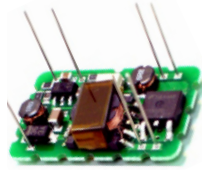


RR4-S05/D05

5 Watt 2:1 regulated
single & dual output



- DIP24, wide 2:1 input range
- Full SMD technology
- 1500 VDC isolation up to 3500 VDC isolation
- Continuous short circuit protection
- Efficiency up to 83%
- -40°C~85°C operation temperature range
- Optional plastic case

OUTPUT SPECIFICATIONS

Voltage accuracy	± 1%
Line regulation	± 0.5%
Load regulation	± 0.5%
(Output 3.3V / ±3.3V Model)	± 1.5%
Ripple & Noise (20 MHz bandwidth) (1)	60 mV pk-pk
Short circuit protection	Indefinite (automatic recovery)
Temperature coefficient	± 0.02%/°C
Capacitor load (2)	See table

INPUT SPECIFICATIONS

Voltage range	See table
Max. input current	See table
No-load input current	See table
Input filter	PI Type
Input reflected ripple current (3)	35 mA pk-pk

GENERAL SPECIFICATIONS

Efficiency	See table
I/O isolation voltage (3 sec.)	
Input / output	1500 ~ 3500 VDC
Metal case / input & output	1000 VDC
I/O isolation capacitance	470 pF typ.
I/O isolation resistance	1000 M Ohm
Switching frequency	typ. 266 kHz
Humidity	95% rel. H
Reliability calculated MTBF (MIL-HDBK-217F)	> 1.121 Mhrs.
Safety standard (designed to meet)	IEC 60950-1:2001

PHYSICAL SPECIFICATIONS

Case material	Nickel-coated copper
	Non-conductive black plastic (UL94V-0 rated)
Base material	Non-conductive black plastic (UL94V-0 rated)
Pin material	Ø 0.5 mm brass solder-coated
Potting material	Epoxy (UL94V-0 rated)
Weight	Metal 17 g, plastic 13.5 g
Dimensions	1.25" x 0.8" 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) Typical value at nominal input voltage and full load.
- 2) Tested by nominal Vin and constant resistor 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.

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“).

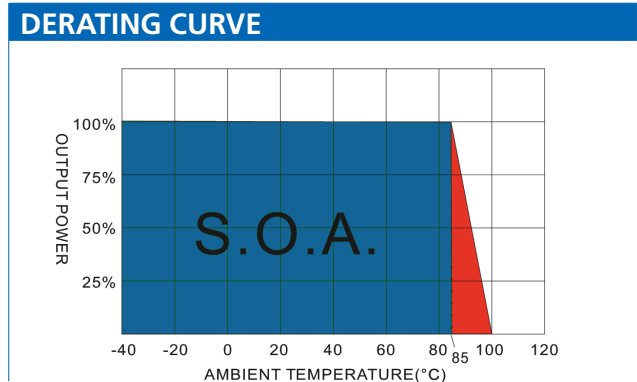
RR4-S05/D05

5 Watt 2:1 regulated
single & dual output

NUMBER STRUCTURE

RR4	-	XX	XX	S	05	A	1 (P)*
Name/Package		Input		Type	Power	Code	Isolation
RR4=DIL24		12=9~18V 24=18~36V 48=36~72V		S=Single D=Dual	05=5W	internal	1=1.5 kVDC 3=3.5 kVDC

