F95 Series

Standard Conformal Coated Chip

LEAD-FREE

LEAD-FREE COMPATIBLE COMPONENT

RoHS COMPLIANT

FEATURES

- Compliant to the RoHS2 directive 2011/65/EU
- For high frequency
- SMD Conformal
- Small and high CV

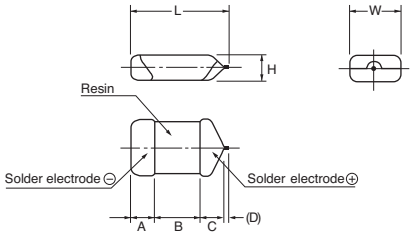
APPLICATIONS

- Smartphone
- Tablet PC
- Wireless module
- e-book

CASE DIMENSIONS: millimeters (inches)

Code	L	W	H	A	B	C	D*
A	3.20±0.30 (0.126±0.012)	1.70±0.30 (0.067±0.008)	1.40±0.20 (0.055±0.008)	0.80±0.30 (0.031±0.012)	1.20±0.30 (0.047±0.012)	0.80±0.30 (0.031±0.012)	0.20 (0.008)
B	3.50±0.20 (0.138±0.012)	2.80±0.20 (0.110±0.012)	1.80±0.20 (0.031±0.008)	0.80±0.30 (0.031±0.012)	1.20±0.30 (0.047±0.012)	1.10±0.30 (0.043±0.012)	0.20 (0.008)
P	2.20±0.30 (0.087±0.012)	1.25±0.30 (0.049±0.012)	1.00±0.20 (0.039±0.008)	0.60±0.30 (0.024±0.012)	0.80±0.30 (0.031±0.012)	0.80±0.30 (0.031±0.012)	0.20 (0.008)
Q	3.20±0.20 (0.126±0.008)	1.60±0.20 (0.063±0.008)	0.80±0.20 (0.031±0.008)	0.80±0.20 (0.031±0.008)	1.20±0.20 (0.047±0.008)	0.80±0.20 (0.031±0.008)	0.20 (0.008)
R	2.20±0.30 (0.087±0.012)	1.25±0.30 (0.049±0.012)	0.65 max. (0.026 max.)	0.60±0.30 (0.024±0.012)	0.80±0.30 (0.031±0.012)	0.50 min. (0.020 min.)	0.20 (0.008)
S	3.20±0.30 (0.126±0.012)	1.60±0.30 (0.063±0.008)	1.00±0.20 (0.039±0.008)	0.80±0.30 (0.031±0.012)	1.20±0.30 (0.047±0.012)	0.80±0.30 (0.031±0.012)	0.20 (0.008)
T	3.50±0.20 (0.138±0.012)	2.70±0.20 (0.106±0.012)	1.00±0.20 (0.039±0.008)	0.80±0.20 (0.031±0.008)	1.20±0.20 (0.047±0.008)	1.10±0.30 (0.043±0.012)	0.20 (0.008)

*D dimension only for reference



Single-side electrodes (Both electrodes at bottom side only)

TECHNICAL SPECIFICATIONS

Item	Performance Characteristics
Category Temperature Range	-55 to +125°C (Rated temperature: +85°C)
Capacitance Tolerance	±20%, ±10% (at 120Hz) (However R • P Case ±20%)
Dissipation Factor at (120Hz)	Refer to next page
ESR (100kHz)	Refer to next page
Leakage Current	Refer to next page Provided that • After 1 minute's application of rated voltage, leakage current at 85°C 10 times or less than 20ºC specified value. • After 1 minute's application of rated voltage, leakage current at 125°C 12.5 times or less than 20ºC specified value.
Capacitance Change by Temperature	+15% Max. (at +125°C) +10% Max. (at +85°C) -10% Max. (at -55°C)
Damp Heat (Steady State)	At 40°C, 90 to 95% R.H., 500 hours (No voltage applied) Capacitance Change ..... Refer to next page (*1) Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less
Temperature Cycles	At -55ºC / +125ºC, 30 minutes each, For 5 cycles, Capacitance Change ..... Refer to next page (*1) Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less
Resistance to Soldering Heat	10 seconds reflow at 260°C, 10 seconds immersion at 260°C. Capacitance Change ..... Refer to next page (*1) Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less
Surge	After application of surge in series with a 33Ω resistor at the rate of 30 seconds ON, 30 seconds OFF, for 1000 successive test cycles at 85°C, capacitors shall meet the characteristic requirements table below. Capacitance Change ..... Refer to next page (*1) Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less
Endurance	After 2000 hours' application of rated voltage at 85°C, capacitors shall meet the characteristic requirements table below. Capacitance Change ..... Refer to next page (*1) Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less
Shear Test	After applying the pressure load of 5N for 10± 1 seconds horizontally to the center of capacitor side body which has no electrode and has been soldered beforehand on a substrate, there shall be found neither exfoliation nor its sign at the terminal electrode. 5N (0.51kg • f) For 10 ± 1 seconds
Terminal Strength	Keeping a capacitor surface-mounted on a substrate upside down and supporting the substrate at both of the opposite bottom points 45mm apart from the center of capacitor, the pressure strength is applied with a specified jig at the center of substrate so that the substrate may bend by 1mm as illustrated. Then, there shall be found no remarkable abnormality on the capacitor terminals. R230 20 1mm 45 45

