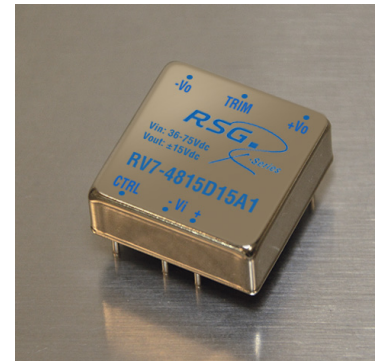


# RV7-S15/D15

- 1" x 1" Package, Full SMD Technologie
- Wide 2:1 Input Range
- Soft Start
- No Minimum Load Required
- Adjustable Output Voltage
- Over Current Protection
- Over Voltage Protection
- 1600VDC Isolation
- Continuous Short Circuit Protection
- Efficiency up to 89%
- Operating Temperature Range -40° ~ +85°C
- Remote On/Off Control (CTRL)

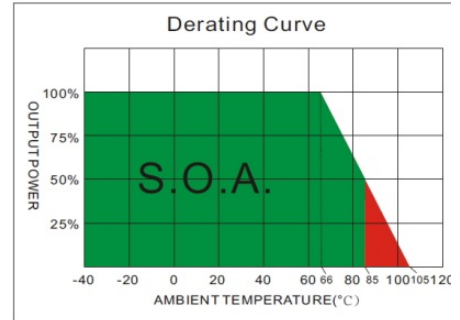
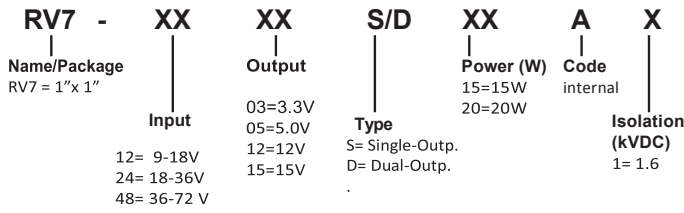
RoHS



OUTPUT SPECIFICATION	
Voltage accuracy:	±1%
Output Voltage Adjustability (Trim):	Singel Output: ±10% max.
Line regulation:	Single & Dual ±0.2% max.
LOAD REGULATION:	Singel: ±0.5% max.
	Dual: ±1%, max. (balanced load)
Cross Regulation (Dual Output):	±5%
Over Voltage Protection (Zener diode clamp):	See table
Over Current Protection:	150% of I <sub>L</sub> , typ.
Short Circuit Protection :	Indefinite (hiccup) (Automatic Recovery)
Ripple noise (20Mhz bandwidth):	100mV pk-pk max.
Temperature coefficient:	±0.02% °C
Capacitor load:	See table
Transient Recovery Time:	250us, typ.
Transient Response:	( Deviation) ±3% max.
INPUT SPECIFICATIONS	
Voltage Range:	See table
Start up Time:	20ms, typ.
No-Load/Full-Load Input Current:	See table
Input Filter:	PI Type
Input Reflected Ripple Current :	20mA pk-pk typ.
Remote On/Off (positive logic):	On: 3.0~12VDC or open circuit,
	OFF: 0~1.2VDC or Short circuit pin 2 and 3
OFF idle current:	5mA typ.
GENERAL SPECIFICATIONS	
Efficiency:	See table typ.
I/O Isolation Voltage (60sec):	1600VDC
Input/Output	1600VDC
Case Input & Output:	1600VDC
I/O Isolation Capacitance:	1200pF typ.
I/O Isolation Resistance:	1000M Ohm
Switching Frequency:	375kHz, typ.
Humidity:	95% rel H
Reliability Calculated MTBF :	> 560khrs (MIL-HDBK-217 f)
Safety Standard: (designed to meet):	IEC 60950-1
ENVIRONMENTAL SPECIFICATION	
Operating Temperature range:	-40°C ~ +85°C (see Derating Curve)
Maximum Case Temperature:	105°C
Storage Temperature :	-55°C ~ +125°C
Cooling :	Nature Convection
PHYSICAL SPECIFICATIONS:	
Base Material:	Non-conductive Black Plastic (UL94V-0 rated)
Case Material:	Nickel-coated Copper
PIN Material:	1.0mm Brass Solder coated
Potting Material:	Epoxy (UL94V-0 rated)
Weight Case-DIP:	18.0g
Dimmension DIP:	1.00" x 1.00" x 0.40"
ABSOLUTE MAXIMUM RATINGS (1)	
Input Surge Voltage (100ms)/	
12V Models:	36VDC max.
24V Models:	50VDC max.
48V Models:	100VDC max.
Soldering Temperature:	260°C max. (2)
EMC SPECIFICATIONS	
Radiated-/Conducted Emissions:	EN55022 Class A see EMI Filter note
ESD:	IEC 61000-4-2 Perf.Criteria A
RS:	IEC 61000-4-3 Perf.Criteria A
EFT:	IEC 61000-4-4 Perf.Criteria A
SURGE:	IEC 61000-4-5 Perf.Criteria A
CS:	IEC 61000-4-6 Perf.Criteria A
PFMF	IEC 61000-4-8 Perf.Criteria A

