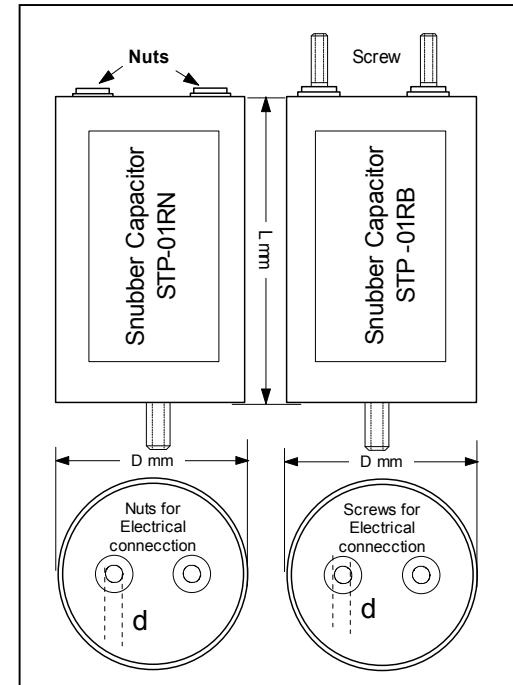
#### Specifications and Size :

**STP-01RN Vndc = 900V / Vrms = 280Vac / Vpeak = 400V 10s / Vsurge = 1440V 10s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN225J900D	2.2	65	100	2.2	20	720	1584	35	11	7	M6
STP-01RN335J900D	3.3	65	100	2.4	20	400	1320	30	9	6	M6
STP-01RN475J900D	4.7	65	100	2.3	20	400	1880	35	11	7	M6
STP-01RN685J900D	6.8	90	100	2.0	20	300	2040	40	12	8	M6
STP-01RN106J900D	10	90	100	1.9	20	300	3000	45	14	9	M6
STP-01RN156J900D	15	90	100	1.7	20	250	3750	50	15	10	M8
STP-01RN226J900D	22	90	165	2.0	35	250	5500	60	24	15	M8
STP-01RN336J900D	33	90	225	2.0	23	250	8250	80	32	20	M8
STP-01RN406J900D	40	90	225	1.7	23	250	10000	80	32	20	M8
STP-01RN506J900D	50	90	293	1.9	18	250	12500	80	32	20	M8
STP-01RN606J900D	60	90	293	1.7	18	250	15000	80	32	20	M8

**STP-01RN Vndc = 1000V / Vrms = 300Vac / Vpeak = 450V 10s / Vsurge = 1600V 10s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN225J1000D	2.2	65	100	2.2	20	880	1936	35	11	7	M6
STP-01RN335J1000D	3.3	65	100	2.4	20	490	1617	30	9	6	M6
STP-01RN475J1000D	4.7	65	100	2.0	20	490	2303	40	12	8	M6
STP-01RN685J1000D	6.8	90	100	2.0	20	400	2720	40	12	8	M6
STP-01RN755J1000D	7.5	90	100	1.7	20	400	3000	45	14	9	M6
STP-01RN106J1000D	10	90	100	1.7	20	300	3000	45	14	9	M6
STP-01RN126J1000D	12	90	165	1.9	29	300	3600	50	20	13	M8
STP-01RN156J1000D	15	90	165	1.9	29	300	4500	60	24	15	M8
STP-01RN226J1000D	22	90	165	1.7	35	300	6600	70	28	18	M8
STP-01RN256J1000D	25	90	225	1.9	23	300	7500	80	32	20	M8
STP-01RN306J1000D	30	90	225	1.7	23	300	9000	80	32	20	M8
STP-01RN336J1000D	33	90	225	1.7	23	300	9900	80	32	20	M8
STP-01RN356J1000D	35	90	293	1.9	18	300	10500	80	32	20	M8
STP-01RN406J1000D	40	90	293	1.7	18	300	12000	80	32	20	M8



**STP-01RN Vndc = 1300V / Vrms = 400Vac / Vpeak = 580V 10s / Vsurge = 2100V 10s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN225J1300D	2.2	65	100	2.3	20	680	1496	30	9	6	M6
STP-01RN335J1300D	3.3	90	100	1.7	20	520	1716	40	12	8	M6
STP-01RN475J1300D	4.7	90	100	1.8	20	520	2444	45	14	9	M6
STP-01RN685J1300D	6.8	90	165	2.2	25	520	3536	50	20	13	M8
STP-01RN755J1300D	7.5	90	165	1.9	29	520	3900	50	20	13	M8
STP-01RN106J1300D	10	90	165	1.9	35	400	4000	55	22	14	M8
STP-01RN126J1300D	12	90	165	1.7	35	400	4800	60	24	15	M8
STP-01RN156J1300D	15	90	225	1.9	23	400	6000	70	28	18	M8
STP-01RN206J1300D	20	90	293	1.9	18	400	8000	80	32	20	M8
STP-01RN226J1300D	22	90	293	1.7	18	400	8800	80	32	20	M8
STP-01RN256J1300D	25	90	293	1.7	18	400	10000	80	32	20	M8

**STP-01RN Vndc = 1500V / Vrms = 450Vac / Vpeak = 640V 10s / Vsurge = 2400V 10s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN225J1500D	2.2	90	100	1.9	20	660	1452	35	11	7	M6
STP-01RN335J1500D	3.3	90	100	1.7	20	660	2178	40	12	8	M6
STP-01RN405J1500D	4	90	100	1.7	20	500	2000	40	12	8	M6
STP-01RN455J1500D	4.5	90	100	1.7	20	500	2250	45	14	9	M6
STP-01RN685J1500D	6.8	90	165	1.7	29	500	3400	55	22	14	M8
STP-01RN755J1500D	7.5	90	165	1.8	35	500	3750	55	22	14	M8
STP-01RN106J1500D	10	90	225	1.8	19	500	5000	70	28	18	M8
STP-01RN126J1500D	12	90	225	1.7	23	500	6000	70	28	18	M8
STP-01RN156J1500D	15	90	293	1.8	18	500	7500	80	32	20	M8
STP-01RN186J1500D	18	90	293	1.7	18	500	9000	80	32	20	M8

**STG-01RN Vndc = 1700V / Vrms = 530Vac / Vpeak = 750V 10s / Vsurge = 2720V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN225K1700D	2.2	65	105	1.8	25	1200	2640	50	37	25	M6
STP-01RN255K1700D	2.5	65	125	2.0	35	680	1700	45	33	22	M6
STP-01RN305K1700D	3	65	125	2.3	35	680	2040	45	33	22	M6
STP-01RN405K1700D	4	65	145	2.2	40	520	2080	45	33	22	M6
STP-01RN505K1700D	5	65	165	2.3	50	400	2000	45	33	22	M6
STP-01RN605K1700D	6	65	165	1.9	50	400	2400	55	40	26	M8
STP-01RN755K1700D	7.5	90	165	1.6	50	400	3000	60	45	30	M8

**STP-01RN Vndc = 1800V / Vrms = 540Vac / Vpeak = 760V 10s / Vsurge = 2900V 10s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN225J1800D	2.2	90	100	1.9	20	800	1760	35	11	7	M6
STP-01RN335J1800D	3.3	90	165	2.5	29	800	2640	45	18	11	M6
STP-01RN475J1800D	4.7	90	165	2.0	35	620	2914	45	18	11	M6
STP-01RN685J1800D	6.8	90	225	2.0	23	620	4216	55	22	14	M8
STP-01RN805J1800D	8	90	225	1.8	23	620	4960	55	22	14	M8
STP-01RN106J1800D	10	90	293	1.8	18	620	6200	80	32	20	M8
STP-01RN126J1800D	12	90	293	1.7	18	620	7440	80	32	20	M8

**STP-01RN Vndc = 2500V / Vrms = 700Vac / Vpeak = 1070V 10s / Vsurge = 4000V 10s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN254J2500D	0.25	65	100	2.5	20	2650	662.5	20	6.0	4.0	M6
STP-01RN504J2500D	0.5	65	100	2.4	20	1450	725	20	6.0	4.0	M6
STP-01RN105J2500D	1	90	100	1.8	20	1100	1100	25	8.8	5.0	M6
STP-01RN155J2500D	1.5	90	100	1.7	20	1100	1650	30	9.0	6.0	M6
STP-01RN205J2500D	2	90	165	1.9	29	1100	2200	40	16.0	10.0	M6
STP-01RN225J2500D	2.2	90	165	1.9	35	880	1936	40	16.0	10.0	M6
STP-01RN335J2500D	3.3	90	225	1.9	23	880	2904	55	22.0	13.8	M8
STP-01RN405J2500D	4	90	225	1.8	23	880	3520	55	22.0	13.8	M8
STP-01RN505J2500D	5	90	293	1.8	18	880	4400	70	28.0	17.5	M8
STP-01RN605J2500D	6	90	293	1.7	18	880	5280	70	28.0	17.5	M8

**STP-01RN Vndc = 2700V / Vrms = 770Vac / Vpeak = 1100V 10s / Vsurge = 4350V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN205K2700D	2	65	165	2.4	50	1000	2000	35	26	17	M6
STP-01RN225K2700D	2.2	65	165	2.0	50	1000	2200	35	26	17	M6
STP-01RN255K2700D	2.5	65	185	2.4	60	800	2000	35	26	17	M6
STP-01RN335K2700D	3.3	65	225	2.3	75	600	1980	35	26	17	M6
STP-01RN405K2700D	4	65	225	1.9	75	600	2400	40	30	20	M6
STP-01RN455K2700D	4.5	90	225	1.8	75	600	2700	45	33	21	M6
STP-01RN505K2700D	5	90	225	1.6	75	600	3000	50	37	25	M8

**STP-01RN Vndc = 3100V / Vrms = 900Vac / Vpeak = 1300V 10s / Vsurge = 5000V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN155K3100D	1.5	65	165	2.4	50	1320	1980	30	22	15	M6
STP-01RN205K3100D	2	65	185	2.2	60	1000	2000	30	22	15	M6
STP-01RN225K3100D	2.2	65	185	2.0	60	1000	2200	30	22	15	M6
STP-01RN255K3100D	2.5	65	185	1.8	60	1000	2500	35	26	17	M6
STP-01RN305K3100D	3	65	225	1.9	75	800	2400	35	26	17	M6
STP-01RN335K3100D	3.3	90	225	1.8	75	800	2640	35	26	17	M6
STP-01RN355K3100D	3.5	90	225	1.7	75	800	2800	40	30	20	M6

**STP-01RN Vndc = 3600V / Vrms = 1100Vac / Vpeak = 1600V 10s / Vsurge = 5760V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN155K3600D	1.5	65	205	2.4	70	1355	2032.5	35	24	16	M6
STP-01RN205K3600D	2	65	245	2.5	85	1000	2000	35	25	17	M6
STP-01RN255K3600D	2.5	65	285	2.4	100	800	2000	35	24	16	M6
STP-01RN305K3600D	3	65	285	1.9	100	800	2400	40	30	20	M6
STP-01RN355K3600D	3.5	90	285	1.8	100	800	2800	45	35	23	M6
STP-01RN405K3600D	4	90	285	1.6	100	800	3200	50	35	23	M8

**STP-01RN Vndc = 4500V / Vrms = 1350Vac / Vpeak = 1950V 10s / Vsurge = 7200V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN254K4500D	0.25	65	135	3.2	35	5000	1250	15	12	8	M6
STP-01RN504K4500D	0.5	65	165	2.7	50	2900	1450	15	13	8	M6
STP-01RN754K4500D	0.75	65	165	1.9	50	2900	2175	25	19	12	M6
STP-01RN105K4500D	1	65	185	1.8	60	2200	2200	25	20	13	M6
STP-01RN125K4500D	1.2	65	225	1.9	75	1700	2040	25	19	12	M6
STP-01RN155K4500D	1.5	90	225	1.6	75	1700	2550	30	23	15	M6

**STP-01RN Vndc = 5300V / Vrms = 1600Vac / Vpeak = 2300V 10s / Vsurge = 8500V 30s/day**

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN254K5300D	0.25	65	135	2.4	35	7000	1750	19	14	9	M6
STP-01RN504K5300D	0.5	65	165	2.0	50	3900	1950	21	16	10	M6
STP-01RN754K5300D	0.75	65	225	2.4	75	2300	1725	19	14	9	M6
STP-01RN105K5300D	1	90	225	1.8	75	2300	2300	25	19	12	M6

The combination of Capacitance value, Voltage, Dimension, please contact us for a design suited to your application needs.

## 1.1.4 High Voltage Snubber Capacitors :

### STP-01RFN, STP-01RFB series

This series of capacitors have been specially developed for medium frequency range, with higher RMS Current, higher dv/dt and higher peak current carrying capability.

### Applications :

High Voltage SCR Snubber and Commutation, Thyristor controlled rectifier circuits, High Current Snubber circuit, Reduce or eliminate voltage or current spikes, Limit dv/dt & di/dt, Motor Speed Control & Static Drive, Harmonic Filter, Inverter, Converter and high RMS ripple Current application

### Properties :

Low ESR, Excellent Frequency Response, High r.m.s. Current Rating, High Pulse Current Ratings (dv/dt), High Voltage Capabilities, High Temperature, High Insulation Resistance, Non inductive, Flame Retardant Construction, Easy Installation

### Electrical Connections :

**STP-01RFB** – with M6 Screw Thread

**STP-01RFN** – with M6 Screw Nut

### Electrical Characteristics : ( can be customized )

**Rated Voltage** : 2500Vdc - 6,900Vdc / 800Vrms - 2000Vrms

**Capacitance range** : 0.1 - 1uF

**Capacitance Tolerance** : +/-5%; +/-10%

**Ripple RMS Current** : up to 30A

**Equivalent Series Resistance (ESR)** : at 23C 100kHz

**Testing Voltage Terminal to Terminal** : Vsurge 10 sec

**Testing Voltage Terminal to Case** : 4500Vac at 105C 1min.

**Insulation Resistance** : 250Vdc +25C >= 300,000Mohm

250Vdc +85C >= 50,000Mohm

250Vdc +105C >= 5,000Mohm

**Reference Standard** : IEC61071

**Operate Temperature** : -25C - +70C - -25C - +85C / -40C - +105C

**Expected Service Life** : 30,000 hours at rated Vac +85C / +105C

60,000 hours at rated Vdc +85C / +105C

**Accelerated Life** : 1.25 x rated AC voltage at +85C / +105C 2,000 hours

### Specifications and Size :

**STP-01RFN V<sub>ndc</sub> = 2500V / V<sub>rms</sub> = 800Vac / V<sub>peak</sub> = 1280V 10s / Vsurge = 4000V 30s/day**

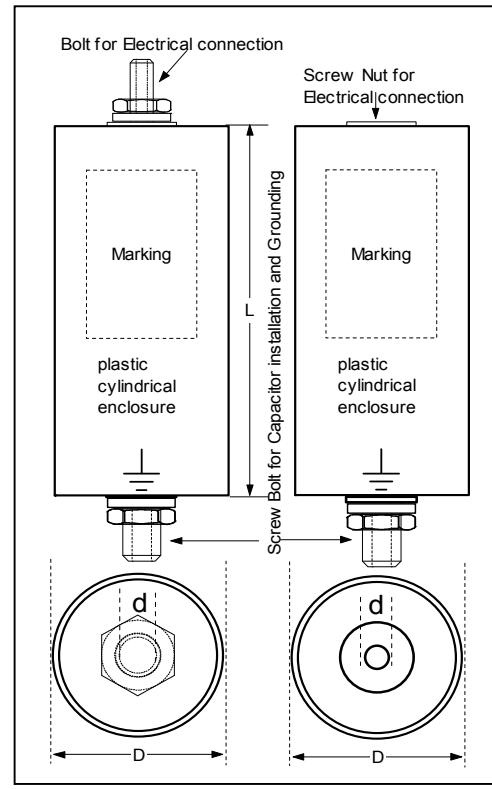
Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	I <sub>rms</sub> 85C	I <sub>rms</sub> 105C	Screw Nut d	Screw Bolt (Mounting)
STP-01RFN104K2500D	0.1	35	87	10.0	90	1800	180	8.5	4.5	M6	M8
STP-01RFN124K2500D	0.12	35	87	9.0	90	1800	216	10	5	M6	M8
STP-01RFN154K2500D	0.15	35	87	8.5	90	1800	270	10	4	M6	M8
STP-01RFN204K2500D	0.2	35	87	8.0	90	1800	360	10	4	M6	M8
STP-01RFN224K2500D	0.22	35	87	7.0	90	1800	396	10	4.5	M6	M8
STP-01RFN334K2500D	0.33	40	87	6.0	90	1800	594	15	6.5	M6	M8

**STP-01RFN V<sub>ndc</sub> = 3000V / V<sub>rms</sub> = 900Vac / V<sub>peak</sub> = 1440V 10s / Vsurge = 4800V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	I <sub>rms</sub> 85C	I <sub>rms</sub> 105C	Screw Nut d	Screw Bolt (Mounting)
STP-01RFN104K3000D	0.1	35	87	10.0	90	2800	280	8	3.5	M6	M8
STP-01RFN124K3000D	0.12	35	87	9.0	90	2800	336	10	4.5	M6	M8
STP-01RFN154K3000D	0.15	35	87	8.5	90	2800	420	10	4	M6	M8
STP-01RFN204K3000D	0.2	40	87	8.0	90	2800	560	10	4.5	M6	M8
STP-01RFN224K3000D	0.22	40	87	7.0	90	2800	616	10	4.5	M6	M8
STP-01RFN254K3000D	0.25	40	87	6.0	90	2800	700	15	6	M6	M8

**STP-01RFN V<sub>ndc</sub> = 3400V / V<sub>rms</sub> = 1000Vac / V<sub>peak</sub> = 1600V 10s / Vsurge = 5400V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	I <sub>rms</sub> 85C	I <sub>rms</sub> 105C	Screw Nut d	Screw Bolt (Mounting)
STP-01RFN224K3400D	0.22	65	118	6.0	120	1300	286	20	11	M6	M12
STP-01RFN334K3400D	0.33	65	118	6.0	120	1300	429	20	11	M6	M12
STP-01RFN474K3400D	0.47	65	118	8.0	120	1300	611	20	9	M6	M12
STP-01RFN684K3400D	0.68	65	118	7.0	120	1300	884	20	11	M6	M12
STP-01RFN754K3400D	0.75	65	118	7.0	120	1300	975	24	12	M6	M12
STP-01RFN105K3400D	1	65	118	5.0	120	1300	1300	30	16	M6	M12