HOW TO ORDER

F95	0G	337	M	A	□	AQ2
Type	**Rated Voltage**	**Capacitance Code** pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)	**Tolerance** K = ±10% M = ±20%	**Case Size** See table above	**Packaging** See page 168 for details	**Single Face Electrode**

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CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

Capacitance		Rated Voltage						
µF	Code	4V (0G)	6.3V (0J)	10V (1A)	16V (1C)	20V (1D)	25V (1E)	35V (1V)
1	105						R	P/S
1.5	155							
2.2	225					P	P/R	A
3.3	335							
4.7	475				P/R	A/S	A/P/Q/S	B
6.8	685						Q*/S*	
10	106			P/R	A/P/Q/S	A/B/S	A/B/T*	
15	156			P	A/S			
22	226		R	A/P/Q/S	A/B/Q/S/T	B		
33	336		P/R*	A/P/Q/S	A*/B/T			
47	476	R*	P	A/B/P/Q*/S/T	B			
68	686		P	B				
100	107	A/P/S	A/B/P/Q/S/T	A/B/S*/T				
150	157	B/P	B					
220	227	A/B/P*/Q/S/T	A*/B/S*/T*					
330	337	A/B/P*/S*/T	B					
470	477	A*/B/P*/T*	B*					
680	687	T*						

Available Ratings

*Codes under development – subject to change

Please contact to your local AVX sales office when these series are being designed in your application.

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RATINGS & PART NUMBER REFERENCE

