

# RV2-S10/D10

10 Watt regulated  
single & dual output



- 2"x1" package, wide 4:1 input range
- Full SMD technology
- 1500 VDC isolation
- Continuous short circuit protection
- Efficiency up to 85%
- -40°C~85°C operation temperature range
- EMI complies with EN55022 class A

## OUTPUT SPECIFICATIONS

Voltage accuracy	± 1%
Line regulation	± 0.5%
Load regulation (From 10% to 100% Load)	± 0.5%
(below 10% load)	± 1.0%
Cross regulation (Dual output) (1)	± 5.0%
Ripple & Noise (20 MHz bandwidth) (2)	75 mV pk-pk
Over current protection (of max. Io)	140%
Short circuit protection	Indefinite (automatic recovery)
Temperature coefficient	± 0.02%/°C
Capacitor load (3)	See table

## INPUT SPECIFICATIONS

Voltage range	See table
Start up time (nom. Vin and constant resistive load)	20ms typ
Max. input current	See table
No-load input current	See table
Input filter	PI type
Input reflected ripple current (4)	35 mA pk-pk

## GENERAL SPECIFICATIONS

Efficiency	See table
I/O isolation voltage (3 sec.)	
Input / output	1500 VDC
Metal case / input & output	1000 VDC
I/O isolation capacitance	1200 pF typ.
I/O isolation resistance	1000 M Ohm
Switching frequency	typ. 300 kHz
Humidity	95% rel. H
Reliability calculated MTBF (MIL-HDBK-217F)	> 1.121 Mhrs.
Safety standard (designed to meet)	IEC 60950-1:2001
Remote on/off (optional)	On: 2.5~5.5VDC or open circuit
	Off: -0.7~0.8VDC or short circuit
(idle current: 2.5mA typ.)	pin 2 and pin 6

## EMC CHARACTERISTICS

Radiated emissions	EN55022	Class A
Conducted emissions (5)	EN55022	Class A
ESD	EN61000-4-2	Perf. crit. B
RS	EN61000-4-3	Perf. crit. A
EFT	EN61000-4-4	Perf. crit. B
CS	EN61000-4-6	Perf. crit. A
PFMF	EN61000-4-8	Perf. crit. A

## PHYSICAL SPECIFICATIONS

Case material	Nickel-coated brass
Pin material	Ø 1.0 mm brass solder-coated
Potting material	Epoxy (UL94V-0 rated)
Weight	30 g
Dimensions	2" x 1" x 0.4"

## ENVIRONMENT SPECIFICATIONS

Operating temperature	-40°C ~ 85°C (See derating curve)
Maximum case temperature	100°C
Storage temperature	-40°C ~ 125°C
Cooling	Nature convection

## ABSOLUTE MAXIMUM RATINGS (6)

These are stress ratings. Exposure of devices to any of these conditions may adversely affect long-term reliability.

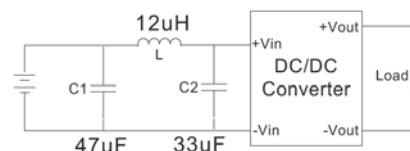
Input voltage (100 mS)	
24 modes	-0.7 ~ 40 VDC
48 modes	-0.7 ~ 80 VDC
Lead soldering temperature	260°C
	(1.5 mm from case 10 sec.)

All specifications typical at Ta = 25°C, nominal input voltage and full load unless otherwise specified.

The information and specifications contained in this data sheet are believed to be correct at time of publication. However, we accept no responsibility for consequences arising from printing errors or inaccuracies. Subject to change without notice.

## NOTE

- 1) One load is 25% to 100%, the other load is 100%. The output voltage variable rate is within ±5%.
- 2) Ripple / Noise measured with 20 MHz bandwidth.
- 3) Tested by minimal Vin and constant resistive load.
- 4) Measured input reflected ripple current with a simulated source inductance of 12uH.
- 5) Input filter components (C1, C2, L) are used to help meeting the conducted emissions requirements 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.
- 6) Exceeding the absolute ratings of the unit could cause damage. It is not allowed for continuous operating.