**STP-01RFN Vndc = 4000V / Vrms = 1200Vac / Vpeak = 1900V 10s / Vsurge = 6400V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 85C	Irms 105C	Screw Nut d	Screw Bolt (Mounting)
STP-01RFN104K4000D	0.1	65	118	10.0	120	1800	180	10	5	M6	M12
STP-01RFN124K4000D	0.12	65	118	8.0	120	1800	216	10	5	M6	M12
STP-01RFN154K4000D	0.15	65	118	7.0	120	1800	270	10	6	M6	M12
STP-01RFN224K4000D	0.22	65	118	6.0	120	1800	396	20	10	M6	M12
STP-01RFN334K4000D	0.33	65	118	6.0	120	1800	594	20	11	M6	M12
STP-01RFN474K4000D	0.47	65	118	7.0	120	1800	846	20	11	M6	M12
STP-01RFN684K4000D	0.68	65	118	5.0	120	1800	1224	27	15	M6	M12

**STP-01RFN Vndc = 4600V / Vrms = 1300Vac / Vpeak = 2080V 10s / Vsurge = 7360V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 85C	Irms 105C	Screw Nut	Screw Bolt (Mounting)
STP-01RFN104K4600D	0.1	65	118	10.0	120	2275	227	10	5	M6	M12
STP-01RFN124K4600D	0.12	65	118	8.0	120	2275	273	10	6	M6	M12
STP-01RFN154K4600D	0.15	65	118	7.0	120	2275	341	10	7	M6	M12
STP-01RFN224K4600D	0.22	65	118	6.0	120	2275	500	16	9	M6	M12
STP-01RFN334K4600D	0.33	65	118	6.0	120	2275	750	20	11	M6	M12
STP-01RFN474K4600D	0.47	65	118	6.0	120	2275	1069	20	12	M6	M12
STP-01RFN684K4600D	0.68	65	118	5.0	120	2275	1547	28	17	M6	M12

**STP-01RFN Vndc = 5700V / Vrms = 1700Vac / Vpeak = 2720V 10s / Vsurge = 9120V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 85C	Irms 105C	Screw Nut d	Screw Bolt (Mounting)
STP-01RFN104K5700D	0.1	65	118	10.0	120	2600	260	10	5	M6	M12
STP-01RFN124K5700D	0.12	65	118	8.0	120	2600	312	10	6	M6	M12
STP-01RFN154K5700D	0.15	65	118	7.0	120	2600	390	12	7	M6	M12
STP-01RFN224K5700D	0.22	65	118	6.0	120	2600	572	20	11	M6	M12
STP-01RFN334K5700D	0.33	65	118	6.0	120	2600	858	22	12	M6	M12

**STP-01RFN Vndc = 6900V / Vrms = 2000Vac / Vpeak = 3200V 10s / Vsurge = 11040V 30s/day**

Part Number	C <sub>n</sub> uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 85C	Irms 105C	Screw Nut	Screw Bolt (Mounting)
STP-01RFN104K6900D	0.1	65	118	10.0	120	4000	400	10	5	M6	M12
STP-01RFN124K6900D	0.12	65	118	8.0	120	4000	480	10	6	M6	M12
STP-01RFN154K6900D	0.15	65	118	7.0	120	4000	600	12	6	M6	M12
STP-01RFN204K6900D	0.2	65	118	6.5	120	4000	800	14	8	M6	M12
STP-01RFN224K6900D	0.22	65	118	6.0	120	4000	880	16	9	M6	M12

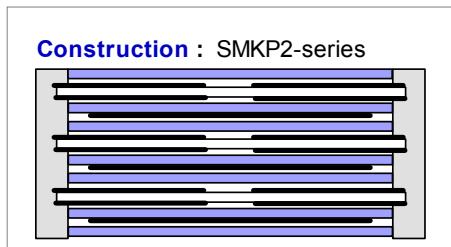
## 1.1.5 Snubber Capacitors – IGBT SMKP2 series

### Applications :

For protection against voltage and current transients in IGBT modules and applications where high dv/dt is encountered

### Construction :

- Low inductance construction
- Flame retardant plastic case and Epoxy Resin UL94-V0
- High Current carrying capacity Tinned Terminals for direct mounting the capacitor to IGBT module
- other Terminals also available



### Electrical Characteristics :

Capacitance : 0.1uF - 3uF at 1kHz +25C

Capacitance Tolerance : +/-5%(J), +/-10% (K)

Rated Voltage Ur	1000Vdc	1200Vdc	1600Vdc	2000Vdc
	500Vac	550Vac	630Vac	650Vac

**Test Voltage** : between Terminals : 1.6xUr Vdc 60s +85C / +105C  
Terminals to Case: 3kVac 60s at +25C / +105C

**Dissipation Factor** : <5x10<sup>-4</sup> at 1kHz +25C

**Rated Temperature** : -20C - +85C / -40C - +105C

**Service Life** : 30,000 hours at rated Vac 70C

60,000 hours at rated Vdc 70C

**Accelerated Life** : 1.25 x rated Vac at 85C for 3,000 hours  
1.25 x rated Vac at 105C for 2,000 hours

**Equivalent Series Resistance ESR** : see item table

**Equivalent Series Inductance ESL** : < 22nH

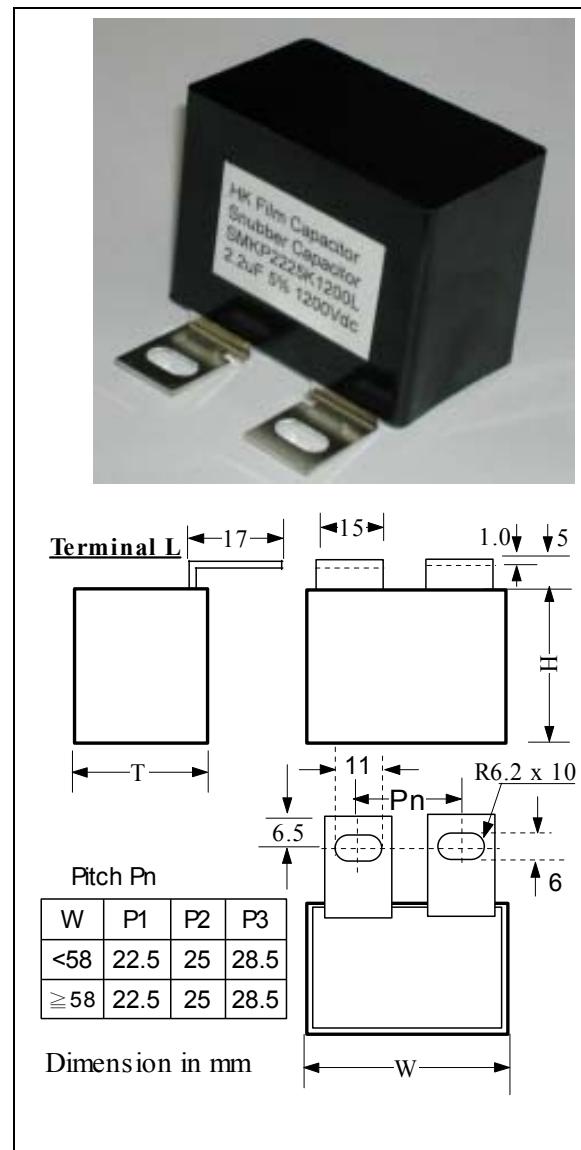
**Insulation Resistance** : 250Vdc +25C >= 300,000Mohm

250Vdc+85C >= 50,000Mohm

250Vdc+105C >= 5,000Mohm

### Specifications and Size :

Part Number	Cap uF	Voltage		dV/dt V/us	Ipeak A	ESR 100kHz 25C m ohm	Irms 55C A	Dimension mm +/<1mm W x H x T
		Vdc	Vac					
SMKP2-154X1000DL	0.15	1000	500	800	120	9.1	7.9	45 x 32 x 22
SMKP2-224X1000DL	0.22			800	176	8.5	9.0	45 x 32 x 22
SMKP2-334X1000DL	0.33			800	264	7.6	11	45 x 32 x 22
SMKP2-474X1000DL	0.47			480	226	7.1	12.4	45 x 32 x 22
SMKP2-564X1000DL	0.56			480	269	6.9	14	45 x 32 x 22
SMKP2-684X1000DL	0.68			480	326	6.3	14.5	45 x 32 x 22
SMKP2-754X1000DL	0.75			480	360	5.6	15	45 x 32 x 22
SMKP2-105X1000DL	1.0			480	480	4.4	17.2	51 x 36 x 25
SMKP2-125X1000DL	1.2			480	576	3.6	19	51 x 36 x 25
SMKP2-155X1000DL	1.5			480	720	2.7	21.3	51 x 40 x 30
SMKP2-205X1000DL	2.0			320	640	2.5	25	59 x 45 x 35
SMKP2-225X1000DL	2.2			320	704	2.4	27	59 x 45 x 35
SMKP2-305X1000DL	3.0			320	960	2.2	29	59 x 45 x 35



## Specifications and Size

Part Number	Cap uF	Voltage		dV/dt	Ipeak	ESR 100kHz 25C m ohm	Irms 55C A	Dimension mm +/-1mm W x H x T
		Vdc	Vac	V/us	A			
SMKP2-154X1200DL	0.15	1200	550	900	135	9.1	8.4	45 x 32 x 22
SMKP2-224X1200DL	0.22			900	198	8.5	11	45 x 32 x 22
SMKP2-334X1200DL	0.33			900	297	7.6	11.5	45 x 32 x 22
SMKP2-474X1200DL	0.47			550	258	7.1	13.5	45 x 32 x 22
SMKP2-564X1200DL	0.56			550	308	6.9	14.2	45 x 32 x 22
SMKP2-684X1200DL	0.68			550	374	6.3	15.6	45 x 32 x 22
SMKP2-754X1200DL	0.75			550	412	5.6	16.8	51 x 36 x 25
SMKP2-105X1200DL	1.0			550	550	4.4	18.6	51 x 36 x 25
SMKP2-125X1200DL	1.2			550	660	3.6	21	51 x 40 x 30
SMKP2-155X1200DL	1.5			550	825	2.7	23	51 x 40 x 30
SMKP2-205X1200DL	2.0			350	700	2.5	28	59 x 45 x 35
SMKP2-225X1200DL	2.2			350	770	2.4	29	59 x 45 x 35
SMKP2-305X1200DL	3.0			350	1050	2.1	32	59 x 45 x 35
SMKP2-104X1600DL	0.1	1600	630	1000	100	10	9.4	45 x 32 x 22
SMKP2-154X1600DL	0.15			1000	150	8	11.5	45 x 32 x 22
SMKP2-224X1600DL	0.22			1000	220	7.5	13	45 x 32 x 22
SMKP2-334X1600DL	0.33			800	264	7.0	14	51 x 36 x 25
SMKP2-474X1600DL	0.47			800	376	6.6	16	51 x 36 x 25
SMKP2-564X1600DL	0.56			800	448	6.2	18	58 x 37 x 32
SMKP2-684X1600DL	0.68			800	544	6.0	19	58 x 37 x 32
SMKP2-754X1600DL	0.75			500	375	5.8	20	58 x 37 x 32
SMKP2-105X1600DL	1.0			500	500	3.2	23.8	58 x 37 x 32
SMKP2-125X1600DL	1.2			500	600	2.8	25	59 x 45 x 35
SMKP2-104X2000DL	0.1	2000	650	1100	110	8	10	45 x 32 x 22
SMKP2-154X2000DL	0.15			1100	165	7.5	11	45 x 32 x 22
SMKP2-224X2000DL	0.22			850	187	7	13.8	45 x 32 x 22
SMKP2-334X2000DL	0.33			850	280	6.4	16.9	51 x 36 x 25
SMKP2-474X2000DL	0.47			850	400	6	19	51 x 40 x 30
SMKP2-564X2000DL	0.56			600	336	5.5	21.5	58 x 37 x 32
SMKP2-684X2000DL	0.68			600	408	5.0	24	59 x 45 x 35
SMKP2-754X2000DL	0.75			600	450	4.2	25	59 x 45 x 35

Where X is for Capacitance tolerance : J for +/-5%, K for +/-10% and M for +/-20%

Other Capacitance, Voltage, RMS Current and Terminals is available. Please contact us for a design suited to your particular needs.

## 1.1.6 High dv/dt Axial lead Polypropylene Film Capacitors / Snubber Capacitors Axial Lead STP-01Q STP-01QE

### STP-01Q STP-01QE

#### Applications :

- Protecting Thyristor against transient voltage and current
- high dv/dt and Pulse Current applications
- SMPS Snubbing circuit
- MMC Capacitors / Multi-Mini Capacitors module

#### Constructions :

- Axial Lead Configuration with Epoxy Resin ( UL94-V0 )sealed at both ends
- tin plated Copper Wire for PCB soldering
- STP-01QE can have Terminals at the Electrical Wire (page 26)

#### Electrical Characteristics :

Capacitance : 0.01uF - 4.7uF at 1kHz +25C

Capacitance Tolerance : +/-5%(J), +/-10% (K)

Voltage Range :

600 Vdc	850 Vdc	1000 Vdc	1200 Vdc	1600 Vdc	2000 Vdc	3000 Vdc
275 Vac	450 Vac	500 Vac	500 Vac	630 Vac	630 Vac	750 Vac

Test Voltage : between Terminals :  $1.6 \times U_n$  Vdc for 60s +25C

Dissipation Factor : < 0.1% at 1kHz +25C

Rated Temperature : -20C - +85C

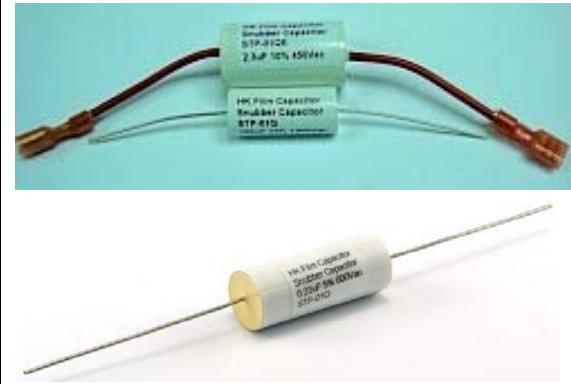
Full rated voltage at 85C, derate linearly to 50% rated voltage at 105C.

Service Life : 30,000 hours at rated Vac 70C  
60,000 hours at rated Vdc 70C

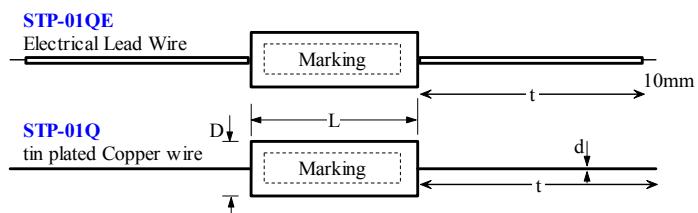
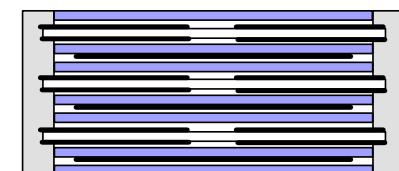
Accelerated Life :

$1.25 \times$  rated DC voltage at 85C for 2,000 hours

Insulation Resistance : >100,000Mohm\*uF  
at +25C 100Vdc 2minute.



Construction :



#### STP-01Q Specifications and Size : 600Vdc / 275Vac

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Imax A 70C
0.10	34.0	9.0	0.8	28	19	195	19.5	2.5
0.15	34.0	10.5	1.0	13	20	195	29	4.0
0.22	34.0	11.5	1.0	12	20	195	43	4.4
0.33	34.0	13.5	1.0	9	21	195	64	5.6
0.47	34.0	15.5	1.0	7	22	195	91	6.9
0.68	34.0	18.0	1.0	6	23	195	132	8.0
1.00	34.0	21.0	1.0	6	24	195	195	8.9
1.50	34.0	25.0	1.2	5	26	195	293	10.0
2.00	46.0	23.5	1.2	5	31	128	256	11.0
3.30	54.0	27.0	1.2	4	36	105	346	15.0
4.70	54.0	32.5	1.2	4	38	105	490	16.5

#### STP-01Q Specifications and Size : 850Vdc / 450Vac

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Imax A 70C
0.15	34.0	13.0	1.0	8	21	710	106	5.5
0.22	34.0	15.5	1.0	8	22	710	156	6.3
0.33	34.0	18.0	1.0	7	23	710	234	7.3
0.47	34.0	21.0	1.0	5	24	710	333	9.5
0.68	34.0	24.5	1.2	4	26	710	483	12.0
1.0	46.0	22.5	1.2	5	30	400	400	11.4
1.5	46.0	27	1.2	4	32	400	600	14.0
2.0	46.0	31	1.2	3	34	400	800	17.5
2.2	46.0	32	1.2	3	34	400	880	18.0
2.5	46.0	34	1.2	3	35	400	1000	19.0

### STP-01Q Specifications and Size : 1000Vdc / 500Vac

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Imax A 70C
0.15	34.0	15.0	1.0	7	22	855	128	6.5
0.22	34.0	17.5	1.0	7	23	855	188	7.5
0.33	34.0	21.0	1.0	6	24	855	280	8.8
0.47	34.0	24.0	1.2	5	26	855	400	10.5
0.68	34.0	28.0	1.2	5	27	855	580	11.5
1.0	46.0	26.0	1.2	5	32	480	480	12.5
1.5	46.0	31.0	1.2	4	34	480	720	15.3
2.0	46.0	36.0	1.2	3	36	480	960	19.0

### STP-01Q Specifications and Size : 1200Vdc / 500Vac

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Imax A 70C
0.10	34.0	15.5	1.0	9	22	1140	114	6
0.15	34.0	18.5	1.0	7	23	1140	170	7.5
0.22	34.0	22.0	1.0	7	24	1140	250	8.2
0.33	46.0	20.0	1.0	7	29	640	210	9
0.47	46.0	23.0	1.2	7	30	640	300	9.8
0.68	46.0	27.0	1.2	6	32	640	435	11.5
1.0	46.0	33.0	1.2	5	35	640	640	14.1
1.5	54.0	35.0	1.2	4	39	500	750	17.9

### STP-01Q Specifications and Size : 1600Vdc / 630Vac

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Imax A 70C
0.10	34.0	18.0	1.0	7	25	1425	140	7.0
0.15	34.0	22.0	1.0	5	24	1425	210	9.9
0.22	34.0	26.0	1.2	7	26	1425	310	9.0
0.33	46.0	24.0	1.2	7	31	800	260	10.0
0.47	46.0	28.0	1.2	6	32	800	375	11.5
0.68	46.0	33.0	1.2	6	35	800	540	13.0
1.00	46.0	39.0	1.2	5	37	800	800	16.0
1.50	54.0	42.0	1.2	4	42	625	940	20.0
2.00	64.0	43.0	1.2	3	45	470	940	21.0