AVX Part Number	Case Size	Cap (µF)	Rated Voltage (V)	*2 Leakage Current (µA)	Disspation Factor (%@120Hz)	ESR (Ω@100kHz)	*1 ΔC/C (%)
4 Volt							
F950G107MAAAQ2	A	100	4	4.0	12	0.5	*
F950G107MPAAQ2	P	100	4	4.0	30	1.2	±15
F950G107MSAAQ2	S	100	4	4.0	14	0.8	*
F950G157MBAAQ2	B	150	4	6.0	14	0.4	*
F950G157MPAAQ2	P	150	4	12.0	31	1.1	±20
F950G227MAAAQ2	A	220	4	8.8	25	0.8	±15
F950G227MBAAQ2	B	220	4	8.8	16	0.4	*
F950G227MQAAQ2	Q	220	4	8.8	30	1.5	±20
F950G227MSAAQ2	S	220	4	8.8	30	0.8	±15
F950G227MTAAQ2	T	220	4	8.8	25	0.6	*
F950G337MAAAQ2	A	330	4	13.2	40	0.8	±20
F950G337MBAAQ2	B	330	4	13.2	30	0.6	±15
F950G337MTAAQ2	T	330	4	13.2	40	0.8	±20
F950G477MBAAQ2	B	470	4	18.8	40	0.4	±20
6.3 Volt							
F950J336MPAAQ2	P	33	6.3	2.1	14	1.1	*
F950J226MRAAQ2	R	22	6.3	1.4	20	2.0	±20
F950J476MPAAQ2	P	47	6.3	3.0	20	1.1	±15
F950J686MPAAQ2	P	68	6.3	4.3	25	1.2	±15
F950J107MAAAQ2	A	100	6.3	6.3	14	0.5	*
F950J107MBAAQ2	B	100	6.3	6.3	14	0.4	*
F950J107MPAAQ2	P	100	6.3	12.6	35	1.2	±20
F950J107MQAAQ2	Q	100	6.3	6.3	30	1.1	±20
F950J107MSAAQ2	S	100	6.3	6.3	20	0.9	±15
F950J107MTAAQ2	T	100	6.3	6.3	14	0.6	*
F950J157MBAAQ2	B	150	6.3	9.5	18	0.4	*
F950J227MBAAQ2	B	220	6.3	13.9	30	0.4	*
F950J337MBAAQ2	B	330	6.3	20.8	35	0.6	±20
10 Volt							
F951A106MPAAQ2	P	10	10	1.0	8	3.0	*
F951A106MRAAQ2	R	10	10	1.0	18	3.0	±20
F951A156MPAAQ2	P	15	10	1.5	10	3.0	*
F951A226MAAAQ2	A	22	10	2.2	6	0.9	*
F951A226MPAAQ2	P	22	10	2.2	14	3.0	*
F951A226MQAAQ2	Q	22	10	2.2	10	2.0	*
F951A226MSAAQ2	S	22	10	2.2	10	1.1	*
F951A336MAAAQ2	A	33	10	3.3	10	0.8	*
F951A336MPAAQ2	P	33	10	3.3	20	3.0	±15
F951A336MQAAQ2	Q	33	10	3.3	18	3.0	±15
F951A336MSAAQ2	S	33	10	3.3	10	1.1	*
F951A476MAAAQ2	A	47	10	4.7	10	0.8	*
F951A476MBAAQ2	B	47	10	4.7	8	0.4	*
F951A476MPAAQ2	P	47	10	4.7	30	3.0	±20
F951A476MSAAQ2	S	47	10	4.7	14	1.1	±15
F951A476MTAAQ2	T	47	10	4.7	12	0.8	*
F951A686MBAAQ2	B	68	10	6.8	12	0.4	*
F951A107MAAAQ2	A	100	10	10.0	35	1.0	±15
F951A107MBAAQ2	B	100	10	10.0	14	0.4	*
F951A107MTAAQ2	T	100	10	10.0	20	0.6	±15
16 Volt							
F951C475MPAAQ2	P	4.7	16	0.8	10	4.0	*
F951C475MRAAQ2	R	4.7	16	0.8	12	6.0	±20
F951C106MAAAQ2	A	10	16	1.6	6	1.4	*
F951C106MPAAQ2	P	10	16	1.6	10	4.0	*
F951C106MQAAQ2	Q	10	16	1.6	8	3.0	*
F951C106MSAAQ2	S	10	16	1.6	8	2.0	*
F951C156MAAAQ2	A	15	16	2.4	8	1.4	*
F951C156MSAAQ2	S	15	16	2.4	8	2.0	*
F951C226MAAAQ2	A	22	16	3.5	8	1.4	*
F951C226MBAAQ2	B	22	16	3.5	6	0.5	*
F951C226MQAAQ2	Q	22	16	3.5	12	3.0	*
F951C226MSAAQ2	S	22	16	3.5	10	2.0	±15
F951C226MTAAQ2	T	22	16	3.5	8	1.4	*
F951C336MBAAQ2	B	33	16	5.3	8	0.5	*
F951C336MTAAQ2	T	33	16	5.3	11	1.5	±10
F951C476MBAAQ2	B	47	16	7.5	10	0.6	*
20 Volt							
F951D225MPAAQ2	P	2.2	20	0.5	6	6.0	*
F951D475MAAAQ2	A	4.7	20	0.9	6	1.5	*
F951D475MSAAQ2	S	4.7	20	0.9	8	4.0	*
F951D106MAAAQ2	A	10	20	2.0	8	1.5	*
F951D106MBAAQ2	B	10	20	2.0	6	0.8	*
F951D106MSAAQ2	S	10	20	2.0	10	4.0	±10
F951D226MBAAQ2	B	22	20	4.4	8	0.8	*
25 Volt							
F951E105MRAAQ2	R	1	25	0.5	10	10.0	±10
F951E225MPAAQ2	P	2.2	25	0.6	8	6.0	±15
F951E225MRAAQ2	R	2.2	25	0.6	15	15.0	±20
F951E475MAAAQ2	A	4.7	25	1.2	8	2.0	*
F951E475MPAAQ2	P	4.7	25	1.2	10	8.0	±15
F951E475MQAAQ2	Q	4.7	25	1.2	10	4.0	±15
F951E475MSAAQ2	S	4.7	25	1.2	8	4.0	*
F951E106MAAAQ2	A	10	25	2.5	12	2.0	±15
F951E106MBAAQ2	B	10	25	2.5	6	0.9	*
35 Volt							
F951V105MPAAQ2	P	1	35	0.5	8	10.0	±10
F951V105MSAAQ2	S	1	35	0.5	6	8.0	*
F951V225MAAAQ2	A	2.2	35	0.8	6	4.4	*
F951V475MBAAQ2	B	4.7	35	1.7	6	1.6	*

1: ΔC/C Marked ""

Item	All Case (%)
Damp Heat	±10
Tempereature cycles	±5
Resistance soldering heat	±5
Surge	±5
Endurance	±10

*2: Leakage Current
After 1 minute's application of rated voltage, leakage current at 20ºC.

* In case of capacitance tolerance ± 10% type, "K" will be put at 9th digit of type numbering system