RV7-S/D15W

- 1“ x 1“ Package
- Wide 4:1 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)*:	
Over Current Protection:	170% of FI, 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
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:	1600 VDC
I/O Isolation Capacitance:	1200pF typ.
I/O Isolation Resistance:	1000M Ohm
Switching Frequency:	375kHz, typ.
Humidity:	95% rel H
Reliability Calculated MTBF : (MIL-HDBK-217 f)	> 560khrs
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)/	
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.=

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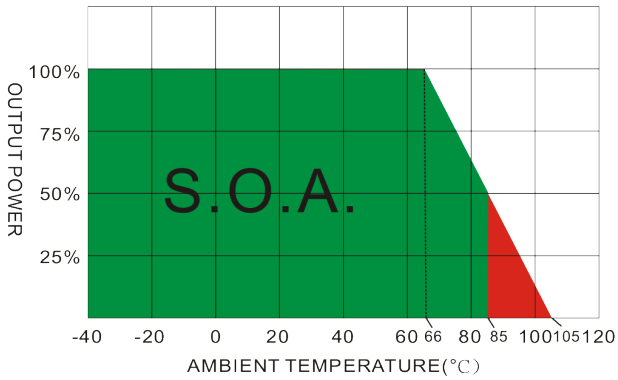
RV7 - 24 03 S 15 A1W

- Series Name
- Input Voltage Range
  - 24 - 9 ~ 36V
  - 48 - 18 ~ 75V
- Nominal Output Voltage
  - 03 - 3.3V
  - 05 - 5V
  - 12 - 12V
  - 15 - 15V
- Output Type
  - S - Single output
  - D - Dual Output
- Watt
- Weitbereich (4:1)
- 1 = Isolation 1600Vdc

Derating Curve



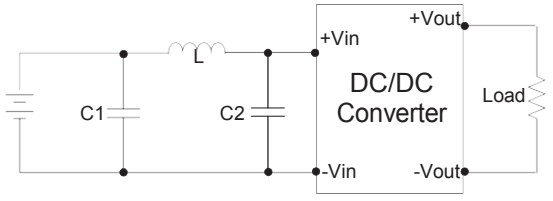
MODEL SELECTION GUIDE

MODEL NUMBER	INPUT Voltage Range (Vdc)	INPUT Current No-Load (mA)	INPUT Current Full Load (mA)	OUTPUT Voltage (Vdc)	OUTPUT Current Min. load (mA)	OUTPUT Current Full load (mA)	EFFICIENCY @FL(%)	Capacitor Load(uF)
RV7-2403S15A1W	9-36	15	647	3.3	0	4000	86	1000
RV7-2405S15A1W	9-36	15	727	5	0	3000	87	1000
RV7-2412S15A1W	9-36	15	747	12	0	1300	88	330
RV7-2415S15A1W	9-36	15	710	15	0	1000	89	220
RV7-4803S15A1W	18-75	10	331	3.3	0	4000	84	1000
RV7-4805S15A1W	18-75	10	368	5	0	3000	86	1000
RV7-4812S15A1W	18-75	10	378	12	0	1300	87	330
RV7-4815S15A1W	18-75	10	360	15	0	1000	88	220
RV7-2405D15A1W	9-36	15	744	±5	0	±1500	85	±470
RV7-2412D15A1W	9-36	15	718	±12	0	±625	88	±220
RV7-2415D15A1W	9-36	15	710	±15	0	±500	89	±100
RV7-4805D15A1W	18-75	10	376	±5	0	±1500	84	±470
RV7-4812D15A1W	18-75	10	363	±12	0	±625	87	±220
RV7-4815D15A1W	18-75	10	359	±15	0	±500	88	±100

The models listed above are just for standard type. If you need the special specification product, please contact us: **info@rsg-electronic.de**

1. One load is 25% to 100% load, the other load is 100% load, the output voltage variable rate is within ±5%.
2. Measured with a 1.0uF ceramic capacitor and 10uF tantalum capacitor.
3. Tested by minimal Vin and constant resistive load.
4. Tested by normal Vin and 25% load step change (75%-50%-25% of Io).
5. Measured Input reflected ripple current with a simulated source inductance of 12uHand a source capacitor Cin(47uF, ESR<1.0© at 100KHz).
6. The remote on/off control pin is referenced to -Vin(pin2).
7. 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.
8. An external filter capacitor is required if the module has to meet IEC61000-4-4 and IEC61000-4-5.
   The filter capacitor n suggest: Nippon chemi-con KY series, 220uF/100V.
9. Nature Convection" is usually about 30-65 LFM but is not equal to still air (0 LFM).
10. Exceeding the absolute ratings of the unit could cause damage.
    It is not allowed for continuous operating.