1) These are stress ratings. Exposure of devices to any of these conditions may adversely affect long-term reliability. 2) (1.5mm from case 10sec Max.) 3) All specifications typical at TA= 25°C, nominal input voltage and full load unless otherwise specified. 4) The information and specification contained in this data sheet are believed to be correct at time of publication. However RSG accepts no responsibility for consequences arising from printing errors or inaccuracies. Specifications are subject to change without notice.

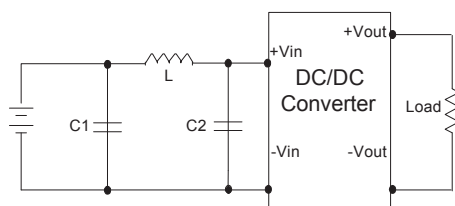
NUMBER STRUCTURE



MODEL SELECTION GUIDE

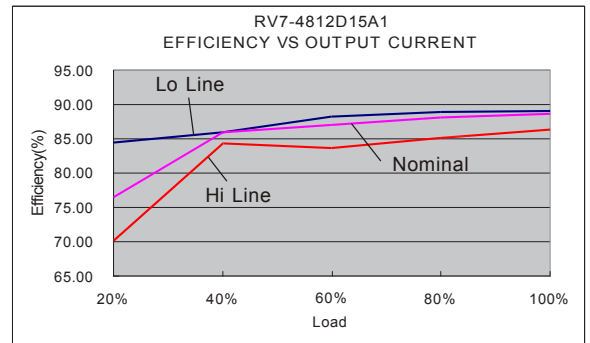
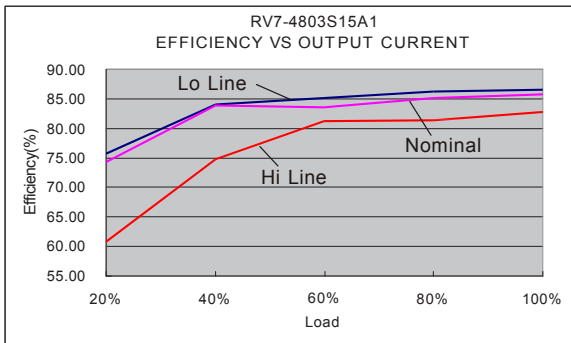
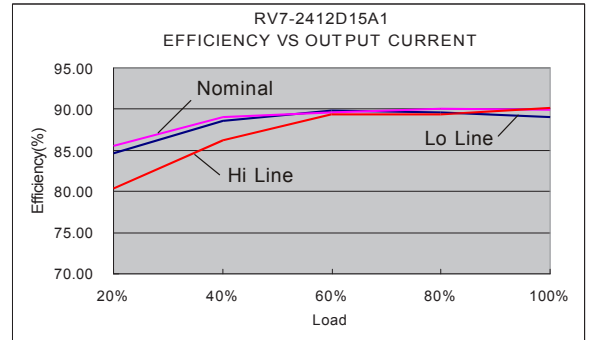
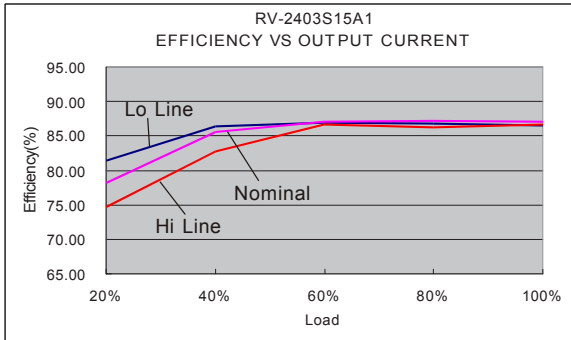
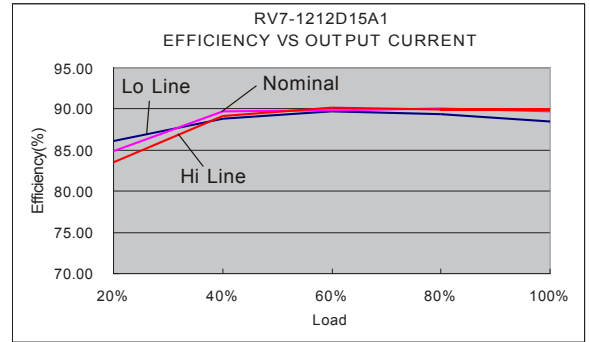
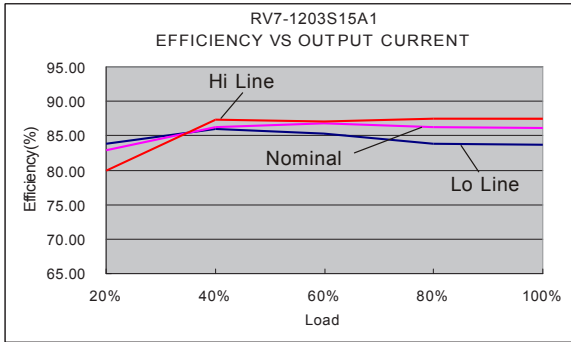
MODEL NUMBER	INPUT Voltage Range (Vdc)	INPUT Current		OUTPUT Voltage (Vdc)	OUTPUT Current		EFFICIENCY @FL(%)	Capacitor Load(µF)
