

RV4-S30/D30

30 Watt 2:1 regulated
single & dual output



- 2"x2" package, wide 2:1 input range
- Full SMD technology
- 1500 VDC isolation
- Continuous short circuit protection
- Efficiency up to 88%
- -40°C~85°C operation temperature range

OUTPUT SPECIFICATIONS

Voltage accuracy	± 1%
Line regulation	± 0.5%
Load regulation (From 10% to 100% Load)	± 0.5%
Ripple & Noise (20 MHz bandwidth) (1)	100 mV pk-pk
Over current protection (of max. Iout)	140% typ.
Short circuit protection	Indefinite (Automatic recovery)
Temperature coefficient	± 0.02%/°C
Capacitor load (2)	See table

INPUT SPECIFICATIONS

Voltage range	See table
Start up time (nominal Vin and constant resistive load)	20ms typ
Max. input current	See table
No-load input current	See table
Input filter	Capacitors
Input reflected ripple current (3)	35 mA pk-pk

GENERAL SPECIFICATIONS

Efficiency	See table
I/O isolation voltage (3 sec.) Input/Output	1500 VDC
Case / input & output	1000 VDC
I/O isolation capacitance	1000 pF typ.
I/O isolation resistance	1000 M Ohm
Switching frequency	typ. 125 kHz
Humidity	95% rel. H
Reliability calculated MTBF (MIL-HDBK-217F)	> 1.121 Mhrs.
Safety standard (designed to meet)	IEC/EN 60950-1:2001

PHYSICAL SPECIFICATIONS

Case material	Nickel-coated brass
Pin material	Ø 1.0 mm brass solder-coated
Potting material	Epoxy (UL94V-0 rated)
Weight	60 g
Dimensions	2.0" x 2.0" x 0.4"

ENVIRONMENT SPECIFICATIONS

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

ABSOLUTE MAXIMUM RATINGS (4)

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

Input voltage (100 mS)	
12 modes	-0.7 ~ 24 VDC
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

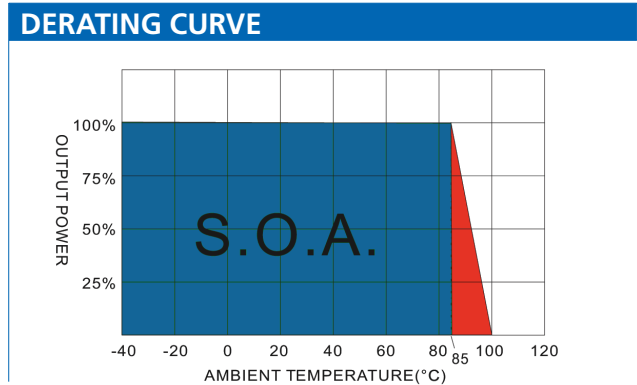
- 1) Measured with 20 MHz bandwidth.
- 2) Tested by minimal Vin and constant resistive load.
- 3) Measured input reflected ripple current with a simulated source inductance of 12uH.
- 4) Exceeding the absolute ratings of the unit could cause damage. It is not allowed for continuous operating.
- 5) Operation under no-load conditions will not damage these devices. However they may not meet all listed specifications.

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“).

RV4-S30/D30

30 Watt 2:1 regulated
single & dual output

NUMBER STRUCTURE						
RV4	-	XX	S	30	A	1
Name/Package RV4=2"x2"		Output 03=3.3V 05=5V 07=7.2V 09=9V 12=12V 15=15V 18=18V 24=24V	Type S=Single D=Dual	Power 30=30W	Code internal	Isolation 1=1.5 kVDC
	Input 12=9-18V 24=18-36V 48=36-72V					