### STP-01Q Specifications and Size : 2000Vdc / 630Vac

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Imax A 70C
0.022	34.0	12	1.0	35	6	1710	37	2.5
0.033	34.0	14	1.0	20	21	1710	56	3.6
0.047	34.0	15	1.0	12	22	1710	80	5.0
0.068	34.0	18	1.0	8	23	1710	116	6.6
0.10	34.0	21	1.0	7	24	1710	170	8.0
0.15	46.0	20	1.0	7	29	960	141	8.6
0.22	46.0	22	1.0	8	30	960	210	9.0
0.33	46.0	27	1.2	8	32	960	316	10.0
0.47	46.0	32	1.2	6	34	960	451	13.0
0.56	54.0	31	1.2	7	37	754	420	12.4
0.68	54.0	34	1.2	6	39	754	512	14.0
1.00	54.0	41	1.2	5	42	754	750	17.3
1.50	54.0	47	1.2	5	50	754	450	14.0

### STP-01Q Specifications and Size : 3000Vdc / 750Vac

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Imax A 70C
0.01	34.0	12	1.0	60	20	2568	25	2
0.015	34.0	14	1.0	40	21	2568	38	2.5
0.022	34.0	16	1.0	25	22	2568	56	3.5
0.033	34.0	18	1.0	14	23	2568	84	5.0
0.047	46.0	17	1.0	14	28	1440	67	5.5
0.068	46.0	19	1.0	12	29	1440	98	6.5
0.10	46.0	23	1.2	10	30	1440	140	8.0
0.15	46.0	27	1.2	8	32	1440	210	10

## 1.2.1 AC Filter Capacitors – ACF series

### Applications :

- Handling high RMS Current for high energy AC Filtering application,
- Transient, Harmonic Damping application, high Power UPS, input/out filter



### Characteristics :

- Temperature up to 105C
- Dry Construction, no leaking fluids and Flame Retardant
- Large capacitance in small package
- High RMS Current handling capacity and Low ESR and Low Inductance

### Electrical Characteristics :

**Capacitance range** : 3uF – 300uF

**Tolerance** : +/-10% +/-5% at 25C

**rated Voltage** : 300Vac – 900Vac / 450Vdc – 1350Vdc

**rated Temperature** : -25C to +85C / -40C to +105C

**Insulation Resistance** : > 50,000Mohm at 500V 105C

**Testing Voltage Terminal to Terminal** : 300Vac – 700Vac

2.15 x rated Vac or Vdc 60 seconds at 25C

2.15 x rated Vac or Vdc 30 seconds at 85C

2.15 x rated Vac or Vdc 10 seconds at 105C

**900Vac** : 1.75 x rated Vac or Vdc 60 seconds at 105C

**Testing Voltage Terminal to Case** : 4500Vac at 50/60Hz for 60 seconds at 105C

**Life Expectancy at rated Voltage** : 150,000 hours at 70C

100,000 hours at 85C

50,000 hours at 105C

**Accelerated Life** : 1.25 x Vac at 70C for 30,000 hours

1.25 x Vac at 85C for 10,000 hours

1.25 x Vac at 105C for 2,000 hours

**Options** : Thermocouple and can be build-in

Support both Axial Screw and Radial Screw terminals

### ACF AC Filter Capacitor : Specifications and Size : 300Vac / 450Vdc

Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>peak</sub> A	ESL nH	ESR (mohm) 100KHz	Irms 55C	Irms 85C	Irms 105C
60	65	90	34	2040	45	1.7	44	33	26
68	65	90	34	2312	45	1.2	47	35	28
75	65	95	31	2325	50	1.2	47	35	28
100	90	90	34	3400	45	1.4	60	45	36
110	90	90	34	3740	45	1.4	62	47	37
120	90	95	31	3720	50	1.5	62	47	37
150	90	110	25	3750	63	1.5	62	47	37
200	90	135	18	3600	86	1.3	65	49	39
250	90	190	12	3000	125	1.2	70	50	40
300	90	195	12	3600	125	1.2	75	50	40

### ACF AC Filter Capacitor : Specifications and Size : 440Vac / 700Vdc

Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>peak</sub> A	ESL nH	ESR (mohm) 100KHz	Irms 55C	Irms 85C	Irms 105C
12	65	75	115	1380	40	1.5	40	30	24
15	65	75	115	1725	40	1.4	48	36	29
20	65	85	90	1800	50	1.6	45	34	27
25	65	95	72	1800	60	1.7	50	38	30
30	65	110	55	1650	75	1.7	46	34	27
35	65	135	40	1400	100	1.9	39	31	25
40	65	135	40	1600	100	1.9	45	34	27
50	65	155	33	1650	120	1.9	50	38	30
60	90	135	40	2400	100	1.8	68	50	40
70	90	135	40	2800	100	1.7	72	55	43
80	90	155	33	2640	120	1.9	72	55	43
90	90	155	33	2970	120	1.8	72	55	43
100	90	190	55	5500	132	1.3	72	55	43
120	90	240	40	4800	132	1.3	68	50	40
150	90	280	33	4950	132	1.4	70	53	42

**ACF AC Filter Capacitor : Specifications and Size : 550Vac / 750Vdc**

Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>peak</sub> A	ESL nH	ESR (mohm) 100KHz	Irms 55C	Irms 85C	Irms 105C
10	65	75	150	1500	40	1.8	38	29	23
12	65	85	140	1680	50	1.8	41	31	25
15	65	95	120	1800	65	1.9	42	32	26
20	65	110	100	2000	80	1.9	43	33	26
25	65	135	80	2000	100	1.8	44	33	27
30	65	135	80	2400	100	1.7	48	36	29
35	65	155	65	2275	120	1.9	51	39	31
40	90	135	80	3200	100	1.8	54	41	33
50	90	155	65	3250	120	1.6	55	42	33
60	90	155	65	3900	120	1.5	66	50	40
68	90	190	107	7276	132	1.4	62	47	37
100	90	280	65	6500	132	1.3	65	49	39

**ACF AC Filter Capacitor : Specifications and Size : 640Vac / 900Vdc**

Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>peak</sub> A	ESL nH	ESR (mohm) 100KHz	Irms 55C	Irms 85C	Irms 105C
6	65	75	170	1020	40	3.4	27	20	16
7	65	75	170	1190	40	3.3	31	24	19
8	65	75	170	1360	40	2.4	36	27	22
10	65	85	160	1600	50	1.9	41	31	25
12	65	95	150	1800	60	1.7	44	34	27
15	65	110	140	2100	80	1.8	45	34	28
20	65	135	110	2200	100	1.9	44	34	27
25	65	155	90	2250	120	1.9	42	32	26
25	90	110	150	3750	80	1.4	54	41	33
30	90	135	110	3300	110	1.6	56	43	34
35	90	155	90	3150	120	1.5	59	45	36
40	90	155	90	3600	120	1.3	61	47	37
50	90	190	90	4500	132	1.3	69	53	42
60	90	240	90	5400	132	1.2	72	55	44
70	90	280	90	6300	132	1.1	72	55	44

**ACF AC Filter Capacitor : Specifications and Size : 700Vac / 1000Vdc**

Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>peak</sub> A	ESL nH	ESR (mohm) 100KHz	Irms 55C	Irms 85C	Irms 105C
5	65	75	190	950	40	3.5	30	23	18
6	65	75	190	1140	40	3.4	36	28	22
7	65	85	170	1190	50	3.6	33	25	20
8	65	85	170	1360	50	3.4	37	28	23
10	65	95	160	1600	60	3.2	37	28	23
12	65	110	145	1740	80	3.3	38	29	23
15	65	135	130	1950	100	3.4	36	28	22
20	65	155	110	2200	120	3.1	39	30	24
20	90	135	130	2600	100	2.2	43	33	26
25	90	135	130	3250	100	1.9	53	41	32
30	90	155	110	3300	120	2.1	52	40	32
35	90	155	110	3850	120	1.8	51	39	31
40	90	190	100	4000	132	1.3	59	45	36
50	90	240	100	5000	132	1.3	54	42	33
60	90	280	100	6000	132	1.4	62	47	38

**ACF AC Filter Capacitor : Specifications and Size : 900Vac / 1350Vdc**

Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>peak</sub> A	ESL nH	ESR (mohm) 100KHz	Irms 55C	Irms 85C	Irms 105C
5	65	85	190	950	50	3.5	38	29	23
6	65	95	185	1110	60	3.6	38	29	23
8	65	110	175	1400	80	3.6	38	29	23
10	65	135	175	1750	100	4.1	38	29	23
12	65	155	148	1776	120	4.4	38	29	23
12	90	110	175	2100	80	1.6	56	43	34
15	90	135	165	2475	100	1.8	52	40	32
20	90	155	148	2960	120	1.9	57	44	35
25	90	190	140	3500	132	1.3	59	45	36
30	90	240	140	4200	132	1.4	62	47	38
40	90	280	140	5600	132	1.3	63	48	39

## 1.2.2 DC Filter Capacitors DCL series

### Applications :

The DCL capacitor is specifically designed for DC filtering, DC Link and low reactive power applications.

### Properties :

Low ESR, Low Inductance, High Insulation Resistance, high ripple current capability, flame Retardant Construction with UL94-V0 plastic case and epoxy rein and Easy Installation

### Electrical Connections :

DCL-AB : M6 / M8 threaded bolts

DCL-AN : threaded female nuts

### Electrical Characteristics :

**Capacitance range** : 40uF - 150uF

**Capacitance Tolerance** : +/-5%; +/-10%

**Rated Voltage** : 800 ~1450Vdc

**Ripple Current** up to 80A

**Equivalent Series Resistance (ESR)** : measured at 23C 100kHz

**Dissipation factor (DF)** : <0.1% 1KHz) at 23C

**Testing Voltage** : Terminal to Terminal : 1.5 x rated voltage 10sec 23C

Terminal to Case : 4000Vac 60s 23C

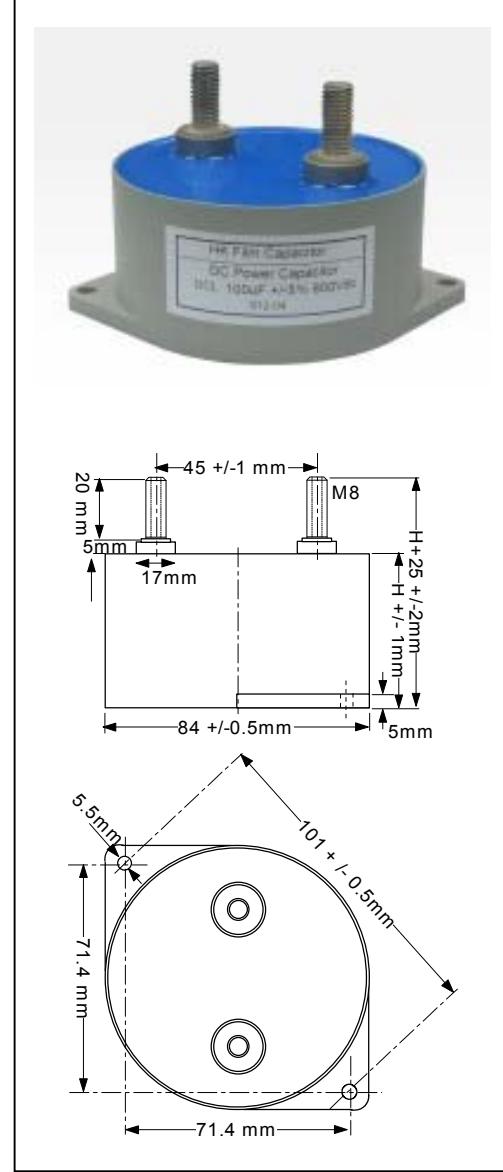
**Pulse Voltage rise & fall time dV/dt** : detail information available on request

**Rated Temperature** : -25C to +85C

### Options :

**Thermocouple** can be build-in :

- capacitor internal temperature can be measured
- output temperature signal can be used as one of reference signals in the circuit and trigger other function



### Specification and Size :

Capacitance uF	Voltage Vdc	H mm	dv/dt v/us	Peak Current I <sub>peak</sub> A	ESL nH	ESR (mohm) 10KHz	Irms 65C
68	800	44	40	2720	20	0.6	80
100	800	54	30	2800	30	0.8	80
140	800	67	20	2800	40	1.1	80
150	800	67	20	3000	40	1.2	80
47	1000	44	55	2585	20	0.7	76
68	1000	54	40	2720	30	1.0	65
100	1000	67	30	3000	40	1.1	65
47	1250	54	55	2585	30	0.9	50
70	1250	67	35	2450	40	1.1	50
40	1450	54	70	2800	30	0.8	50
60	1450	67	45	2700	40	0.9	50

For any Capacitance value, Voltage, ripple current is not listed above, please feel free to contact us. We might have a direct replacement for your need.

## 1.2.3 Pulse Current Capacitors / DC Filter Capacitors DCF-03 and DCF-04 series

- medium Frequency range and higher RMS Current
- for 20 - 100kHz frequency

### Applications :

For Switching Power Supply input filtering, DC blocking and output filter, welding equipment, DC Filtering application, MMC Capacitors module / Multi-Miniature Capacitors module

### Constructions :

Supporting different Capacitor Configuration, electrical connections and mounting options so as to increase your design flexibility

### Properties :

Medium Frequency range and RMS Current Capacity; very Low Losses and Low Inductance, High Insulation Resistance; both AC and DC voltage; Flame Retardant Construction; Easy Installation

### Electrical Connections :

Large Terminals - to deliver larger discharge current Ipp and Ir.m.s. when compare with traditional copper tin wires

### Electrical Characteristics :

**DCF-03QI / DCF-03QL / DCF-03QT** – higher RMS current

Rated Voltage : 100 - 400Vdc / 70 - 250Vac

RMS Current up to 30A

**DCF-04QI / DCF-04QL / DCF-04QT** – smaller size & higher voltage range

Rated Voltage : 250 - 700Vdc / 160 - 400Vac

RMS Current up to 13A

**Capacitance range** : 1uF - 30uF

**Capacitance Tolerance** : +/-5%; +/-10%

**Equivalent Series Resistance (ESR)** : measured at 25C 100kHz

**Dissipation factor (DF)** : <0.1% 1KHz) at 23C

**Testing Voltage** : 2 x U<sub>n</sub> 60sec 25C (can be customized design)

**Insulation Resistance** : Terminal – Terminal : 300,000M ohm 500Vdc 60sec

Terminal – Case : 5000M ohm 500Vdc 60sec

**Operate Temperature** : -25C - +70C / -25C - +85C / -25C - +105C

Full rated voltage at 85C, derate linearly to 50% rated voltage at 105C.

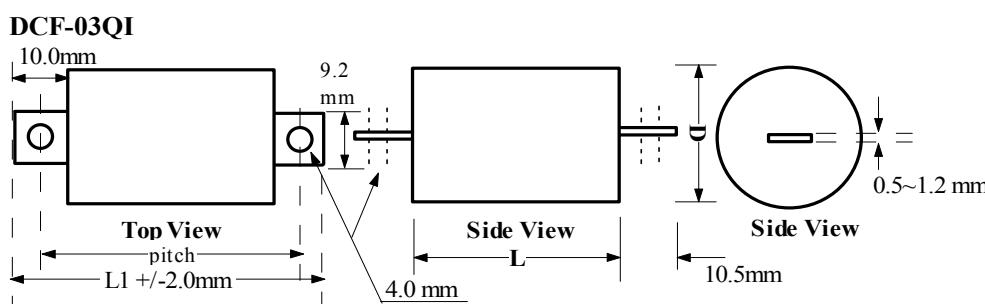
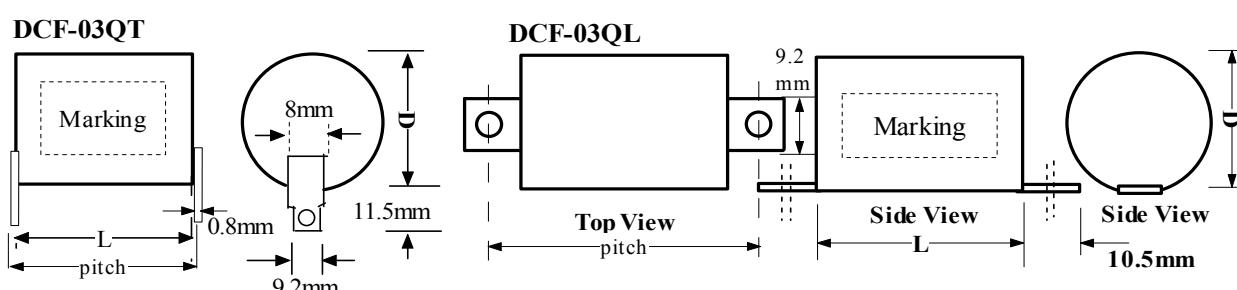
**Pulse Voltage rise & fall time dv/dt** : detail information available on request

### Options :

**Thermocouple** can be build-in :

- capacitor internal temperature can be measured

- output temperature signal can be used as one of reference signals in the circuit and trigger other function



Dimension Tolerance : +/-1mm unless specify



# Pulse Current Capacitors / DC Filter Capacitors DCF-03QI series

Specifications and Size : 100Vdc / 75Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	I rms A							Peak Pulse Current A	Max. dv/dt V/us	Max. ESR @ 100KHz mohm 90C
				+25C	+45C	+55C	+65C	+75C	+85C	+90C			
1.0 uF	15	31	50	11	9.9	8.9	8.0	6.5	5.2	4.4	22	22	15
2.0 uF	18	33	52	12.5	11.3	10.1	9	7.2	6.4	5.5	38	19	12
2.2 uF	20	33	52	13	11.7	10.5	9.3	7.4	6.6	5.6	41	19	12
3.0 uF	21	38	57	13.5	12.2	10.9	9.8	8.8	7.7	6.5	45	15	11
3.3 uF	22.5	38	57	14	12.4	11.2	10.2	9.0	7.9	6.7	49.5	15	11
5.0 uF	25.5	38	57	15.5	13.1	11.8	10.6	9.6	8.6	7.5	75	15	10
10.0 uF	26.5	42	61	18	15.3	13.7	12.3	11.2	10.0	8.5	100	10	9
20.0 uF	33	52	71	23	19.5	17.5	15.8	14.2	12.8	11	140	7	8
30.0 uF	39	52	71	25	21.2	19.1	17.2	15.4	13.9	12.2	210	7	6

Specifications and Size : 200Vdc / 140Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	I rms A							Peak Pulse Current A	Max. dv/dt V/us	Max. ESR @ 100KHz mohm 90C
				+25C	+45C	+55C	+65C	+75C	+85C	+90C			
1.0 uF	18	33	52	8	8	8	8	8	6.8	5.4	15	15	20
2.0 uF	21.5	38	57	14.5	12.3	11	9.9	9	8.1	7.2	22	11	15
2.2 uF	22.5	38	57	15	12.7	11.5	10.3	9.2	8.3	7.3	24.2	11	15
3.0 uF	26	38	57	16	13.6	12.2	11	9.9	8.9	7.5	33	11	13
3.3 uF	27	38	57	16.5	14.8	13.3	12	10.8	9.6	7.7	36.3	11	13
5.0 uF	33	38	57	19	16.2	14.5	13	11	10	8.5	55	11	11
10.0 uF	37.5	50	69	22.5	19	17	15.5	13.9	12.5	10.6	100	10	9
20.0 uF	44.5	65	86	28	23.8	21	18.9	16	14.5	13	140	7	6

Specifications and Size : 400Vdc / 270Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	I rms A							Peak Pulse Current A	Max. dv/dt V/us	Max. ESR @ 100KHz mohm 90C
				+25C	+45C	+55C	+65C	+75C	+85C	+90C			
1.0 uF	19.5	38	57	9.5	9.5	9.5	9.5	8.3	7.5	6.7	20	20	18
2.0 uF	22	50	69	15	15	15	14.2	12.4	10.5	8.5	32	16	15
2.2 uF	22.5	50	69	15.5	15.5	15.5	14.7	12.9	11	9.0	35	16	15
3.0 uF	26	50	69	21	17.8	16	15.2	13.7	11.6	9.6	48	16	11
3.3 uF	27	50	69	21.5	18	16.4	15	13.8	12.4	9.8	52	16	11
5.0 uF	28	65	86	24.4	20.7	18.6	16.7	15	13.5	11.5	55	11	8
10.0 uF	40	65	86	30	25.5	22.9	20.5	18.5	16.6	14.5	110	11	6

For other Capacitance, Voltage, r.m.s. Current and Peak Pulse Current not listed, please contact us for details.