	C1	L	C2
RV7-24XXX15A1W	1210 2.2uF/100V	12uH	1210 2.2uF/100V
RV7-48XXX15A1W	1210 2.2uF/100V	12uH	1210 2.2uF/100V



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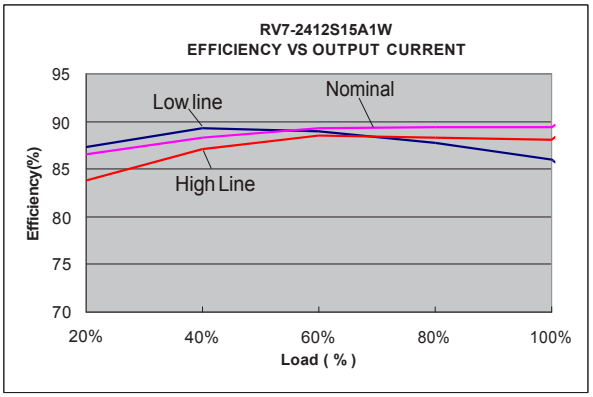

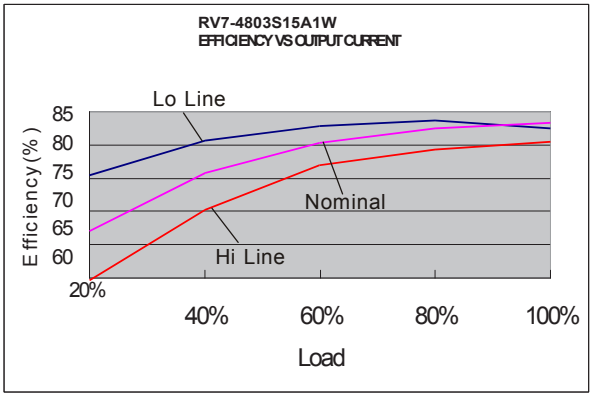

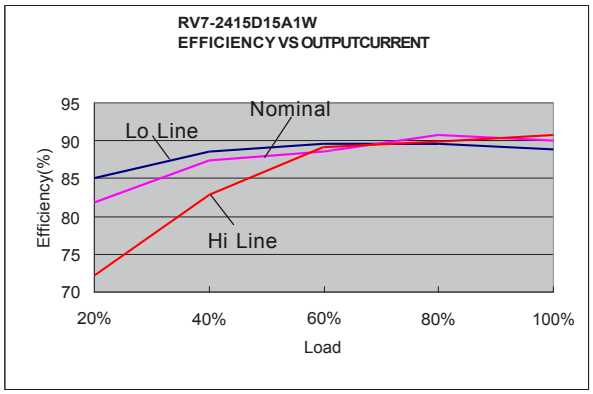

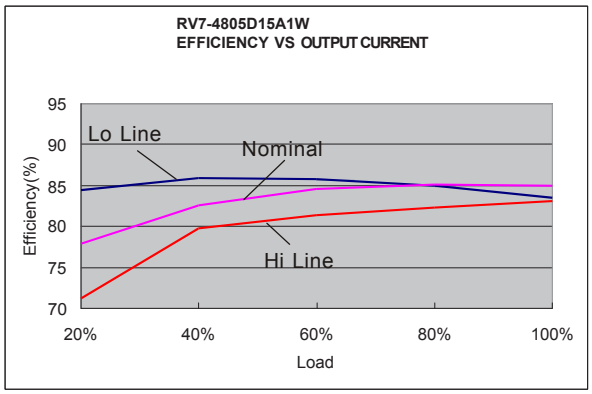

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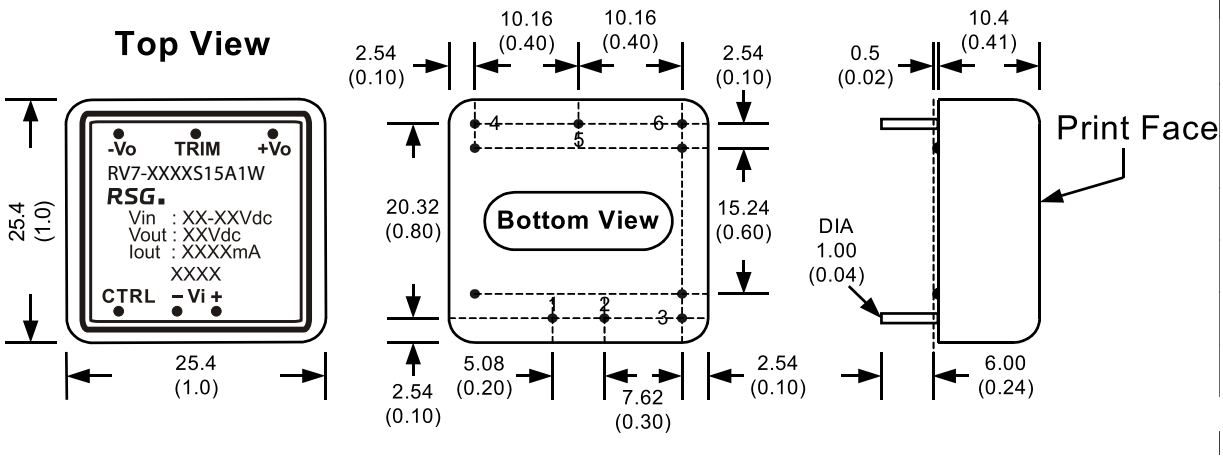
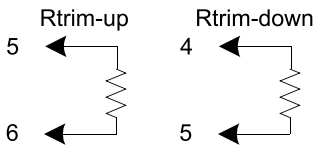


All dimensions are typical in millimeters (inches).
1. Pin diameter: 1.0 ±0.05 (0.04 ±0.002)
2. Pin pitch and length tolerance: ±0.35 (±0.014)
3. Case Tolerance: ±0.5 (±0.02)
4. Stand-off tolerance: ±0.1 (±0.004)

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

EXTERNAL OUTPUT TRIMMING

Output can be externally trimmed by using the method as below. (single output models only)



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The models listed above are standard types. If you need special specifications or have questions regarding packing (Tube or Tape&Reel) or need application support, please contact our specialists: sales@rsg-electronic.de or +49 69-984047-0