MODEL SELECTION GUIDE

Model Number	Input Range VDC	Input current No Load / Full Load (mA)	Output VDC	Output current No Load / Full Load (mA)	Efficiency @FL (%)	Capacitor Load (μF)
RV4-1205S30A1	9-18	30 / 3012	5	600 / 6000	83	3300
RV4-1207S30A1	9-18	25 / 3012	7.2	416 / 4166	83	3300
RV4-1209S30A1	9-18	30 / 2976	9	333 / 3333	84	2200
RV4-1212S30A1	9-18	30 / 2976	12	250 / 2500	84	1000
RV4-1215S30A1	9-18	30 / 2906	15	200 / 2000	86	1000
RV4-1218S30A1	9-18	30 / 2450	18	138 / 1388	85	680
RV4-1224S30A1	9-18	30 / 2941	24	125 / 1250	85	680
RV4-1203D30A1	9-18	20 / 2115	±3.3	±300 / ±3000	78	±2200
RV4-1205D30A1	9-18	25 / 3048	±5	±300 / ±3000	82	±2200
RV4-1207D30A1	9-18	25 / 3012	±7.2	±208 / ±2083	83	±1000
RV4-1209D30A1	9-18	25 / 3012	±9	±166 / ±1666	83	±1000
RV4-1212D30A1	9-18	30 / 2976	±12	±125 / ±1250	84	±1000
RV4-1215D30A1	9-18	35 / 2941	±15	±100 / ±1000	85	±470
RV4-1218D30A1	9-18	35 / 2941	±18	±83 / ±833	85	±330
RV4-1224D30A1	9-18	40 / 2941	±24	±62 / ±625	85	±220
RV4-2403S30A1	18-36	25 / 1031	3.3	600 / 6000	80	3300
RV4-2405S30A1	18-36	25 / 1470	5	600 / 6000	85	3300
RV4-2407S30A1	18-36	25 / 1470	7.2	416 / 4166	84	3300
RV4-2409S30A1	18-36	25 / 1436	9	333 / 3333	87	2200
RV4-2412S30A1	18-36	25 / 1436	12	250 / 2500	87	1000
RV4-2415S30A1	18-36	25 / 1436	15	200 / 2000	87	1000
RV4-2418S30A1	18-36	25 / 1453	18	138 / 1388	86	680
RV4-2424S30A1	18-36	25 / 1453	24	125 / 1250	86	680
RV4-2403D30A1	18-36	25 / 1057	±3.3	±300 / ±3000	78	±2200
RV4-2405D30A1	18-36	25 / 1488	±5	±300 / ±3000	84	±2200
RV4-2407D30A1	18-36	25 / 1453	±7.2	±208 / ±2083	86	±1000
RV4-2409D30A1	18-36	25 / 1470	±9	±166 / ±1666	85	±1000
RV4-2412D30A1	18-36	20 / 1470	±12	±125 / ±1250	85	±1000
RV4-2415D30A1	18-36	25 / 1436	±15	±100 / ±1000	87	±470
RV4-2418D30A1	18-36	25 / 1420	±18	±83 / ±833	88	±330
RV4-2424D30A1	18-36	30 / 1436	±24	±62 / ±625	87	±220
RV4-4803S30A1	36-72	20 / 515	3.3	600 / 6000	79	3300
RV4-4805S30A1	36-72	20 / 753	5	600 / 6000	83	3300
RV4-4807S30A1	36-72	20 / 744	7.2	416 / 4166	84	3300
RV4-4809S30A1	36-72	20 / 744	9	333 / 3333	84	2200
RV4-4812S30A1	36-72	20 / 726	12	250 / 2500	86	1000
RV4-4815S30A1	36-72	20 / 710	15	200 / 2000	88	1000
RV4-4818S30A1	36-72	20 / 726	18	138 / 1388	86	470
RV4-4824S30A1	36-72	25 / 710	24	125 / 1250	88	330