## Pulse Current Capacitors / DC Filter Capacitors DCF-04QI series

### Specifications and Size : 250Vdc / 160Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. ESR @ 100KHz mohm	Max. dv/dt V/us	Peak Current A	Irms 70C 100kHz A
1	11.5	22	43	2.4	99	99	5.4
1.5	10.5	34	55	4.9	55	82.5	7.1
2.2	11.5	34	55	3.3	55	121	9.1
2.5	12.5	34	55	3	55	138	9.1
3	14	34	55	2.6	55	165	9.1
5	17.5	34	55	1.9	55	275	9.7
6.8	20.5	34	55	1.6	55	374	9.7
10	20.5	45	66	1.9	33	330	9.7
15	25	45	66	1.4	33	495	13.2
20	28.5	45	66	1.3	33	660	13.2
25	32	45	66	1.3	33	825	13.2
30	30	58	79	2.3	22	660	13.2

### Specifications and Size : 400Vdc / 250Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. ESR @ 100KHz mohm	Max. dv/dt V/us	Peak Current A	Irms 70C 100kHz A
0.68	10.5	34	55	6.7	77	53	6.1
1	12.5	34	55	4.6	77	77	8.1
1.5	15	34	55	3.2	77	116	9.1
2	17	34	55	2.6	77	154	9.7
2.2	18	34	55	2.5	77	169	9.7
2.5	19	34	55	2.3	77	193	9.7
3	20.5	34	55	2.1	77	231	9.7
4	20	45	66	2.7	55	220	9.7
4.7	21.5	45	66	2.4	55	259	10.8
5	22	45	66	2.3	55	275	10.8
6.8	25.5	45	66	1.9	55	374	13.2
10	30.5	45	66	1.6	55	550	13.2
15	32.5	58	77	2.8	33	495	13.2

### Specifications and Size : 600Vdc / 330Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. ESR @ 100KHz mohm	Max. dv/dt V/us	Peak Current A	Irms 70C 100kHz A
1	16	34	55	3.8	110	110	9.7
2	19	45	66	3.7	83	166	9.7
2.2	20	45	66	3.5	83	183	9.7
3	23	45	66	2.8	83	249	10.8
4.7	28	45	66	2.1	83	390	13.2
5	29	45	66	2	83	415	13.2
6.8	29	58	79	4.1	55	374	13.2
10	35	58	79	3.2	55	550	13.2

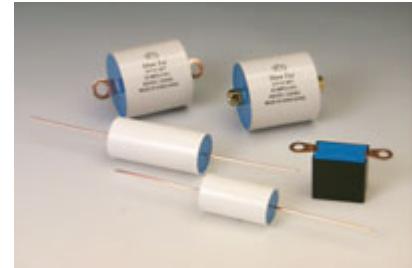
### Specifications and Size : 700Vdc / 400Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. ESR @ 100KHz mohm	Max. dv/dt V/us	Peak Current A	Irms 70C 100kHz A
0.68	17.5	34	55	4.1	138	94	9.7
1	21	34	55	3.1	138	138	10.8
1.5	21	45	66	3.8	99	149	10.8
2	24	45	66	3	99	198	13.2
2.2	25	45	66	2.8	99	218	13.2
3	29	45	66	2.3	99	297	13.2
4	33.5	45	66	2	99	396	13.2
4.7	30	58	79	4.7	66	310	13.2
5	31	58	79	4.4	66	330	13.2

## 1.2.4 High Power DC Filter Capacitors : - STFC-series

### Applications :

- High Frequency and Current application
- DC filter circuit
- act as discharge capacitor to trigger laser or energy discharge function
- EMC Filter application
- Voltage Converters and Frequency Converters
- Traction drives and Industrial drives
- UPS and Equipment



### Electrical Connection and Mounting :

- high current carrying capacity construction
- copper terminal tab
- copper M6, M8, M10 screw nut
- Contact Surface Area : reinforced, flat and even design

### Constructions :

- Axial Thermoplastic case with Epoxy Resin end sealed : so that the capacitor can be operated at a higher temperature range and harsh working environment (all plastic parts and epoxy resin being used are self-extinguishing UL94-V0 grade)
- Supporting different Capacitor Configuration, electrical connections and mounting options so as to increase your design flexibility



### Electrical Characteristics :

**Capacitance** : 3uF – 100uF

**Tolerance** : +/-10%, +/-5% at 23C 1kHz

**Voltage** : 200V – 2150V



### Testing Voltage :

- DC Voltage :  $1.5 \times U_n$  30sec (can be customized design)
- AC Voltage : according to EN61071 (can be customized design)
- Terminal - Case :  $2 \times U_n + 1000\text{Vac}$  60 seconds



**Operate Temperature** : -25C - +70C / -25C - +85C / -25C - +105C

very low losses and low inductance

High Current carrying capacity

Thermoplastic case pot with UL90V-0 epoxy – so that the capacitor can be operated at a higher temperature range and harsh working environment

Temperature range : -25C - +85C / -40C - +105C

Pulse Voltage rise & fall time dv/dt : detail information available on request

The combination of Capacitance value and Voltage or should there be a Dimensional constraint, please contact us for a design suited to your particular needs.

## 1.2.5 Feed Through Capacitors : - STF-series

### Applications :

- High Frequency and High Current AC, DC filter circuit
- EMC Filter application

### Specifications :

- high feed through current capacity
- Contact Surface Area : reinforced, flat and even design
- large contact surface area
- can withstand stronger external force
- very low losses and low inductance
- high Insulation Resistance
- not easy to oxidation – lower contact resistance
- will not flashover on the contact surfaces
- Solderable



### Constructions :

- Supporting different Capacitor Configuration, electrical connections and mounting options so as to increase your design flexibility
- wrap with flame-retardant tape + strong Contact Surface Area



### Electrical Characteristics :

**Capacitance** : 0.1uF - 20uF

**Tolerance** : +/-10%, +/-5% at 23C 1kHz

**Voltage** : AC & DC is available,  
48Vac - 1200Vac  
100Vdc - 3000Vdc

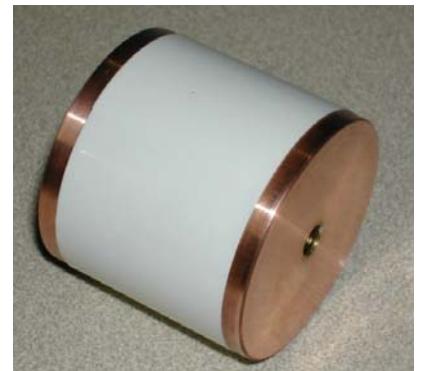


### Testing Voltage :

- DC Voltage :  $1.6 \times U_n$  60sec (can be customized design)
- AC Voltage : according to EN132400 (can be customized design)
- according to X1, X2, Y1 and Y2

Temperature range : -25C - +70C / -40C - +85C (full voltage rating)

Pulse Voltage rise & fall time dv/dt : detail information available on request.



The combination of Capacitance value and Voltage or should there be a Dimensional constraint, please contact us for a design suited to your particular needs.

### 1.3.1 Medium Power Film Capacitors – DLFF series

#### Applications :

- Automotive, Wind Power, Solar Power and Industrial application
- Converter and Inverter circuit
- DC Link circuit and application
- Smoothing and Filter circuit
- can be a better replacement for electrolytic capacitor
- AC / DC application

#### Properties and comparison with Electrolytic Capacitor :

Use segmented self-healing metallized polypropylene film

Lower ESR and ESL

Lower dielectric and resistive loss

high Capacitance volume ratio

higher r.m.s. current per capacitance

support higher voltage range

longer application life

Non polar dielectric

Dry construction

Don't have electrolyte leakage problem

can deliver higher ripple RMS current per capacitance



#### Electrical Characteristics :

**Rated Voltage** : 600Vdc - 1400Vdc

**Capacitance range** : 50uF - 1100uF

#### Test Voltage :

Terminal to Terminal :  $1.5 \times$  rated voltage for 10 seconds at +85C / +105C

Terminal to Case : 4500Vac 60 seconds at +85C / +105C

**Operate Temperature** : -25C to +85C / -40C to +105C

**Reference Standard** : IEC 61071

**Life Expectancy** : 100,000 hours at rated Vdc at +85C / +105C

30,000 hours at rated Vac at +85C / +105C

**Accelerated Life** :  $1.25 \times$  Vac 5,000 hours at +85C / +105C

**Insulation Resistance** : 250Vdc +25C  $\geq$  300,000Mohm

250Vdc +85C  $\geq$  50,000Mohm

250Vdc +105C  $\geq$  5,000Mohm

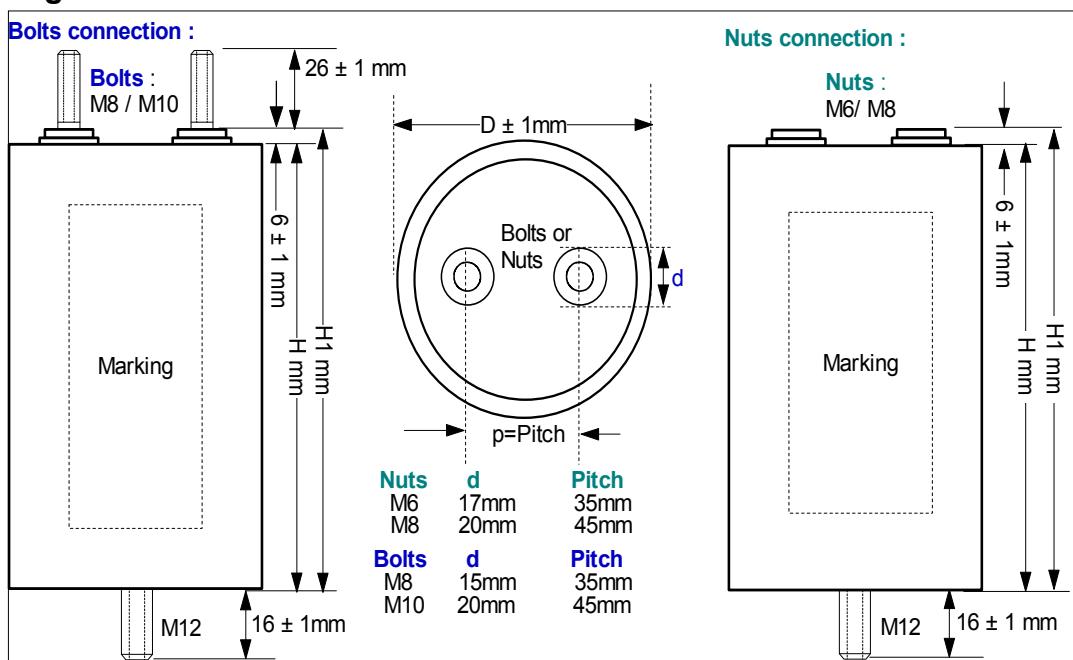
#### Options :

**Thermocouple** can be built-in :

- capacitor internal temperature can be measured

- output temperature signal can be used as one of reference signals in the circuit and trigger other function

#### Drawing :



Other voltage, Capacitance, Irms and configurations can be provided. Please contact us for details.

**DLFF series**

Specifications and Size : 600Vdc / 250Vac at 85C

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 25C	I rms A 40C	I rms A 55C	I rms A 75C	Dimensions		
								D	H	H1
220	600	11	2420	44	37	31	22	75	115	121
250	600	11	2750	50	42	36	25	75	115	121
300	600	11	3300	60	51	43	30	90	115	121
400	600	9	3600	56	47	40	28	90	140	146
450	600	9	4050	63	53	45	32	90	140	146
500	600	8	4000	55	46	39	27	90	160	166
550	600	8	4400	61	51	44	30	90	160	166
600	600	10	6000	78	66	56	39	90	195	201
700	600	8	5600	64	54	46	32	90	250	256
800	600	8	6400	73	62	52	36	90	250	256
900	600	8	7200	82	69	59	41	90	250	256
1000	600	7	7000	72	61	52	36	90	295	301
1100	600	7	7700	80	68	57	40	90	295	301

Specifications and Size : 800Vdc / 300Vac at 85C

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 25C	I rms A 40C	I rms A 55C	I rms A 75C	Dimensions		
								D	H	H1
150	800	15	2250	37	32	27	19	75	115	121
200	800	11	2200	35	30	25	17	75	140	146
200	800	15	3000	50	42	36	25	90	115	121
250	800	9	2250	35	29	25	17	75	160	166
250	800	11	2750	46	39	33	23	90	140	146
270	800	11	2970	37	31	27	19	75	160	166
300	800	9	2700	42	35	30	21	90	160	166
350	800	9	3150	49	41	35	24	90	160	166
400	800	13	5200	65	55	47	32	90	195	201
450	800	10	4500	52	44	37	26	90	250	256
500	800	10	5000	44	37	31	22	90	250	256
550	800	10	5500	63	53	45	31	90	250	256
600	800	8	4800	55	46	39	27	90	295	301
700	800	8	5600	64	54	46	32	90	295	301

**DLFF series**

Specifications and Size : 1000Vdc / 370Vac at 85C

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 25C	I rms A 40C	I rms A 55C	I rms A 75C	Dimensions		
								D	H	H1
120	1000	17	2040	36	30	26	18	90	115	121
150	1000	17	2550	45	38	32	22	90	115	121
180	1000	12.5	2250	38	32	27	19	90	140	146
220	1000	11	2420	37	31	26	18	90	160	166
250	1000	15	3750	63	53	45	31	90	195	201
300	1000	11	3300	43	36	31	21	90	250	256
350	1000	11	3850	50	42	36	25	90	250	256
400	1000	10	4000	44	37	31	22	90	295	301
450	1000	10	4500	49	41	35	24	90	295	301

Specifications and Size : 1200Vdc / 420Vac at 85C

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 25C	I rms A 40C	I rms A 55C	I rms A 75C	Dimensions		
								D	H	H1
70	1200	20	1400	25	21	18	12	75	115	121
100	1200	20	2000	35	29	25	17	90	115	121
150	1200	14.5	2175	37	31	26	18	90	140	146
170	1200	12	2040	33	28	23	16	90	160	166
200	1200	18	3600	46	39	33	23	90	195	201
220	1200	18	3960	35	29	25	17	90	195	201
250	1200	13	3250	40	34	28	20	90	250	256
300	1200	13	3900	48	40	34	24	90	250	256
320	1200	11	3500	42	35	30	21	90	295	301
350	1200	11	3850	44	37	31	22	90	295	301

Specifications and Size : 1400Vdc / 500Vac at 85C

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 25C	I rms A 40C	I rms A 55C	I rms A 75C	Dimensions		
								D	H	H1
50	1400	23	1150	20	17	14	10	75	115	121
70	1400	23	1610	28	23	20	14	90	115	121
100	1400	17	1700	28	23	20	14	90	140	146
120	1400	14.5	1740	27	23	19	13	90	160	166
130	1400	14.5	1885	29	24	21	14	90	160	166
150	1400	23	3450	39	33	28	19	90	195	201
200	1400	17	3400	36	31	26	18	90	250	256
230	1400	14.5	3335	34	28	24	17	90	295	301
250	1400	14.5	3625	36	30	26	18	90	295	301
270	1400	14.5	3915	39	33	28	19	90	295	301

**DLFF series****Specifications and Size : 600Vdc / 250Vac at 105C**

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 40C	I rms A 55C	I rms A 75C	I rms A 85C	I rms A 90C	I rms A 105C	Dimensions		
										D	H	H1
150	600	14	2100	46	41	35	29	24	11	90	115	121
200	600	14	2800	62	55	47	40	32	16	90	115	121
250	600	11	2750	55	49	42	35	28	14	90	140	146
270	600	11	2970	59	53	45	38	30	15	90	140	146
300	600	11	3300	63	56	48	41	32	16	90	140	146
350	600	13	3850	70	63	53	46	36	18	90	195	201
400	600	13	5200	80	72	61	52	41	21	90	195	201
450	600	10	4500	64	57	49	41	33	16	90	250	256
500	600	10	5000	70	63	53	46	36	18	90	250	256
550	600	10	5500	77	69	59	50	40	21	90	250	256
600	600	10	6000	85	76	65	55	44	22	90	250	256

**Specifications and Size : 800Vdc / 300Vac at 105C**

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 40C	I rms A 55C	I rms A 75C	I rms A 85C	I rms A 90C	I rms A 105C	Dimensions		
										D	H	H1
120	800	17	2040	44	39	34	28	22	11	90	115	121
150	800	17	2550	54	48	41	35	28	14	90	115	121
180	800	12.5	2250	45	40	34	29	23	11	90	140	146
220	800	15	3300	58	53	45	38	30	15	90	195	201
250	800	15	2750	67	60	51	44	35	17	90	195	201
300	800	11	3300	57	51	43	37	29	14	90	250	256
350	800	11	3850	66	59	50	43	34	17	90	250	256
400	800	9	3600	56	50	43	36	29	14	90	295	301
450	800	9	4050	63	56	48	41	32	16	90	295	301

**Specifications and Size : 1000Vdc / 350Vac at 105C**

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 40C	I rms A 55C	I rms A 75C	I rms A 85C	I rms A 90C	I rms A 105C	Dimensions		
										D	H	H1
60	1000	31	1860	42	37	32	27	21	10	90	90	96
70	1000	31	2170	49	44	37	31	25	12	90	90	96
100	1000	20	2000	42	37	32	27	21	10	90	115	121
170	1000	18	3060	53	53	45	38	30	15	90	195	201
200	1000	18	3600	63	56	48	41	32	16	90	195	201
220	1000	13	2860	48	43	37	31	25	12	90	250	256
250	1000	13	3250	56	50	43	36	29	14	90	250	256
300	1000	11	3300	48	43	37	31	25	12	90	295	301
320	1000	11	3520	52	46	39	33	27	13	90	295	301