		No-Load (mA)	Full Load (mA)		Nin. load (mA)	Full load (mA)		
RV7-1203S15A1	9-18	20	1310	3.3	0	4000	85	1000
RV7-1205S15A1	9-18	20	1471	5	0	3000	86	1000
RV7-1212S15A1	9-18	20	1494	12	0	1300	88	330
RV7-1215S15A1	9-18	20	1420	15	0	1000	89	220
RV7-2403S15A1	18-36	15	647	3.3	0	4000	86	1000
RV7-2405S15A1	18-36	15	727	5	0	3000	87	1000
RV7-2412S15A1	18-36	15	747	12	0	1300	88	330
RV7-2415S15A1	18-36	15	710	15	0	1000	89	220
RV7-4803S15A1	36-75	10	327	3.3	0	4000	85	1000
RV7-4805S15A1	36-75	10	368	5	0	3000	86	1000
RV7-4812S15A1	36-75	10	374	12	0	1300	88	330
RV7-4815S15A1	36-75	10	359	15	0	1000	88	220
RV7-1205D15A1	9-18	20	1488	±5	0	±1500	85	±470
RV7-1212D15A1	9-18	20	1420	±12	0	±625	89	±220
RV7-1215D15A1	9-18	20	1437	±15	0	±500	89	±100
RV7-2405D15A1	18-36	15	744	±5	0	±1500	85	±470
RV7-2412D15A1	18-36	15	718	±12	0	±625	88	±220
RV7-2415D15A1	18-36	15	710	±15	0	±500	89	±100
RV7-4805D15A1	36-75	10	377	±5	0	±1500	84	±470
RV7-4812D15A1	36-75	10	363	±12	0	±625	87	±220
RV7-4815D15A1	36-75	10	359	±15	0	±500	88	±100