The models listed are just for standard type. If you need a special specification product, please contact our service. Phone: +49 69 984047-0, mail to: info@rsg-electronic.de or use the forms on www.rsg-electronic.de („Kontakt“).

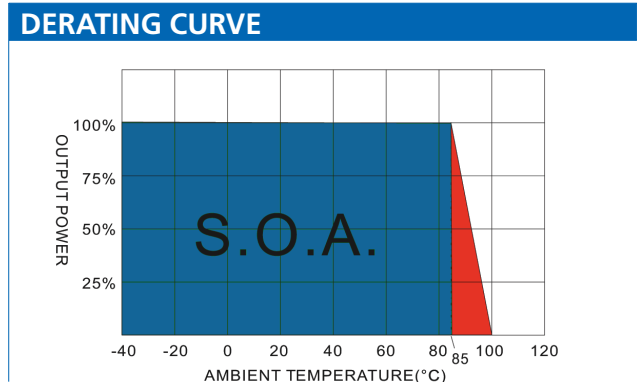
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### NUMBER STRUCTURE

<b>RV2</b>	-	<b>XX</b>	<b>XX</b>	<b>S</b>	<b>10</b>	<b>A</b>	<b>1 *C</b>
Name/Package		Output		Type	Power	Code	Isolation
RV2=2"x1"		03=3.3V 05=5V 07=7.2V 09=9V 12=12V 15=15V		S=Single D=Dual	10=10W	internal	1=1.5 kVDC
Input							
24=9-36V 48=18-72V							

\*C = Control function (optional)  
Please add suffix „C“ for Control function



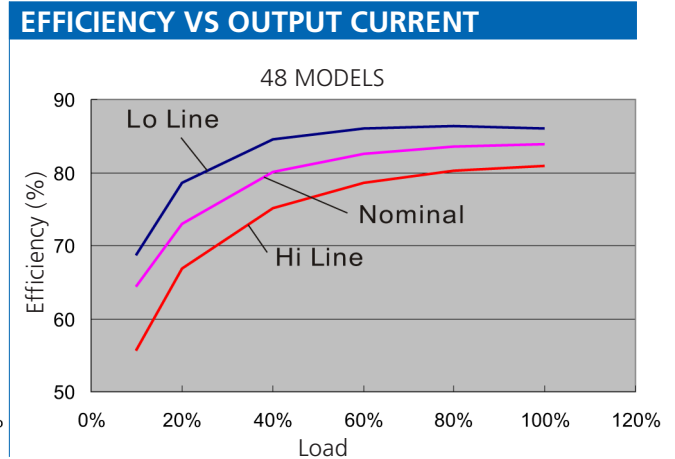
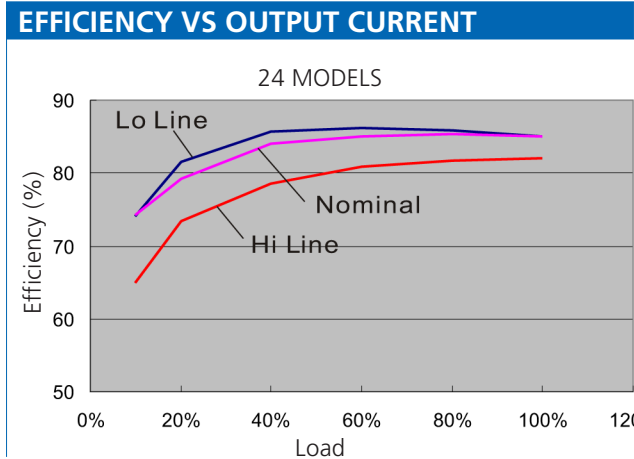
## MODEL SELECTION GUIDE