**DLFF series**Specifications and Size : 1200Vdc / 400Vac at **105C**

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 40C	I rms A 55C	I rms A 75C	I rms A 85C	I rms A 90C	I rms A 105C	Dimensions		
										D	H	H1
50	1200	35	1750	38	34	29	24	19	10	90	90	96
70	1200	23	1610	32	29	24	21	16	8	90	115	121
100	1200	17	1700	33	29	25	21	17	8	90	140	146
130	1200	21	2730	45	40	34	29	23	11	90	195	201
150	1200	21	3150	51	46	39	33	27	13	90	195	201
200	1200	15	3000	50	45	38	32	26	13	90	250	256
225	1200	13	2925	41	36	31	26	21	10	90	295	301
230	1200	13	2990	42	37	32	27	21	10	90	295	301
250	1200	13	3250	45	40	34	29	23	11	90	295	301
270	1200	13	3510	49	44	37	31	25	12	90	295	301

## 1.4.1 Energy Discharge Capacitors

Pulse Grade Capacitors : STP-02R and STP-02RM series

STP-02RM is a smaller version of STP-02R

### Applications :

- Electric Fence Energizer, Welding Energizer Equipment, High intensity discharge lighting, High Energy and Current Discharge applications
- Capacitor can be direct short circuit at rated voltage without any protective component

### Constructions :

Supporting different Capacitor Configuration, electrical connections and mounting options so as to increase your design flexibility

### Electrical Connections :

Tin plated copper lead wire

Flexible electrical lead wire

Support Varies type Terminals : 250 type 6.35mm, 187 type 4.75mm, T280 type 4mm and other large size Terminals – which can deliver larger discharge current Ipp when compare with lead wires



### Properties :

Low D.F. & Dielectric loss, High Discharge Current & Voltage Capabilities; High Insulation Resistance; AC and DC voltage; Flame Retardant Construction; Easy Installation

**Mountings :** Plastic Cylindrical Case : with stud – M8 / without stud

### Electrical Characteristics :

**Rated Voltage :** 400 - 1600Vdc / 220 - 570Vac ( can customized design )

**Capacitance range :** 0.1uF - 200uF

**Capacitance Tolerance :** +/-5%; +/-10%

**Equivalent Series Resistance (ESR) :** measured at 25C 100kHz

**Dissipation factor (DF) :** <0.1% 1KHz) at 23C

**Testing Voltage :** (can be customized design)

STP-02R : 1.2 x U<sub>n</sub> 10sec 25C

STP-02RM : 1.2 x U<sub>n</sub> 10sec 25C

STP-02QT, STP-02QL, STP-02QI : 1.6 x U<sub>n</sub> 10sec 25C

**Insulation Resistance :** Terminal – Terminal : 15000M ohm 1kVdc 60sec

Terminal – Case : 5000M ohm 1kVdc 60sec

**Operate Temperature :** -25C - +70C / -25C - +85C / -40C - +105C

### Options :

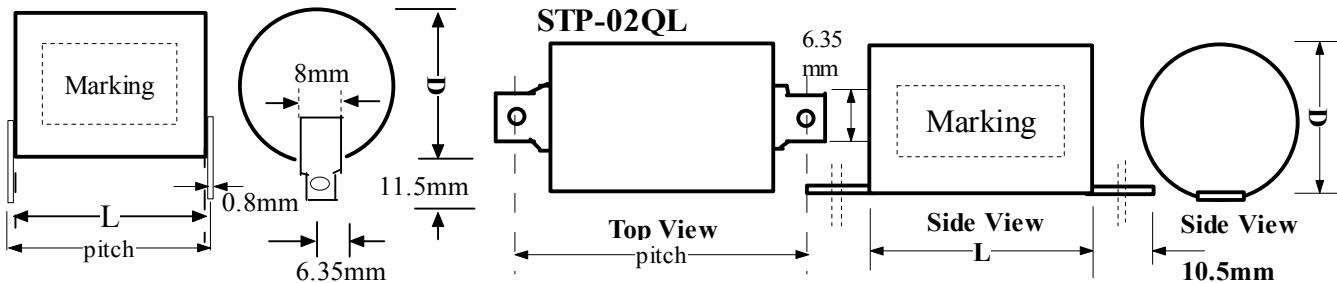
**Thermocouple** can be build-in :

- capacitor internal temperature can be measured
- output temperature signal can be used as one of reference signals in the circuit and trigger other function

## Energy Discharge Capacitors - STP-02QT and STP-02QL series

- large Terminals to deliver larger discharge current Ipp and Ir.m.s. when compare with traditional copper tin wires
- for Welding Equipment, power supply and Multi-Mini Capacitors module application

### STP-02QT



Specifications and Size : 450Vdc / 280Vac at 70C

+/- 1mm

Capacitance uF	Diameter D mm	Length L mm	STP-02QT pitch mm	STP-02QL pitch mm	I.R in Mohm 100V	ESR 100KHz mohm	dv/dt V/us	Peak Pulse Current A 70C	r.m.s. Current A 70C
2.0uF	22.5	37.5	38.5	51.5	600,000	3.1	90	180	10A
2.2uF	23.5	37.5	38.5	51.5	600,000	3.0	90	198	10A
2.5uF	24.5	37.5	38.5	51.5	600,000	3.0	90	225	10A
3.0uF	26	37.5	38.5	51.5	600,000	3.0	90	270	10A
4.0uF	31.5	37.5	38.5	51.5	600,000	2.9	90	360	10A
6.0uF	37	37.5	38.5	51.5	600,000	2.9	90	540	12A
6.8uF	38.5	37.5	38.5	51.5	600,000	2.5	90	621	12A
8.0uF	43	37.5	38.5	51.5	600,000	2.2	90	720	12A
9.0uF	44.5	37.5	38.5	51.5	600,000	2.2	90	810	12A
10.0uF	38	49	50	63	400,000	2.3	70	700	13.5A
12.0uF	41.5	49	50	63	400,000	2.3	70	840	13.5A
15.0uF	45	49	50	63	400,000	2.0	70	1050	13.5A
17.0uF	47	49	50	63	400,000	2.0	70	1190	13.5A
20.0uF	52	49	50	63	400,000	1.8	70	1400	13.5A

Specifications and Size : 600Vdc / 330Vac at 70C

Capacitance uF	Diameter D mm	Length L mm	STP-02QT pitch mm	STP-02QL pitch mm	I.R in Mohm 100V	ESR 100KHz mohm	dv/dt V/us	Peak Pulse Current A 70C	r.m.s. Current A 70C
2.0uF	22.5	38.5	39.5	52.5	600,000	3.1	120	240	11A
2.2uF	23.5	38.5	39.5	52.5	600,000	3.0	120	264	11A
2.5uF	24.5	38.5	39.5	52.5	600,000	3.0	120	300	11A
3.0uF	26	38.5	39.5	52.5	600,000	3.0	120	360	11A
4.0uF	31.5	38.5	39.5	52.5	600,000	2.9	120	480	11A
6.0uF	37	38.5	39.5	52.5	600,000	2.9	120	720	13.5A
6.8uF	38.5	38.5	39.5	52.5	600,000	2.5	120	816	13.5A
8.0uF	43	38.5	39.5	52.5	600,000	2.2	120	960	13.5A
9.0uF	44.5	38.5	39.5	52.5	600,000	2.2	120	1080	13.5A
10.0uF	39.5	48	49	62	400,000	2.3	100	1000	15A
12.0uF	43	48	49	62	400,000	2.3	100	1200	15A
15.0uF	47	48	49	62	400,000	2.0	100	1500	15A
17.0uF	50	48	49	62	400,000	2.0	100	1700	15A
20.0uF	54	48	49	62	400,000	1.8	100	2000	15A

For other Capacitance, Voltage and Peak Pulse Discharge Current not listed, please contact us for details.

## 2.1 High Voltage Filter Capacitors :

**STHVF** : with screw Nut at Capacitor both Ends

**STHVF-A** : with Copper Lead at Capacitor both Ends ( Axial Lead )

### Applications :

- By-pass DC / AC Filtering, Transient and Harmonic Damping
- Coupling and Decoupling
- Filter applications
- Voltage Multiplier
- Induction heating
- X-Ray power supplies
- Electrostatic air cleaners



### Features :

- Polypropylene film dielectric
- low inductance
- excellent Frequency Response
- RMS Current Rating
- high peak Pulse Current Ratings (dv/dt)
- higher Temperature range
- M6, M8 and M10 screw threads/nut as capacitor electrical terminal



### When compare with traditional Paper Dielectric, Oil Impregnated and Metal Enclosure Capacitor :

- Plastic enclosure : safer when compare with oil impregnated capacitor.
- Dry construction : Epoxy Resin end seal and doesn't have impregnant liquid leakage problem
- Plastic enclosure and Epoxy Resin are flame retardant UL94-V0 grade
- compact size and light weight
- higher Insulation Resistance and Insulation Voltage
- low capacitor loss

### Electrical Characteristics : STHVF series

#### Voltage range :

6000Vdc	8000Vdc	10,000Vdc	12,000Vdc	15,000Vdc	20,000Vdc	25,000Vdc	30,000Vdc
1350Vac	1500Vac	1700Vac	2000Vac	2500Vac	3000Vac	4000Vac	5000Vac

**Capacitance range** : 0.025uF – 1uF

**Tolerance** : +/-10% +/-5% at 25C

**Rated Temperature** : -25C to +85C / -40C to +105C

**Insulation Resistance** : 250Vdc +25C >= 300,000Mohm  
250Vdc +85C >= 50,000Mohm  
250Vdc +105C >= 5,000Mohm

**Testing Voltage Terminal to Terminal** : Voltage Vdc < 20kVdc : 2.15 x rated Vdc 60 seconds at 105C

> 20kVdc : 1.75 x rated Vdc 60 seconds at 105C

Voltage Vac : 1.75 x rated Vac 60 seconds at 105C

**Accelerated Life** : 1.25 x Vdc or Vac at 105C for 2,000 hours

**RMS Current** - Irms : up to 65Arms

**Peak discharge current** - I peak : up to 2200A

**Low ESR and series Inductance** : refer to the data listed below

**Temperature range** : -25C to +70C / -25C to +85C / -40C to +105C

**Pulse Voltage rise & fall time dv/dt** : detail information available on require

### Electrical Characteristics : STHVF-A series : Copper lead at Capacitor both ends (Axial Lead)

#### Voltage range :

4000Vdc	6000Vdc	8,000Vdc	10,000Vdc	12,000Vdc	15,000Vdc	20,000Vdc
1800Vac	2500Vac	3000Vac	3500Vac	4500Vac	5500Vac	6500Vac

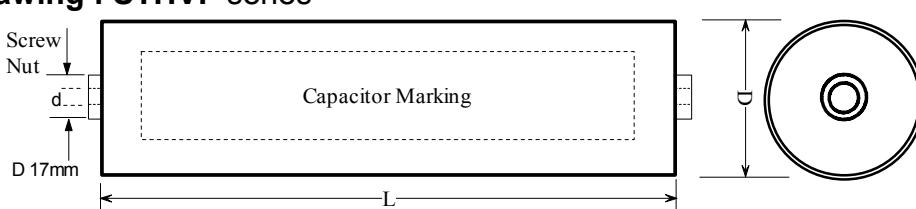
**Capacitance range** : 0.025uF – 0.82uF

**Tolerance** : +/-10% +/-5% at 25C

**Rated Temperature** : -25C to +70C / -25C to +85C / -40C to +105C

**Max. ripple current** Irms : up to 10A

### Drawing : STHVF series



### STHVF Specifications and Size : 1350Vac / 6000Vdc

Capacitance uF	Diameter D mm	Length L mm	dv/dt v/us	I <sub>peak A</sub> 105C	Irms 100kHz 85C	Irms 100kHz 105C	ESR mohm 100khz	Electrical connection Thread / Nut d
0.1	65	120	2700	270	8	6	9	M6
0.12	65	120	2700	324	9	7	7.7	M6
0.15	65	120	2700	405	11	8	7	M6
0.2	65	120	2700	540	15	11	6.5	M6
0.22	65	120	2700	594	16	12	6	M6
0.25	65	120	2700	675	19	14	5.5	M6
0.3	65	120	2700	810	22	16	5	M6
0.33	65	120	2700	891	25	18	4.5	M6
0.5	90	120	2700	1350	37	28	4.5	M6
0.68	65	210	1350	918	50	38	4	M6
1.0	90	210	1350	1350	65	56	4	M6

### STHVF Specifications and Size : 1500Vac / 8000Vdc

Capacitance uF	Diameter D mm	Length L mm	dv/dt v/us	I <sub>peak A</sub> 105C	Irms 100kHz 85C	Irms 100kHz 105C	ESR mohm 100khz	Electrical connection Thread / Nut d
0.1	65	120	3400	240	9	6	8	M6
0.12	65	120	3400	408	11	8	7.2	M6
0.15	65	120	3400	510	14	10	6.5	M6
0.2	65	120	3400	680	19	13	6	M6
0.22	65	120	3400	748	20	14	5.5	M6
0.25	65	120	3400	850	23	16	5	M6
0.3	90	120	3400	1020	28	19	4.5	M6
0.33	90	120	3400	1122	31	21	4	M6
0.5	65	210	1700	850	47	33	3.5	M6

### STHVF Specifications and Size : 1700Vac / 10000Vdc

Capacitance uF	Diameter D mm	Length L mm	dv/dt v/us	I <sub>peak A</sub> 105C	Irms 100kHz 85C	Irms 100kHz 105C	ESR mohm 100khz	Electrical connection Thread / Nut d
0.1	65	120	4300	430	11	7	7.5	M6
0.12	65	120	4300	516	13	9	7	M6
0.15	65	120	4300	645	16	11	6	M6
0.2	65	120	4300	860	22	15	5.5	M6
0.22	65	120	4300	946	24	17	5	M6
0.25	90	120	4300	1075	27	19	5	M6
0.27	90	120	4300	1161	30	21	5	M6
0.3	90	120	4300	1290	33	23	4.5	M6
0.33	90	120	4300	1419	36	25	4	M6
0.5	90	210	2150	1075	55	38	3.5	M6

### STHVF Specifications and Size : 2000Vac / 12000Vdc

Capacitance uF	Diameter D mm	Length L mm	dv/dt v/us	I <sub>peak A</sub> 105C	Irms 100kHz 85C	Irms 100kHz 105C	ESR mohm 100khz	Electrical connection Thread / Nut d
0.05	65	210	5900	295	9	6	25	M6
0.1	65	210	5900	590	19	11	20	M6
0.12	65	210	5900	708	18	12	18	M6
0.15	65	210	5900	885	23	15	15	M6
0.2	90	210	5900	1180	30	20	13	M6
0.22	90	210	5900	1298	33	21	12	M6
0.25	90	210	5900	1475	38	24	12	M6

### STHVF Specifications and Size : 2500Vac / 15000Vdc

Capacitance uF	Diameter D mm	Length L mm	dv/dt v/us	I <sub>peak A</sub> 105C	Irms 100kHz 85C	Irms 100kHz 105C	ESR mohm 100khz	Electrical connection Thread / Nut d
0.05	65	210	8250	412	9	6	25	M6
0.1	65	210	8250	825	19	13	20	M6
0.12	65	210	8250	990	18	13	18	M6
0.15	90	210	8250	1237	23	16	15	M6
0.2	90	210	8250	1650	31	22	13	M6
0.22	90	210	8250	1815	34	24	12	M6

### STHVF Specifications and Size : 3000Vac / 20000Vdc

Capacitance uF	Diameter D mm	Length L mm	dv/dt v/us	I <sub>peak A</sub> 105C	Irms 100kHz 85C	Irms 100kHz 105C	ESR mohm 100khz	Electrical connection Thread / Nut d
0.025	65	210	12200	305	7	5	35	M6
0.33	65	210	12200	402	9	7	30	M6
0.05	65	210	12200	610	14	10	25	M6
0.1	65	210	12200	1220	23	17	20	M6
0.12	90	210	12200	1464	28	21	18	M6
0.15	90	210	12200	1830	35	26	15	M6

### STHVF Specifications and Size : 4000Vac / 25000Vdc

Capacitance uF	Diameter D mm	Length L mm	dv/dt v/us	I <sub>peak A</sub> 105C	Irms 100kHz 85C	Irms 100kHz 105C	ESR mohm 100khz	Electrical connection Thread / Nut d
0.025	65	296	14000	350	10	7	60	M6
0.33	65	296	14000	462	13	9	55	M6
0.05	65	296	14000	700	14	10	50	M6
0.75	90	296	14000	1050	22	15	40	M6
0.1	90	296	14000	1400	29	20	36	M6
0.12	90	296	14000	1680	35	25	30	M6
0.15	90	296	14000	2100	38	26	30	M6

### STHVF Specifications and Size : 5000Vac / 30000Vdc

Capacitance uF	Diameter D mm	Length L mm	dv/dt v/us	I <sub>peak A</sub> 105C	Irms 100kHz 85C	Irms 100kHz 105C	ESR mohm 100khz	Electrical connection Thread / Nut d
0.025	65	296	18500	463	9	6	60	M6
0.33	65	296	18500	610	12	8	55	M6
0.05	90	296	18500	925	19	13	50	M6
0.1	90	296	18500	1850	29	20	40	M6
0.12	90	296	18500	2220	34	24	30	M6

## 2.2 High Voltage Pulse Capacitors : STHVP series

### Applications :

- High Voltage Energy and Current Discharge
- Medium Frequency range and RMS Current rating
- AC / DC voltage application
- Capacitor can be discharged at rated voltage directly without any protective component even at 105C
- High Voltage Decoupling and Snubbing
- Voltage Multiplier
- Induction heating
- act as discharge capacitor to trigger laser, X-Ray and Tesla Coil
- for high voltage capacitor bank or array
- High Voltage Power Supplies



### Features :

- low inductance
- excellent Frequency Response
- RMS Current Rating
- high peak Pulse Current Ratings (dv/dt)
- higher Temperature range
- M6, M8 and M10 screw threads/nut as capacitor electrical terminal



### When compare with traditional Paper Dielectric, Oil Impregnated and Metal Enclosure Capacitor :

- Plastic enclosure : safer when compare with oil impregnated capacitor.
- Dry construction : Epoxy Resin end seal and doesn't have impregnant liquid leakage problem
- Plastic enclosure and Epoxy Resin are flame retardant UL94-V0 grade
- compact size and light weight
- higher Insulation Resistance and Insulation Voltage
- low capacitor loss