- One load is 25% to 100% load, the other load is 100% load, the output voltage variable rate is within ±5%.
- Measured with a 1.0µF ceramic capacitor and 10µF tantalum capacitor.
- Tested by minimal Vin and constant resistive load.
- Tested by normal Vin and 25% load step change ( 75%-50%-25% of Io ).
- Measured Input reflected ripple current with a simulated source inductance of 12µH and a source capacitor Cin (47µF, ESR<1.0@ 100KHz).
- The remote on/off control pin is referenced to -Vin(pin2).
- Input filter components (C1, C2, L) are used to help meet conducted emissions requirement for the module. These components should be mounted as close as possible to the module; and all leads should be minimized to decrease radiated noise.
- An external filter capacitor is required if the module has to meet IEC61000-4-4 and IEC61000-4-5. The filter capacitor RSG suggest: Nippon chemi-con KY series, 220µF/100V.
- Nature Convection" is usually about 30-65 LFM but is not equal to still air (0 LFM).
- Exceeding the absolute ratings of the unit could cause damage. It is not for continuous operating

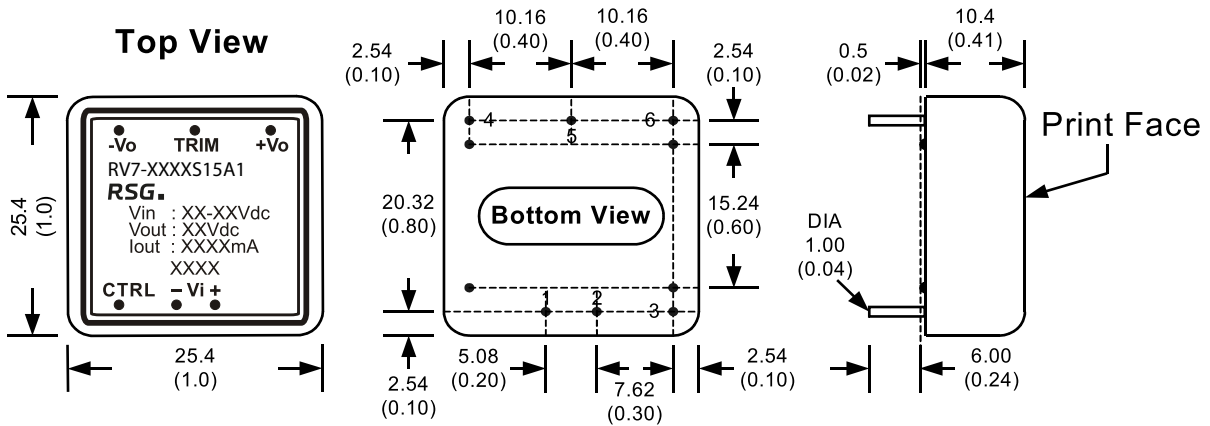


	C1	L	C2
RV7-12XXX15A1	1210, 2.2µF/100V	12µH	1210, 2.2µF/100V
RV7-24XXX15A1	1210, 2.2µF/100V	12µH	1210, 2.2µF/100V
RV7-48XXX15A1	1210, 2.2µF/100V	12µH	1210, 2.2µF/100V

**RV7-S15/D15**



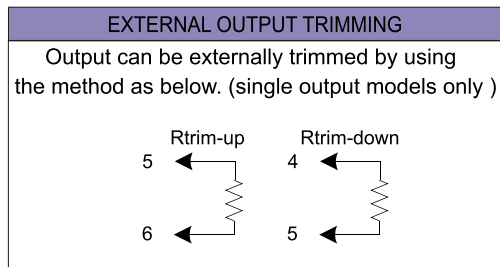
MECHANICAL SPECIFICATIONS



All dimensions are typical in millimeters ( inches ).

1. Pin diameter:  $1.0 \pm 0.05$  (  $0.04 \pm 0.002$  )
2. Pin pitch and length tolerance:  $\pm 0.35$  (  $\pm 0.014$  )
3. Case Tolerance:  $\pm 0.5$  (  $\pm 0.02$  )
4. Stand-off tolerance:  $\pm 0.1$  (  $\pm 0.004$  )

PIN CONNECTIONS		
PIN NUMBER	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
3	CTRL	CTRL
4	+Vout	+Vout
5	Trim	Com
6	-Vout	-Vout



The models listed here are just standard type. If you need a product with special specification or you have questions regarding packing standards (Tube oder Tape/Reel) as well as application support, please contact our specialists: [sales@rsg-electronic.de](mailto:sales@rsg-electronic.de) or +49 69-984047-41/-28