Model Number	Input Range VDC	Input current (mA) No Load / Full Load	Output VDC	Output current Full Load (mA)	Efficiency @FL (%)	Capacitor Load (µF)
RV2-2403S10A1	9-36	25 / 348	3.3	2000	80	3300
RV2-2405S10A1	9-36	25 / 508	5	2000	82	3300
RV2-2407S10A1	9-36	25 / 502	7.2	1388	83	1000
RV2-2409S10A1	9-36	25 / 502	9	1111	83	680
RV2-2412S10A1	9-36	25 / 490	12	833	85	680
RV2-2415S10A1	9-36	25 / 490	15	666	85	470
RV2-2405D10A1	9-36	25 / 508	±5	±1000	82	±2200
RV2-2407D10A1	9-36	25 / 502	±7.2	±694	83	±470
RV2-2409D10A1	9-36	25 / 502	±9	±555	83	±470
RV2-2412D10A1	9-36	25 / 490	±12	±416	85	±470
RV2-2415D10A1	9-36	25 / 490	±15	±333	85	±330
RV2-4803S10A1	18-72	20 / 174	3.3	2000	79	3300
RV2-4805S10A1	18-72	20 / 254	5	2000	82	3300
RV2-4807S10A1	18-72	20 / 251	7.2	1388	83	1000
RV2-4809S10A1	18-72	20 / 251	9	1111	83	680
RV2-4812S10A1	18-72	20 / 245	12	833	85	680
RV2-4815S10A1	18-72	20 / 245	15	666	85	470
RV2-4805D10A1	18-72	20 / 254	±5	±1000	82	±2200
RV2-4807D10A1	18-72	20 / 251	±7.2	±694	83	±470
RV2-4809D10A1	18-72	20 / 251	±9	±555	83	±470
RV2-4812D10A1	18-72	20 / 245	±12	±416	85	±470
RV2-4815D10A1	18-72	20 / 245	±15	±333	85	±330



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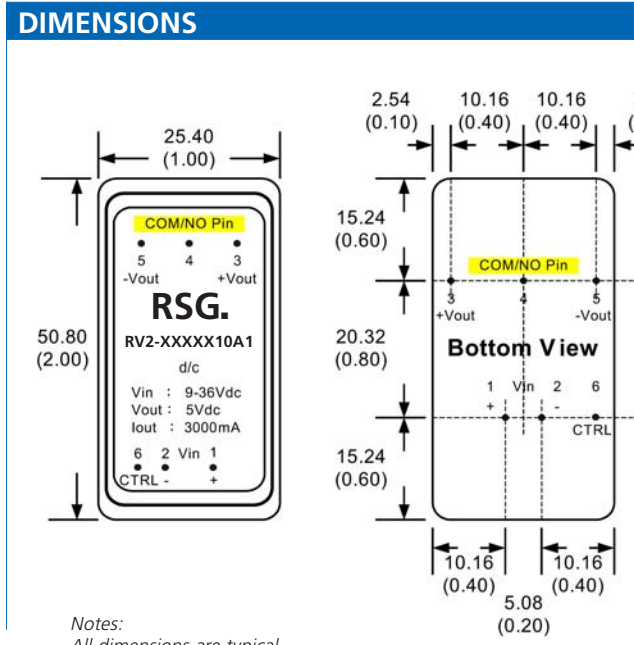


### PIN CONNECTIONS STANDARD

Pin Number	Single	Dual
1	+V Input	+V Input
2	-V Input	-V Input
3	+V Output	+V Output
4	N.P.	Common
5	-V Output	-V Output
6	N.P.	N.P.

### PIN CONNECTIONS REMOTE CONTROL (optional)

Pin Number	Single	Dual
1	+V Input	+V Input
2	-V Input	-V Input
3	+V Output	+V Output
4	N.P.	Common
5	-V Output	-V Output
6	CTRL	CTRL



Notes:  
All dimensions are typical in millimeters (inches).  
1) Pin diameter:  $1.0 \pm 0.05$  ( $0.04 \pm 0.002$ )  
2) Pin pitch tolerance:  $\pm 0.35$  ( $\pm 0.014$ )  
3) Case tolerance:  $\pm 0.5$  ( $\pm 0.02$ )