### Electrical Characteristics :

#### Voltage range :

5000Vdc	6000Vdc	8000Vdc	10000Vdc	12000Vdc	15000Vdc	20000Vdc	20000Vdc
2000Vac	2300Vac	2500Vac	3000Vac	3500Vac	4000Vac	2100Vac	5500Vac

Capacitance : 0.033uF - 2.2uF

Ripple RMS Current – Imms up to 65A

peak discharge current - I peak : up to 14500A

Tolerance : +/-10%, +/-5% at 22C 1kHz

Testing Voltage : 1.3 x Un 10sec (can be customized design)

Insulation Resistance : 250Vdc +25C >= 300,000Mohm

250Vdc +85C >= 50,000Mohm

250Vdc +105C >= 5,000Mohm

Low ESR and series Inductance

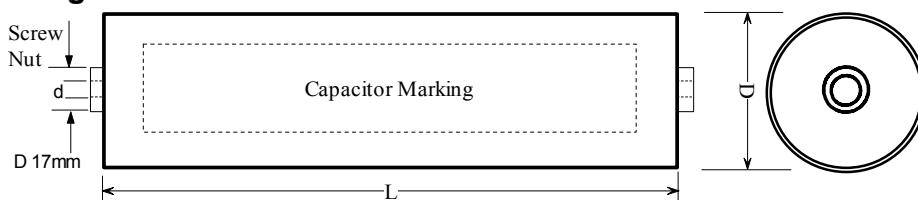
Temperature range : -25C to +70C

-25C to +85C

-40C to +105C ( depends on capacitor raw materials )

Pulse Voltage rise & fall time dv/dt : detail information available on require

### Drawing :



**STHVP Specifications and Size : 5000Vdc / 2000Vac**

Capacitance uF	Diameter D mm	Length L Mm	ESR mohm 100khz	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 45C	Irms 55C	Irms 85C	Irms max. 105C	d (mm)
0.68	65	147	4.5	1380	938	18	16.5	14	14	M6
1	65	147	4.0	1380	1380	27	25	20	20	M6
1.2	65	147	4.0	1380	1656	33	30	25	25	M6
1.5	90	147	3.5	1380	2070	40	37	30	30	M6
2.2	90	147	3.0	1380	3036	60	55	45	45	M8

**STHVP Specifications and Size : 6000Vdc / 2300Vac**

Capacitance uF	Diameter D mm	Length L Mm	ESR mohm 100khz	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 45C	Irms 55C	Irms 85C	Irms max. 105C	d (mm)
0.22	65	96	4.5	4400	968	22	20	16.5	7	M6
0.33	65	96	4.0	4400	1452	33	30	25	8	M6
0.47	90	96	4.0	4400	2068	45	40	35	13	M6
0.68	90	96	3.5	4400	2992	65	60	50	20	M8
0.68	65	147	4.5	2160	1468	35	30	25	12	M6
1	90	147	4.0	2160	2160	50	45	35	15	M6
1.2	90	147	4.0	2160	2592	60	55	45	18	M6
1.5	90	147	3.5	2160	3240	65	60	55	22	M6

**STHVP Specifications and Size : 8000Vdc / 2500Vac**

Capacitance uF	Diameter D mm	Length L Mm	ESR mohm 100khz	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 45C	Irms 55C	Irms 85C	Irms max. 105C	d (mm)
0.2	65	96	4.0	7000	1400	25	20	16	8	M6
0.22	65	96	4.0	7000	1540	25	20	20	10	M6
0.25	65	96	4.0	7000	1750	30	25	20	12	M6
0.33	65	147	4.5	3600	1188	20	18	15	10	M6
0.4	65	147	4.0	3600	1440	25	20	18	12	M6
0.5	65	147	4.0	3600	1800	30	25	25	20	M6
0.68	90	147	4.0	3600	2448	40	35	30	20	M6
1	90	147	3.5	3600	3600	60	55	45	25	M6

**STHVP Specifications and Size : 10000Vdc / 3000Vac**

Capacitance uF	Diameter D mm	Length L Mm	ESR mohm 100khz	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 45C	Irms 55C	Irms 85C	Irms max. 105C	d (mm)
0.1	65	183	5.0	8000	800	18	16	12	8	M6
0.12	65	183	5.0	8000	960	22	16	15	10	M6
0.15	65	183	5.0	8000	1200	23	20	15	10	M6
0.2	65	183	5.0	8000	1600	25	22	18	12	M6
0.22	65	183	5.0	8000	1760	25	22	18	12	M6
0.25	65	183	4.5	8000	2000	30	25	18	12	M6
0.3	90	183	4.5	8000	2400	35	30	23	16	M6
0.33	65	183	4.5	8000	2640	40	35	25	18	M6
0.4	90	183	4.0	8000	3200	40	35	25	18	M6
0.47	90	183	4.0	8000	3760	55	50	40	27	M6
0.5	90	183	3.5	8000	4000	55	50	40	27	M6
0.68	90	183	3.5	8000	5440	65	60	45	30	M6
1	90	273	3.5	4000	4000	55	50	40	27	M6

**STHVP Specifications and Size : 12000Vdc / 3500Vac**

Capacitance uF	Diameter D mm	Length L Mm	ESR mohm 100khz	dv/dt v/us	Peak Current I <sub>peak</sub> A	Irms 45C	Irms 55C	Irms 85C	Irms max. 105C	d (mm)
0.05	65	183	4.0	8800	440	13	10	4.5	3.5	M6
0.1	65	183	4.0	8800	880	24	20	10	7	M6
0.12	65	183	4.0	8800	1056	28	25	10	8	M6
0.15	65	183	4.0	8800	1320	28	25	13	8	M6
0.22	90	183	4.0	8800	1936	45	40	20	13	M6
0.25	90	183	4.0	8800	2200	50	45	22	15	M6
0.33	90	183	3.5	8800	2904	50	45	30	20	M6
0.5	65	273	3.5	4400	2200	50	45	22	15	M6
0.75	90	273	3.5	4400	3300	65	60	35	22	M6

**STHVP Specifications and Size : 15000Vdc / 4000Vac**

<b>Capacitance uF</b>	<b>Diameter D mm</b>	<b>Length L Mm</b>	<b>ESR mohm 100khz</b>	<b>dv/dt v/us</b>	<b>Peak Current I<sub>peak</sub> A</b>	<b>Irms 45C</b>	<b>Irms 55C</b>	<b>Irms 85C</b>	<b>Irms max. 105C</b>	<b>d (mm)</b>
0.05	65	264	5.0	9000	450	13	10	6.5	5	M6
0.068	65	264	5.0	9000	612	18	13	6.5	5	M6
0.075	65	264	4.5	9000	675	20	15	13	8	M6
0.1	65	264	4.5	9000	900	20	17	13	8	M6
0.12	65	264	4.5	9000	1080	30	25	15	10	M6
0.15	65	264	4.5	9000	1350	30	25	15	10	M6
0.2	65	264	4.0	9000	1800	40	35	15	14	M6
0.25	90	264	4.0	9000	2250	50	45	30	18	M6
0.3	90	264	3.5	9000	2700	50	45	30	20	M6
0.33	90	264	3.5	9000	2970	55	50	30	22	M6

**STHVP Specifications and Size : 20000Vdc / 2100Vac**

<b>Capacitance uF</b>	<b>Diameter D mm</b>	<b>Length L Mm</b>	<b>ESR mohm 100khz</b>	<b>dv/dt v/us</b>	<b>Peak Current I<sub>peak</sub> A</b>	<b>Irms 55C</b>	<b>Irms 70C</b>	<b>Irms 85C</b>	<b>Irms max. 105C</b>	<b>d (mm)</b>
0.033	65	220	18	11000	363	5.5	3.5	3	2	M6
0.050	65	220	18	11000	550	8	5.5	4	3	M6
0.075	65	295	18	6000	450	6.5	4.5	3.5	2.5	M6
0.1	65	295	15	6000	600	9	6	5	3	M6

**STHVP Specifications and Size : 20000Vdc / 5500Vac**

<b>Capacitance uF</b>	<b>Diameter D mm</b>	<b>Length L Mm</b>	<b>ESR mohm 100khz</b>	<b>dv/dt v/us</b>	<b>Peak Current I<sub>peak</sub> A</b>	<b>Irms 45C</b>	<b>Irms 55C</b>	<b>Irms 85C</b>	<b>Irms max. 105C</b>	<b>d (mm)</b>
0.05	65	264	5.0	14500	725	13	10	5.5	4.5	M6
0.068	65	264	5.0	14500	986	17	13	7	5.5	M6
0.075	65	264	4.5	14500	1088	18	15	8	6.5	M6
0.1	90	264	4.5	14500	1450	25	20	10	8	M6
0.12	90	264	4.0	14500	1740	30	25	13	10	M6
0.15	90	264	3.5	14500	2175	35	30	15	12	M6

For the other Capacitance value, Voltage, Dimension, RMS Current, dv/dt, high peak current that not listed above, please contact us for a design suited to your particular needs.

### 3.1 Power RC Snubber Networks : - STRC series

#### Applications :

Interference suppression; elimination of spark and transient phenomena in power switch and relay; arc suppressing for industrial heavy duty application; electrical automation control, starting, stopping, regulating or protecting electric motors  
Transient and dV/dt suppression for power Thyristor and Triacs in snubber circuit  
Fan Speed Regulator and Motor Speed Regulator  
Suitable for AC and DC voltage application



#### Constructions :

Supporting different Capacitor Configuration, electrical connections and mounting options so as to increase your design flexibility

#### Mounting systems :

Cylindrical Plastic Case : with Stud - M8 or without Stud (see P.30)

Box Plastic Case: Screw mounting hole / without Screw mounting hole(see p.33)



#### Electrical Characteristics :

**Capacitance value** : 0.1 - 2.0uF

**Voltage** : 125Vac, 220Vac, 240Vac, 480Vac, 600Vac

**Resistance and rate power of the Resistor** : customer design, 1/4W - 50W

**Temperature range** : -25C - +85C / -40C - +105C

**Testing Voltage** : 1.5 x U<sub>n</sub> 10sec (can be customized design)

Varistor options is available



#### Circuits :

connection for Resistor and Capacitor : series, parallel or three phase



The combination of Capacitance value, Voltage, Resistor type, Resistance, Power Rating and Dimension, please contact us for a design suited to your particular needs.

## RC Snubber Networks :-class X2 250VAC / 600DC

### STRC-X2-series

Switch Contact protection

Interference suppression of contact

Transient Suppression

Long life even when subjected to high frequency and over voltage

Plastic Case & Epoxy Resin – Flame Retardant meet UL94-V0

**Varistor** options is available

### Electrical Connection :

Flexible wire : UL #1015,105C, AWG#18, 20

Flexible wire with terminal : Ring, Y or Pin terminal with various size

### General Specifications :

**Capacitance range** : 0.1 – 1.0uF

**Capacitance tolerance** : +/-5%(J) +/-10% (k)

**Resistance range** : 22 to 680 ohm 0.5W / 1W (normal values E6 series)

**Rated Voltage** : 250VAC / 600VDC (inclusive of the superimposed AC component peak value)

**Temperature range** : -25C to +85C / -40C - +105C

### Testing Voltage :

Terminal to Terminal : 2000VDC 2sec at 25±5C (can be customer design)

Terminal to Case : 2500Vac 2sec at 25±5C

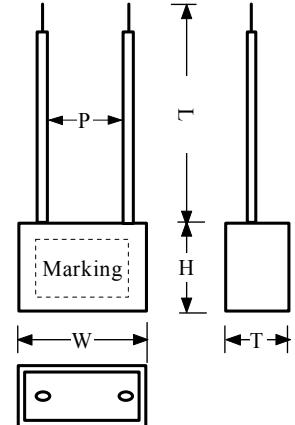
**Insulation Resistance** : > 20000Mohm

**Reference Standard** : IEC60068-1 DIN40045 40/85/21

**Circuitry** : Resistor and Capacitor in series

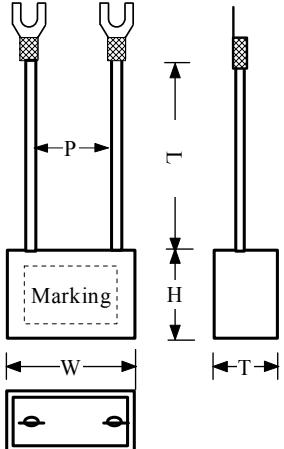
Electrical Wire UL1015 105°C

AWG#16 18



Electrical Wire UL1015 105°C

AWG#16 18 + Y terminal



### Dimensions :

Capacitance uF +/-10%	Resistance ohm +/-5%	Rated Power W	Rated Voltage		Width W mm	Height H mm	Thickness T mm	Pitch P mm	Lead length L mm
			Vac	Vdc					
0.1	22 – 680	1/2 - 1	250	600	26.5	19	10	21	150 or 300
0.22					32	22	13	26	
0.25					32	30	15	26	
0.47									
0.5									
1.0									

## RC Snubber Networks :- 480VAC / 1000DC

### STRC-480 series

Switch Contact protection

Interference suppression of contact

Transient Suppression

Long life even when subjected to high frequency and over voltage

Plastic Case & Epoxy Resin – Flame Retardant meet UL94-V0

**Varistor** options is available

### Electrical Connection :

Flexible wire : UL #1015, 105°C , AWG#18, 20

Flexible wire with terminal : Ring, Y or Pin terminal with various size

**Mounting** : M8 stud – Cylindrical type only

### General Specifications :

**Capacitance range** : 0.1 – 0.5uF

**Capacitance tolerance** : +/-5%(J) +/-10% (k)

**Resistance range** : 22 to 1kohm 1-10W other valve is available

**Rated Voltage** : 480VAC / 1000VDC (inclusive of the superimposed AC component peak value)

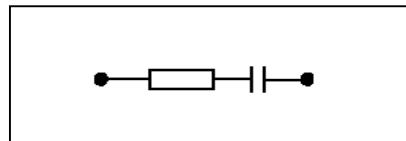
**Temperature range** : -40C - +85C / -40C - +105C

**Testing Voltage** : T to T : 1.75 x U<sub>n</sub> 10sec at 25±5C(can be customer design)  
T to Case : 2000Vac 10sec at 25±5C

**Insulation Resistance** : >10,000Mohm at 250VDC 2min. 23C

**Reference Standard** : IEC60068-1

### Circuitry :

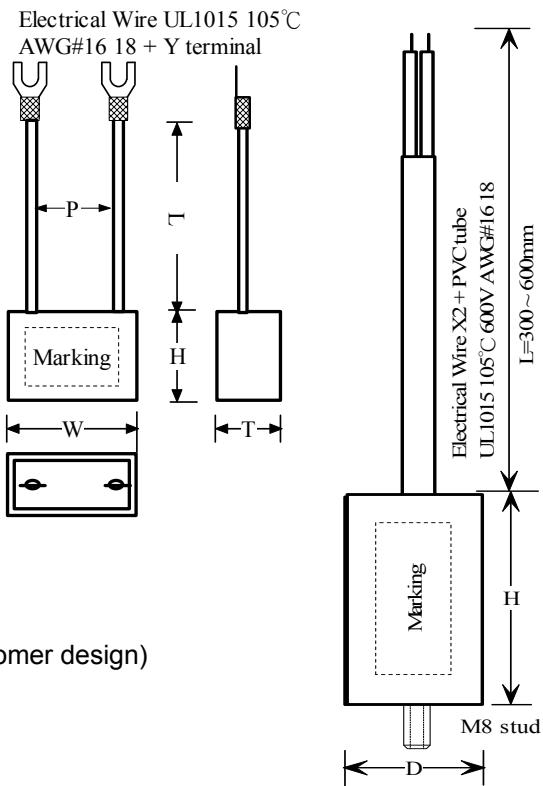


### Box – type :

uF +/-5%	Rated Voltage		Resistance	Rated Power	Box			Electrical Wire
	VAC	VDC	ohm ±10%	W	W	H	T	L=mm
0.1	480	1000	10	1	39	32	22	300 or 600
0.1	480	1000	22	2				
0.1	480	1000	47	2				
0.1	480	1000	47	1				
0.1	480	1000	100	2				
0.1	480	1000	100	3				
0.1	480	1000	220	1				

### Cylindrical – type :

uF +/-5%	VAC	VDC	ohm ±10%	W	D	H	L=mm
0.22	480	1000	10	5	45	73	300 or 600
0.25	480	1000	220	5			
0.25	480	1000	50	10			
0.25	480	1000	68	10			
0.25	480	1000	100	10			
0.3	480	1000	100	10			
0.47	480	1000	220	5			
0.47	480	1000	820	10			
0.5	480	1000	15	5			
0.5	480	1000	220	5			
0.5	480	1000	10	10			
0.5	480	1000	75	10			
0.5	480	1000	100	10			
0.5	480	1000	220	10			
1.0	480	1000	10	5			
1.0	480	1000	220	5			



### 3 Phase RC Snubber Networks : 400VAC - 600VAC

#### STRCY-xxx and STRCD-xxx series

Applied in parallel with three phase inductive loads (Electrical Motor) to absorb transients Voltage and pulse

EMI filter for Electrical Motor

Wye and Delta connection

High pulse current handling capacity

Plastic Case & Epoxy Resin – Flame Retardant meet UL94-V0

**Varistor** options are available

Box and Cylindrical plastic case options

#### Application :

Transient Voltage Suppressor, EMI Filter and Circuit protection for Three

phase Motor, CNC equipment, Magnetic Contactor, Solenoid, Relay and

Starter

#### Electrical Connection :

Flexible wire : UL #1015,105C, AWG#16, 18

Flexible wire with terminal : Ring, Y or Pin terminal with various size

#### General Specifications :

**Capacitance range** : 0.1 – 0.5uF

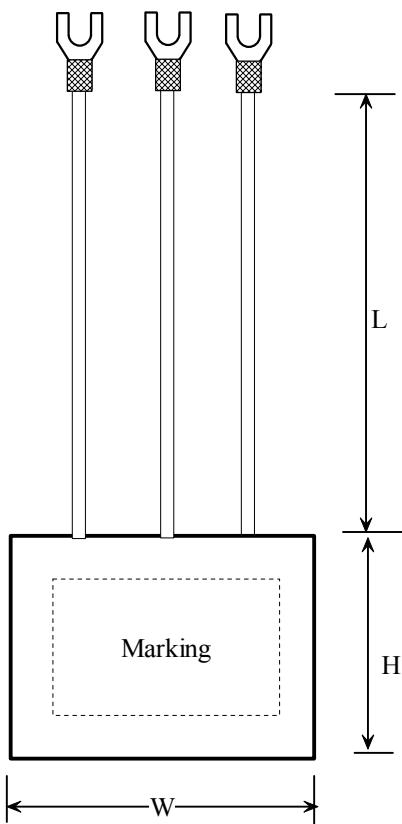
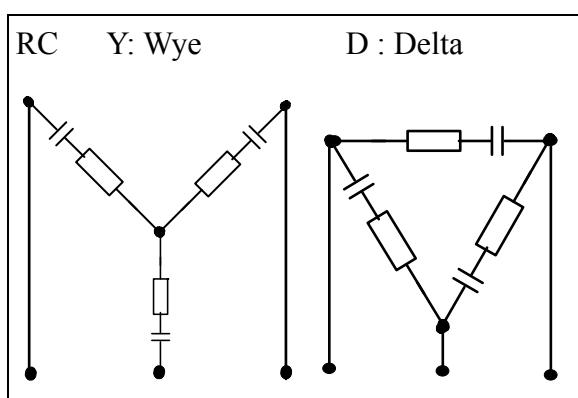
**Capacitance tolerance** :  $\pm 10\%$  (k)