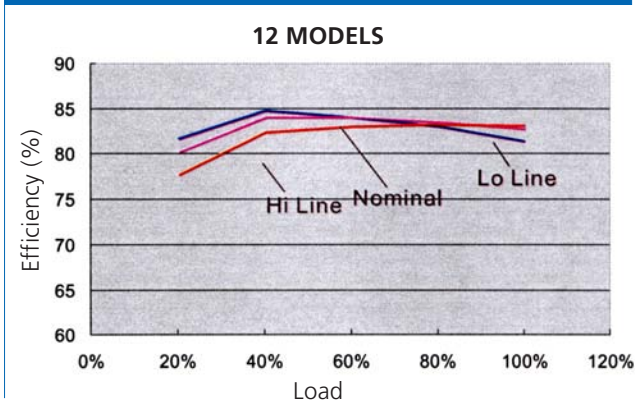
RV4-S30/D30

30 Watt 2:1 regulated
single & dual output

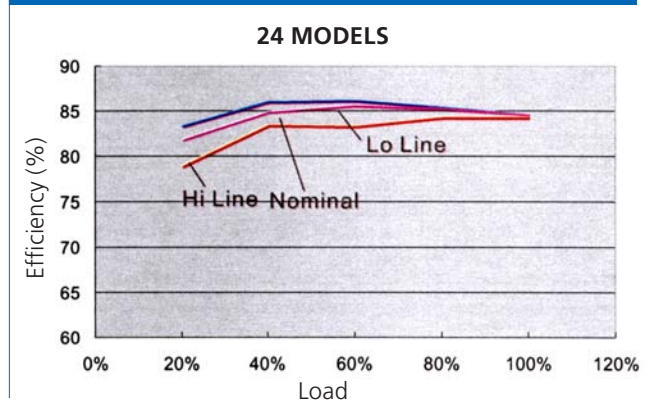
MODEL SELECTION GUIDE

Model Number	Input Range VDC	Input current No Load / Full Load (mA)	Output VDC	Output current No Load / Full Load (mA)	Efficiency @FL (%)	Capacitor Load (μ F)
RV4-4803D30A1	36-72	20 / 429	\pm 3.3	\pm 300 / \pm 3000	80	\pm 1500
RV4-4805D30A1	36-72	15 / 635	\pm 5	\pm 300 / \pm 3000	82	\pm 1500
RV4-4807D30A1	36-72	20 / 635	\pm 7.2	\pm 208 / \pm 2083	82	\pm 1000
RV4-4809D25A1	36-72	20 / 735	\pm 9	\pm 166 / \pm 1666	85	\pm 1000
RV4-4812D25A1	36-72	20 / 718	\pm 12	\pm 125 / \pm 1250	87	\pm 1000
RV4-4815D25A1	36-72	20 / 710	\pm 15	\pm 100 / \pm 1000	88	\pm 470
RV4-4818D25A1	36-72	20 / 726	\pm 18	\pm 83 / \pm 833	86	\pm 330
RV4-4824D25A1	36-72	20 / 726	\pm 24	\pm 62 / \pm 625	86	\pm 220

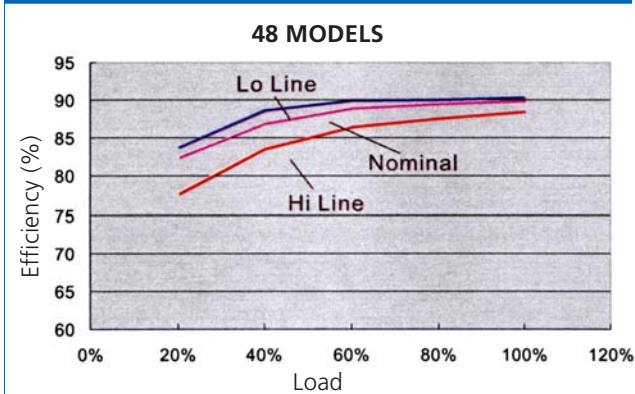
EFFICIENCY VS OUTPUT CURRENT



EFFICIENCY VS OUTPUT CURRENT



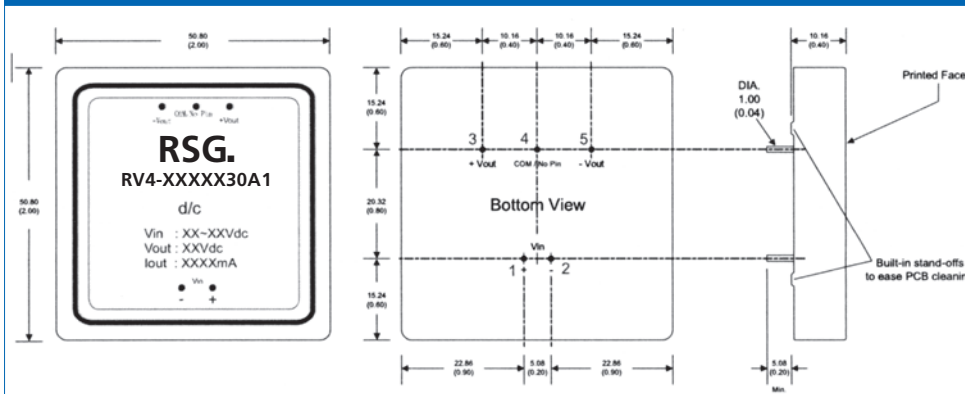
EFFICIENCY VS OUTPUT CURRENT



PIN CONNECTIONS

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

MECHANICAL SPECIFICATIONS



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

Page: 3/3
Last update: 16.02.09