**Resistance range** : 22 to 820 ohm 3W - other valve is available

**Rated Voltage** : 3 X 400VAC - 600VAC

**Temperature range** : -25C - +85C / -40C - +105C

#### Circuitry :



#### Delta :

Capacitance uF	Voltage VAC	Resistor		Box W X H X T	Electrical Wire L in mm
		ohm +/-10%	rated power W		
0.1	3X400	10~330	3	42 x 38 x 27	300 or 600
0.22		27~330	3		
0.5		22~470	3		

#### Wye :

Capacitance uF	Voltage VAC	Resistor		Box W X H X T	Electrical Wire L in mm
		ohm +/-10%	rated power W		
0.1	3X600	10~330	3	42 x 38 x 27	300 or 600
0.22		27~330	3		
0.5		22~470	3		

## 3 Phase RC Snubber Networks : 480VAC

### STRCY-xxx and STRCD-xxx series

Applied in parallel with three phase inductive loads (Electrical Motor) to absorb transients Voltage and pulse

EMI filter for Electrical Motor

Wye and Delta connection

Very High pulse current handling capacity

Plastic Case & Epoxy Resin – Flame Retardant meet UL94-V0

**Varistor** options are available

Cylindrical plastic case

### Application :

Transient Voltage Suppressor, EMI Filter and Circuit protection for Three phase

Motor, CNC equipment, Magnetic Contactor, Solenoid, Relay and Starter

### Electrical Connection :

Flexible wire : UL #1015,105C, AWG#16, 18

Flexible wire with terminal : Ring, Y or Pin terminal with various size

### Mounting :

M8 stud

### General Specifications :

**Capacitance range** : 0.5uF

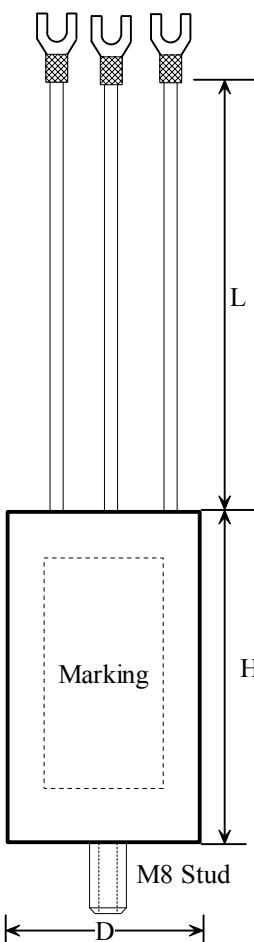
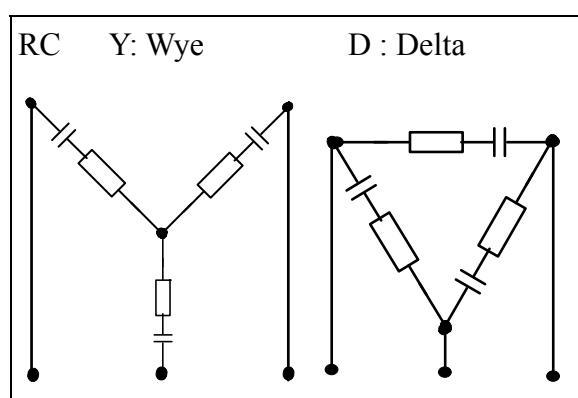
**Capacitance tolerance** : +/-5%(J) +/-10%(k)

**Resistance range** : 10 - 680ohm 10W other valve is available

**Rated Voltage** : 3 X 480VAC

**Temperature range** : -25C - +85C / -40C - +105C

### Circuitry :



Resistor		Capacitor		Size	Electrical Wire
ohm ±10%	Rated Power W	uF	VAC	D x H mm	L in mm
10					
15					
22					
27					
33					
47					
68					
82					
100					
150					
220					
330					
470					
680					
10	10	0.5	480	45 x 73	300 or 600

## Transient Voltage Suppressors : 24VAC - 480VAC

### STVS-xxx series

- Applied in parallel with inductive loads (Electrical Motor) to absorb transients Voltage and pulse
- EMI filter for Electrical Motor
- High pulse current handling capacity
- Varistor options is available
- Plastic Case & Epoxy Resin – Flame Retardant meet UL94V0
- Box type and Cylindrical available

### Application :

Transient Voltage Suppressor, EMI Filter and Circuit protection for Three phase Motor, CNC equipment, Magnetic Contactor, Solenoid, Relay and Starter

### Electrical Connection :

Flexible wire : UL #1015, 105°C, AWG#16, 18

Flexible wire with terminal : Ring, Y or Pin terminal with various size

### Mounting :

M8 stud – Round type only

### General Specifications :

**Capacitance range** : 0.1 – 0.5uF

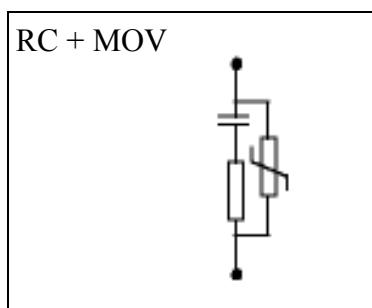
**Capacitance tolerance** : +/-5%(J) +/-10%(k)

**Resistance range** : 22 to 820ohm 1/2-10W other valve is available

**Rated Voltage** : 24VAC - 480VAC

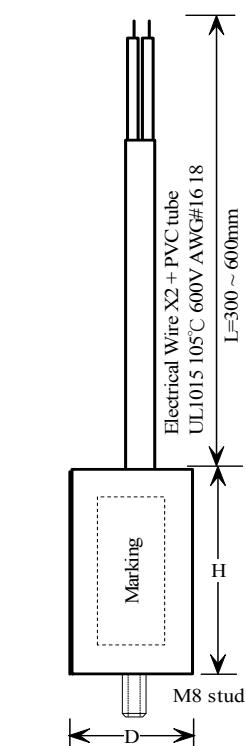
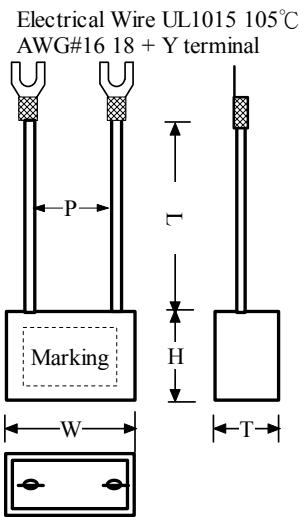
**Temperature range** : -25C - +85C / -40C - +105C

### Circuitry :



### Dimensions :

Capacitance uF	Rated Voltage		Resistance		Varistor	Size W x H x T D x H	Electrical Wire L in mm
	VAC	VDC	ohm +/-10%	rated power W			
0.22	120	200	47	1/2	Customer design	32 x 22 x 11	150 or 300
0.22	250	470	220	1		39 x 32 x 22	
0.47	24	50	220	1/2		39 x 32 x 22	
0.47	120	600	220	1		45 x 73	
0.5	120	600	100 - 220	1			
0.1	250	1000	47	2			
0.1	275	2000	220	2			
0.47	250	600	100 - 220	2			
0.25	480	1000	470	10			
0.5	480	1000	50 - 220	10			



## 3 Phase Transient Voltage Suppressors : 400VAC - 500VAC

### STVSYP-xxx series

Applied in parallel with three phase inductive loads (Electrical Motor) to absorb transients Voltage and pulse  
EMI filter for Electrical Motor  
Wye connection  
High pulse current handling capacity  
**Varistor** options is available  
Plastic Case & Epoxy Resin – Flame Retardant meet UL94-V0  
Cylindrical type

### Application :

Transient Voltage Suppressor, EMI Filter and Circuit protection for Three phase Motor, CNC equipment, Magnetic Contactor, Solenoid, Relay and Starter

### Electrical Connection :

Flexible wire : UL #1015,105C, AWG#16, 18

Flexible wire with terminal : Ring, Y or Pin terminal with various size

### Mounting :

M8 stud

### General Specifications :

**Capacitance range** : 0.22 – 0.5uF

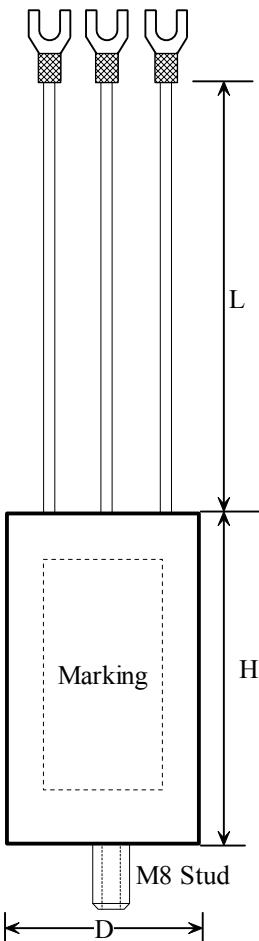
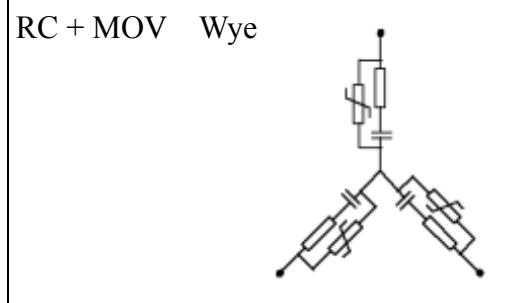
**Capacitance tolerance** : +/-5%(J) +/-10% (K)

**Resistance range** : 22 to 820ohm 1/2-10W other valve is available

**Rated Voltage** : 3 X 250VAC - 510VAC

**Temperature range** : -25C - +70C / -40C - +105C

### Circuitry :



### Dimensions :

Resistor		Capacitor		Varistor	Size D x H mm	Electrical Wire L in mm
ohm +/-10%	Rated Power W	uF	VAC			
10~680	10W	0.22	400	Customer design	65 x 50	300 or 600
		0.47	400			
		0.5	500			

### **3.2 Motor Run Capacitors** : – continuous operation

#### **Typical Applications :**

Motor Run Capacitor – ideal for various motor applications in washing machine, air conditioner, electric water pump, power factor correction

By connecting the capacitor in series with the starting winding motor, allow motors with two or three windings to function on a single-phase supply.

AC Filter application.



#### **Constructions :**

Self-healing, low dielectric loss metallized polypropylene

Cylindrical or Box Plastic Case : self-extinguishing (UL94-V0 grade) plastic

Optional : Thermoplastic Plastic Case – so that the capacitor can be operated at a higher temperature range and harsh working environment

Epoxy Resin : self-extinguishing (UL94-V0 grade)

Size : Cylindrical : Diameter : 30-65mm / High : 65-118mm

Box : Width: 32-60mm High: 20-38mm Thickness: 14-26mm



#### **Electrical Connections :**

Soldering terminal

Single or double quick terminal

Stiff wire

Flexible wire

Twin-core cable

Wire or cable with receptacle or terminal

Tin plated copper lead wire (Box type only)



#### **Mounting systems :**

Cylindrical Plastic Case : with Stud - M8 / without Stud

Box Plastic Case : Screw mounting tab / without Screw mounting tab

#### **Properties :**

Low Dissipation Factor, high Insulation Resistance, Self-Healing, Non inductive, long operating time

Providing different connections and mounting options so as to increase your design flexibility.

#### **Safety Class :** P0 P1 P2

#### **Reference standards :**

EN60252-1994, VDE0560-8, IEC.252-1993, UL810, CSA C 22.2, JIS : 4908-1995

#### **Electrical Characteristics :**

**Capacitance range :** 2.5 - 100uF

**Rated Voltage :** 370Vac, 400Vac, 450Vac, 500Vac, 600Vac, 650Vac

**Capacitance Tolerance :** +/-5%; +/-10%

**Dissipation factor (DF) :** < 0.002 at 23C 50/60Hz

**Insulation Resistance :** Terminal – Terminal >5000 ohm uF  
Terminal – Case >1000M ohm uF

**Temperature range :** -25C - +85C / -40C - +105C

**Rated frequency :** 50 - 60Hz

**Testing Voltage :** Terminal – Terminal : 2.15 x U<sub>n</sub> 10sec (can be customized design)  
Terminal – Case : 3000AC 10sec

**Maximum Permissible Overvoltage :** 110% of rated voltage

**Maximum Permissible Overcurrent :** 130% of rated current

**Maximum Permissible Reactive output (Voltage-Ampere) :** 135% of rated Volt-Ampere

**Pulse Voltage rise & fall time dV/dt :** detail information available on request

#### **Life Expectancy :**

Class A	Class B	Class C	Class D
30,000hrs	10,000hrs	3,000hrs	1000hrs

The combination of Capacitance value and Voltage or should there be a dimensional constraint, please contact us for a design suited to your particular needs.

## Cylindrical Capacitor Configurations - Electrical Connection and Mounting :

**Quick Terminal** : 187 : w4.75 x h10 x t0.5mm

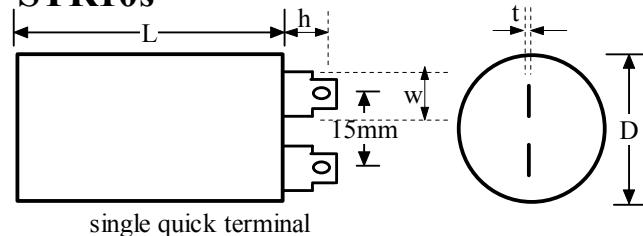
250D / 250S : w6.35 x h10 x t0.8mm

**Solder Terminal** : T280 : w2 + 2.8 x h12 x t0.5mm - pulse grade capacitor only

**Electrical Wire length** : 100mm, other length is available;

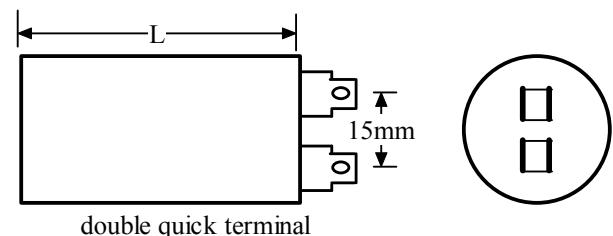
6.35mm female terminals ( optional )

**STR10s**



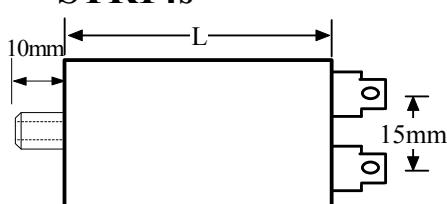
single quick terminal

**STR10d**



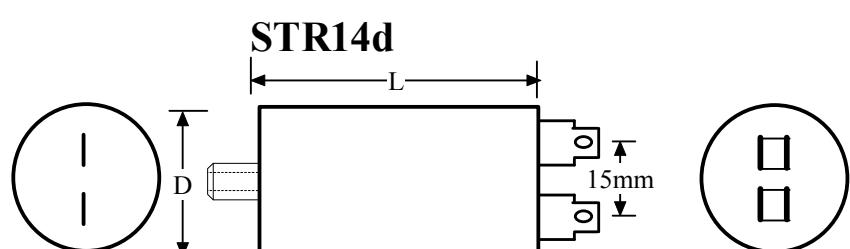
double quick terminal

**STR14s**



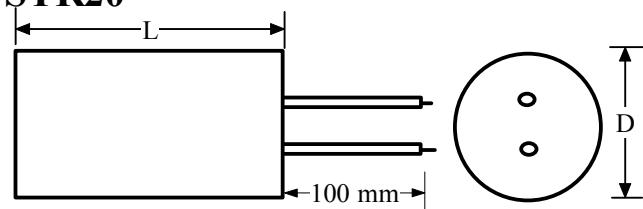
M8 stud with  
single quick terminal

**STR14d**



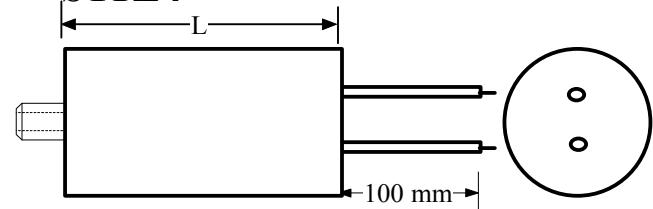
M8 stud with  
double quick terminal

**STR20**



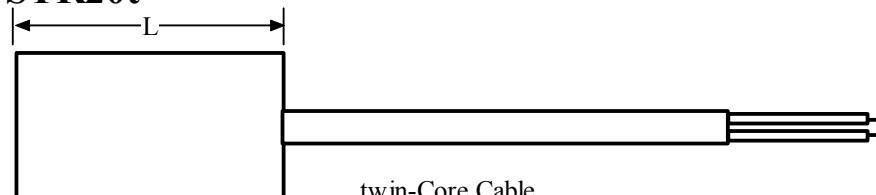
electrical wire

**STR24**

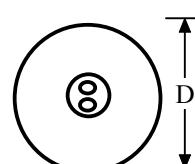


M8 stud with  
electrical wire

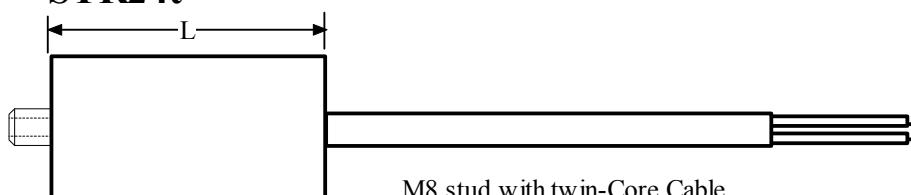
**STR20t**



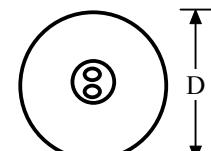
twin-Core Cable



**STR24t**



M8 stud with twin-Core Cable



: Optional Faston Terminal 6.35mm for STR-20, STR-24,  
there are some other Terminals for your choice, please refer to page 34

The above packaging configuration can be applied for all cylindrical type capacitors.

## Cylindrical Motor Capacitor dimension :

	Dimension : Diameter x Length in mm	
Capacitance uF	250Vac	400Vac
4uF	30 x 55	30 x 55
5uF	30 x 55	30 x 55
6uF	30 x 55	30 x 55
7uF	30 x 55	30 x 55
8uF	30 x 55	30 x 55
9uF	30 x 55	35 x 55
10uF	30 x 55	35 x 55
12uF	30 x 55	35 x 55
15uF	35 x 55	35 x 73
20uF	35 x 73	40 x 73
25uF	35 x 73	40 x 73
30uF	35 x 73	45 x 73
35uF	40 x 73	45 x 73
40uF	40 x 73	45 x 93
45uF	45 x 93	45 x 93
50uF	45 x 93	45 x 128
55uF	45 x 93	45 x 128
60uF	45 x 93	45 x 128
70uF	45 x 128	
80uF	45 x 128	

### **3.3 Motor Run Capacitors : box type :**

#### **Typical Applications :**

This series of Motor Run Capacitors are specially designed for AC mini motors and electrical apparatus.

Applications like Electric Fan, Ceiling Fan, Bread Maker and Home Appliance.

#### **Features :**

high Insulated Resistance

loss dielectric loss : less electrical energy loss by the capacitor during operation

stable temperature characteristic : dissipation factor and capacitance remain stable and will not be changed by ambient temperature



#### **Constructions :**

Self-healing low, loss metallized polypropylene

Box Plastic Case and Epoxy Resin : self-extinguishing (UL-94V0 grade) plastic

Optional : Thermoplastic Plastic Case – so that the capacitor can be operated at a higher temperature range and harsh working environment



#### **Electrical Connections :**

Soldering terminal

Single or double quick terminal

Stiff electrical wire

Flexible electrical wire

Electrical wire with receptacle or terminal

Tin plated copper lead wire (Box type only)

#### **Mounting systems :**

Screw mounting tab / without Screw mounting tab

#### **Properties :**

Low Dissipation Factor, high Insulation Resistance, Self-Healing, Non inductive, long operating time

Providing different connections and mounting options so as to increase your design flexibility.

#### **Reference standards :**

EN60252-1994, VDE0560-8, IEC.252-1993, UL810, CSA C 22.2, JIS : 4908-1995

#### **Safety Class : P0 P1 P2**

#### **Electrical Characteristics :**

**Capacitance range :** 1 - 35uF

**Rated Voltage :** 250Vac, 370Vac, 400Vac, 450Vac

**Capacitance Tolerance :** +/-5%

**Dissipation factor (DF) :** < 0.002 at 23C 50/60Hz

**Temperature range :** -40C - +85C / -40C - +105C

**Rated frequency :** 50 - 60Hz

**Testing Voltage :** Terminal – Terminal :  $2.15 \times U_n$  10sec (can be customized design)

Terminal – Case : 3000AC 10sec

# Box Type Capacitor Configurations - Electrical Connection and Mounting :

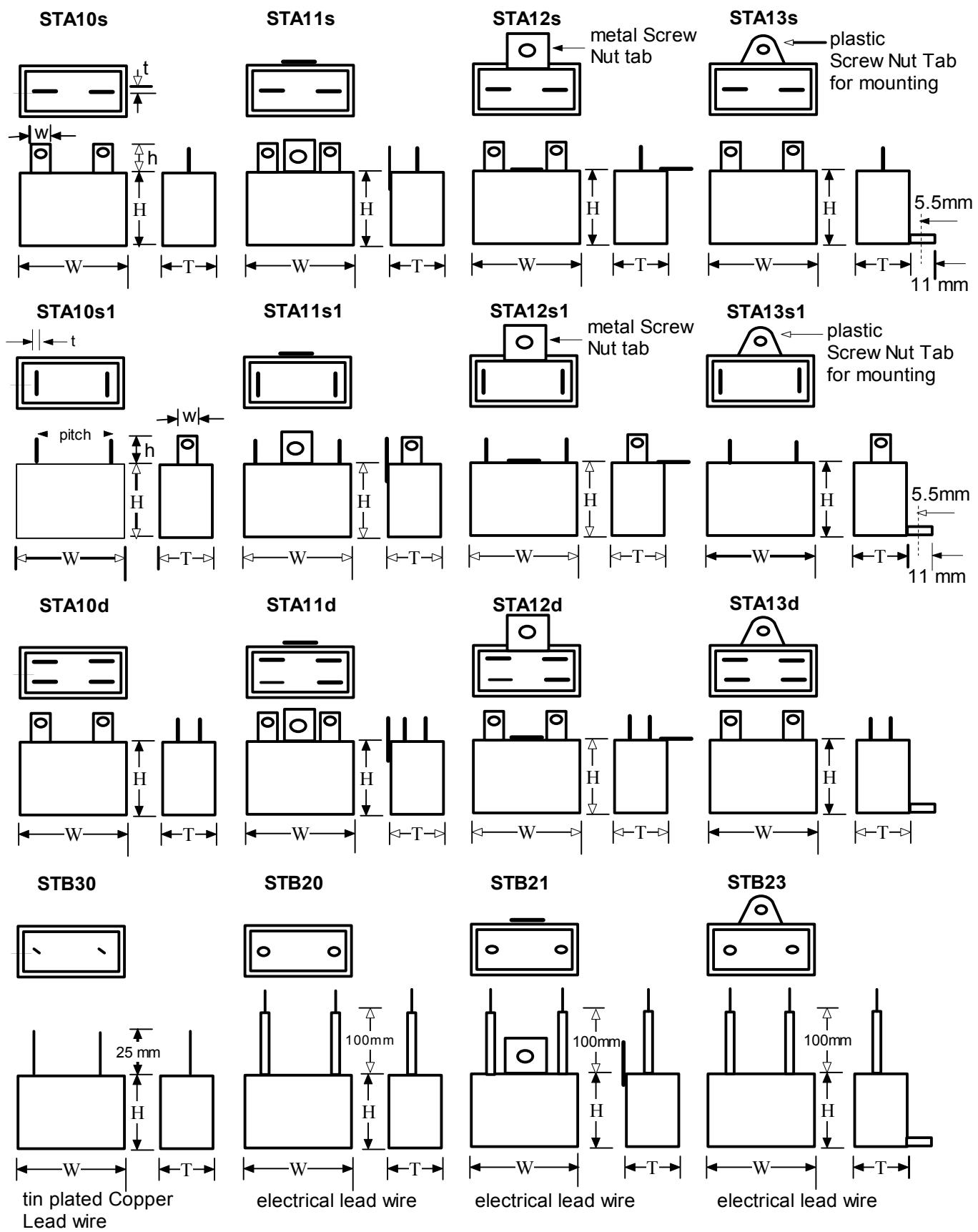
## Box type : STA and STB series

Quick Terminal : 187 type : w4.75 x h10 x t0.5mm  
 250 type : w6.35 x h10 x t0.8mm

Solder Terminal : T280 type : w4 x h8 x t0.5mm

Tin Plated Copper Lead

standard electrical lead wire length : 100mm, other length is available



The above packaging configuration can be applied for all plastic box type capacitor.

## **Motor Run Capacitor Box type : STA and STB series size :**

Dimension in mm

Capacitance: uF	Rated Voltage														
	250Vac			300Vac			350Vac			400Vac			450Vac		
	W	T	H	W	T	H	W	T	H	W	T	H	W	T	H
1.0	32	11	21	37	13.5	25	37	13.5	25	37	13.5	25	37	14.5	25
1.5	32	11	21	37	13.5	25	37	13.5	25	38	18	29	38	18	29
2.0	32	11	21	37	13.5	25	38	18	29	38	18	29	50	20	30
2.5	32	11	21	37	14.5	26	38	18	29	50	20	30	50	20	30
3.0	32	13	23.5	38	18	29	37	19	29	50	20	30	51	22	32
3.5	32	13	23.5	38	18	29	50	20	30	50	20	30	58	23	35
4.0	37	14	25	37	19	29	50	20	30	51	22	32	58	23	35
4.5	37	13.5	25	50	20	30	50	20	30	58	23	35	58	23	35
5.0	37	13.5	25	50	20	30	51	22	32	58	23	35			
5.5	37	13.5	25	50	20	30	51	22	32	58	23	35			
6.0	37	14.5	26	51	22	32	58	23	35	58	23	35			
6.5	38	18	29	51	22	32	58	23	35	58	23	35			
7.0	38	18	29	51	22	32	58	23	35						
8.0	38	18	29	58	23	35	58	23	35						
9.0	37	19	29	58	23	35									
10.0	50	20	30	58	23	35									
11.0	50	20	30	58	23	35									
12.0	50	20	30												
13.0	50	20	30												
14.0	50	20	30												
15.0	50	22	32												
16.0	50	22	32												

Other combination of Capacitance value and Voltage or should there be a dimensional constraint, please contact us for a design suited to your particular needs.

## Motor Run Capacitor – Part Number System :

ST-----  
1 2 3 4 a 5 5 56 6 6 7 8

1 : series designation

ST

2 : basic design

A: capacitors with Tab Terminal - Box

B: capacitors with Leads - Box

R: capacitors with cylindrical shaped enclosure

3 : electrical connection

1. tab terminals

2. standard copper leads

3. Tin-plated copper wire

4 : mounting means

0. with no mounting design

1. straight mounting tab – Box type

2. angled mounting tab – Box type

3. integral flat mounting bolt of enclosure – Box type

4. integral threaded mounting bolt of enclosure – cylindrical type

a. : Terminals and Electrical Wires type – electrical connection

single terminal - s

double terminal - d

Twin-core cable (cylindrical type) - t

Stiff wire (cylindrical type) - w

Flexible wire (cylindrical type) - f

Wire or cable with receptacle or terminal : t, w, f + terminal code

5 : capacitance

105 : 1uF

106 : 10uF

107 : 100uF

108 : 1000uF

6 : voltage : AC voltage

220V 250V 370V 400V 450V 500V 600V 630V 800V

7 : tolerance

J : +/-5%

K : +/-10%

8 : Safety Class :

nil: - P0

P1 : - P1

P2 : - P2



## **Capacitors Modules :**

### **3.4 Dual-Capacitance Capacitors :**

This series of Motor Run Capacitors contain two independent capacitors in a single-housing.

A typical application is in the air conditioning units where capacitors are required for both compressor and fan motors.



### **Constructions :**

Self-healing, low loss metallized polypropylene

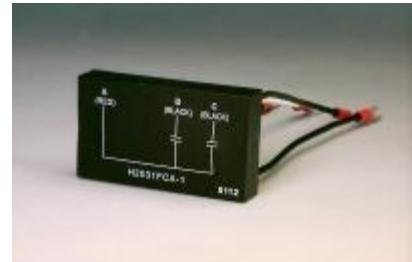
Cylindrical or Box Plastic Case : self-extinguishing (UL94-V0 grade) plastic

Optional : Thermoplastic Plastic Case – so that the capacitor can be operated at a higher temperature range and harsh working environment

Resin : self-extinguishing (UL94-V0 grade)

Size : Diameter : 30-65mm / High : 65-118mm

Box : Width: 32-60 High: 20-38 Thickness : 14-26mm



### **Properties :**

Non inductive, Low Dissipation Factor, high Insulation Resistance, Self-Healing, spaces efficient.

Providing different connections and mounting options so as to increase your design flexibility.



### **Electrical Connections :**

Soldering terminal

Quick terminal

Stiff wire

Flexible wire

Core cable

Wire or cable with receptacle or terminal

Tin plated copper lead wire (Box type only)

### **Mounting systems :**

Cylindrical Plastic Case : with Stud -M8 / without Stud

Box Plastic Case : Screw mounting tab / without Screw mounting tab

### **Reference standards :**

EN60252-1994, UL810, CSA C 22.2, JIS : 4908-1995

### **Electrical Characteristics :**

**Capacitance range :** 0.1uF - 10uF + 0.1uF - 60uF

**Rated Voltage :** 125Vac, 220Vac, 250Vac, 370Vac, 400Vac, 450Vac, 500Vac, 600Vac

Circuit for the capacitors can be customized design

**Capacitance Tolerance :** +/-5%; +/-10%

**Dissipation factor (DF)** < 0.002 at 23C 50/60Hz

**Insulation Resistance :** Terminal – Terminal >5000M ohm uF  
Terminal – Case >1000M ohm uF

**Temperature range :** -25C - +85C / -40C - +105C

**Rated frequency :** 50 - 60Hz

**Testing Voltage :** Terminal – Terminal :  $2.15 \times U_n$  10sec (can be customized design)  
Terminal – Case : 3000AC 10sec

**Pulse Voltage rise & fall time dV/dt :** detail information available on request

The combination of Capacitance value, Voltage, Dimension or even connection between Capacitors, please contact us for a design suited to your particular needs.

### **3.5 Multi-Capacitance Capacitors :**

This series of Capacitors are intent to provide more than two capacitance in a single-housing.

Suitable for multi-speed control or improve output torque for Motor - Fan Speed Regulator and Motor Speed Regulator

#### **Constructions :**

Self-healing, low loss metallized polypropylene

Cylindrical or Box Plastic Case : self-extinguishing (UL94-V0 grade) plastic

Optional : Thermoplastic Plastic Case – so that the capacitor can be operated at a higher temperature range and harsh working environment

Resin : self-extinguishing (UL94-V0 grade)

The inner connection and the capacitance can be tailor made according to the application

#### **Properties :**

Non inductive, Low Dissipation Factor, high Insulation Resistance, Self-Healing, spaces efficient.

Providing different connections and mounting options so as to increase your design flexibility.

#### **Electrical Connections :**

Soldering terminal

Quick terminals

Stiff wire

Flexible wire

core cable

Wire or cable with receptacle or terminal

Tin plated copper lead wire (Box type only)

#### **Mounting systems :**

Cylindrical Plastic Case : with Stud - M8 / without Stud

Box Plastic Case : Screw mounting tab / without Screw mounting tab

#### **Reference standards :**

EN60252-1994, UL810, CSA C 22.2, JIS : 4908-1995

#### **Electrical Characteristics :**

**Capacitance range** : customer design

**Rated Voltage** : 220Vac, 250Vac, 370Vac, 400Vac, 450Vac, 500Vac, 600Vac

Circuit for the capacitors can be customized design

**Capacitance Tolerance** : +/-5%; +/-10%

**Dissipation factor (DF)** < 0.002 at 23C 50/60Hz

**Insulation Resistance** : Terminal – Terminal >5000M ohm uF  
Terminal – Case >1000M ohm uF

**Temperature range** : -25C - +70C / -40 C~ +85C / -40C - +105C

**Rated frequency** : 50 - 60Hz

**Testing Voltage** : Terminal – Terminal :  $2.15 \times U_n$  10sec (can be customized design)  
Terminal – Case : 3000AC 10sec

**Pulse Voltage rise & fall time dV/dt** : detail information available on request



The combination of Capacitance value, Voltage, Dimension or even connection between Capacitors, please contact us for a design suited to your particular needs.

## Capacitor Package Configurations and Coding :

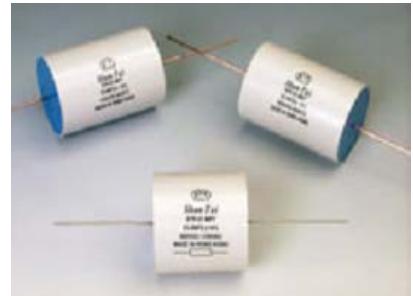
### Cylindrical plastic case with epoxy seal at Both ends :

- A : with Tin Plated Copper Lead Wire at both ends ( Axial Leads )
- AE : with Electrical Lead wire at both ends
- AN : with Screw Nut M8 etc at both ends
- ANL : with Screw Nut M8 etc at both ends + Mounting Foot-L at both ends for easier capacitor mounting
- AB : with Screw Bolt/Thread M8 etc at both ends
- ABL : with Screw Bolt/Thread M8 etc at both ends + Mounting Foot-L at both ends for easier capacitor mounting
- ABN : with Screw Bolt and Screw Nut, one at an end
- AT : with T-Terminal Foot at both ends for Electrical Connection and Capacitor Installation. (e.g. see page 18)
- AL : with L-Terminal Foot at both ends for Electrical Connection and Capacitor Installation. (e.g. see page 18)
- AI : with I-Terminal Foot at both ends for Electrical Connection and Capacitor Installation. (e.g. see page 18)



### Cylindrical plastic case with Electrical connection at One end :

- R : with Terminals or Electrical Lead Wires. Configuration STR see P45.
- RC : with short Tin plated Copper leads for PCB soldering
- RN : Screw Nuts at one end
- RB : Screw Bolt/Threads at one end



### Capacitor wrapped with Flame Retardant tape and with Electrical connection at Both ends :

- Q : with Tin plated Copper lead at both ends
- QE : with Electrical Lead wire at both ends
- QT : with T-Terminal at both ends (e.g. see page 18)
- QL : with L-Terminal at both ends (e.g. see page 18)
- QI : with I-Terminal at both ends (e.g. see page 18)

### Box type Capacitor :

- B : with Terminals
- BN : with Screw Nuts
- BB : with Screw Bolt/Threads
- BL : with Tin plated Copper L-Terminals
- BC : with Tin plated Copper short pins
- B : with electrical lead wires
- BT : for different kind of Terminal, small, 187, 250 T280 etc...
- D : epoxy dipped type – small capacitance value only

\* The above Capacitor Configuration and Packaging Code can be applied on most of all our capacitor series.

## **Electrical Connection Options :**

**Terminal and Receptacle** – can be applied to most of the capacitors

TR-1 - TR-3 for Terminal : 250 : W6.35 x H10 x 0.8mm (250 Faston)

TR-4 for Terminal : 187 : W4.75 x H10 x 0.5mm



TR-1



TR-2



TR-3



TR-4



PT-1



YT-1



YT-2



YT-3



RT-1



T-1

Size : M5 M6 M8 M10 M12



There are some other connectors can be used with our capacitors so as to increase your design flexibly.

## **Information Request Form :**

Please complete the form below as much detail as possible and send the form to Our Sales Department by pressing the "Submit" button at the bottom of the page.

Name : \_\_\_\_\_ Title : \_\_\_\_\_

Company : \_\_\_\_\_

Business : Manufacturer(  ) Trading(  ) Sales Agent(  ) End user(  ) Department : \_\_\_\_\_

Address : \_\_\_\_\_

Country : \_\_\_\_\_ Post Code / Zip : \_\_\_\_\_ Web : \_\_\_\_\_

Telephone : \_\_\_\_\_ Fax : \_\_\_\_\_ E-mail : \_\_\_\_\_

How did you learn our company? \_\_\_\_\_

Information require : Quotation (  ) Specification sheet (  ) Catalogue (  )

Message : \_\_\_\_\_

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## **Contact Information :**

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Email : [info@filmcapacitor-st.com](mailto:info@filmcapacitor-st.com)

Postal address:

1st Floor, Po Yip Building,  
No. 23 Hing Yip Street, Kwun Tong, Kowloon, Hong Kong

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HK Film Capacitor Ltd. reserves the right to make changes without further notice for any capacitors herein to improve reliability, function or design.