**Note: Please add suffix „P“ for Plastic case!*



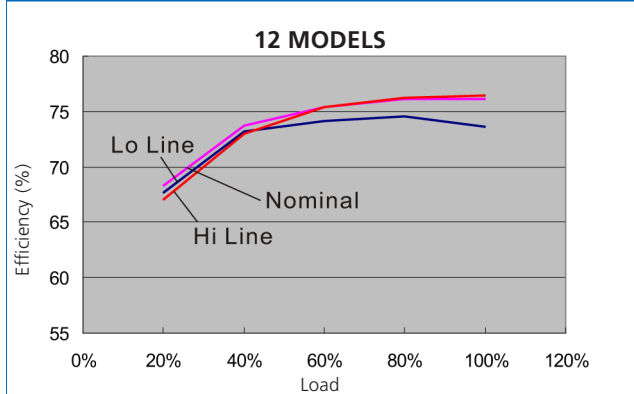
MODEL SELECTION GUIDE

Model Number	Input Range VDC	Input current (mA) No Load / Full Load	Output VDC	Output current Full Load (mA)	Efficiency @FL (%)	Capacitor Load (µF)
RR4-1203S05AX	9-18	30 / 490	3.3	1300	73	1000
RR4-1205S05AX	9-18	30 / 542	5	1000	77	1000
RR4-1209S05AX	9-18	30 / 534	9	555	78	680
RR4-1212S05AX	9-18	30 / 514	12	417	81	330
RR4-1215S05AX	9-18	30 / 520	15	333	80	220
RR4-1224S05AX	9-18	30 / 520	24	208	80	68
RR4-1203D05AX	9-18	30 / 565	±3.3	±750	73	±680
RR4-1205D05AX	9-18	30 / 542	±5	±500	77	±330
RR4-1209D05AX	9-18	30 / 520	±9	±278	80	±220
RR4-1212D05AX	9-18	30 / 520	±12	±208	80	±100
RR4-1215D05AX	9-18	30 / 528	±15	±167	79	±47
RR4-1224D05AX	9-18	30 / 520	±24	±104	80	±33
RR4-2403S05AX	18-36	20 / 239	3.3	1300	75	1000
RR4-2405S05AX	18-36	20 / 261	5	1000	80	1000
RR4-2409S05AX	18-36	20 / 254	9	555	82	680
RR4-2412S05AX	18-36	20 / 261	12	417	80	330
RR4-2415S05AX	18-36	20 / 255	15	333	82	220
RR4-2424S05AX	18-36	20 / 255	24	208	82	68
RR4-2403D05AX	18-36	20 / 275	±3.3	±750	75	±680
RR4-2405D05AX	18-36	20 / 267	±5	±500	78	±330
RR4-2409D05AX	18-36	20 / 251	±9	±278	83	±220
RR4-2412D05AX	18-36	20 / 261	±12	±208	80	±100
RR4-2415D05AX	18-36	20 / 261	±15	±167	80	±47
RR4-2424D05AX	18-36	20 / 261	±24	±104	80	±33
RR4-4803S05AX	36-72	12 / 120	3.3	1300	75	1000
RR4-4805S05AX	36-72	12 / 131	5	1000	80	1000
RR4-4809S05AX	36-72	12 / 127	9	555	82	680
RR4-4812S05AX	36-72	12 / 131	12	417	80	330
RR4-4815S05AX	36-72	12 / 126	15	333	83	220
RR4-4824S05AX	36-72	12 / 126	24	208	83	68
RR4-4803D05AX	36-72	12 / 142	±3.3	±750	73	±680
RR4-4805D05AX	36-72	12 / 132	±5	±500	79	±330
RR4-4809D05AX	36-72	12 / 132	±9	±278	79	±220
RR4-4812D05AX	36-72	12 / 131	±12	±208	80	±100
RR4-4815D05AX	36-72	12 / 131	±15	±167	80	±47
RR4-4824D05AX	36-72	12 / 131	±24	±104	80	±33

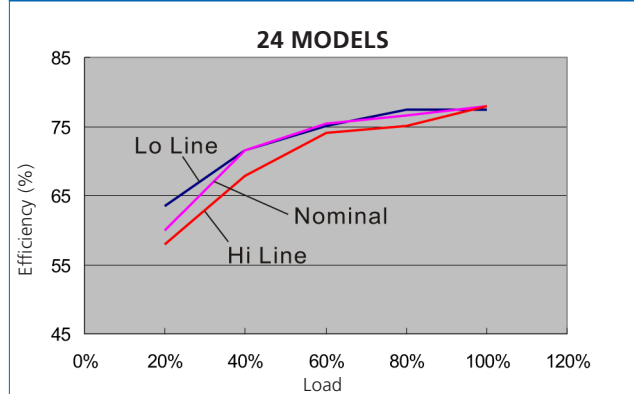
RR4-S05/D05

5 Watt 2:1 regulated
single & dual output

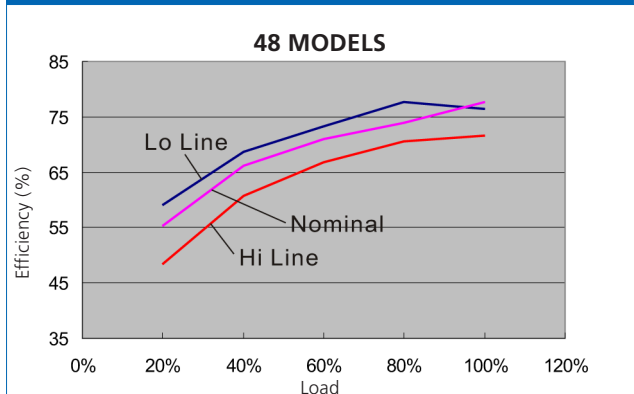
EFFICIENCY VS OUTPUT CURRENT 12



EFFICIENCY VS OUTPUT CURRENT 24



EFFICIENCY VS OUTPUT CURRENT 48

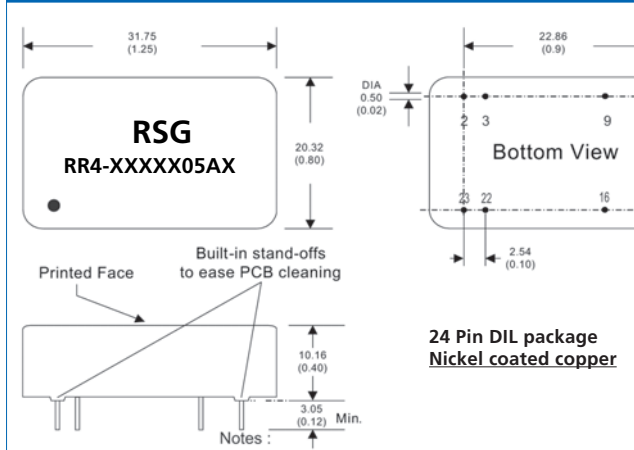


PIN CONNECTIONS

Copper and Plastic models / High isolation same as normal

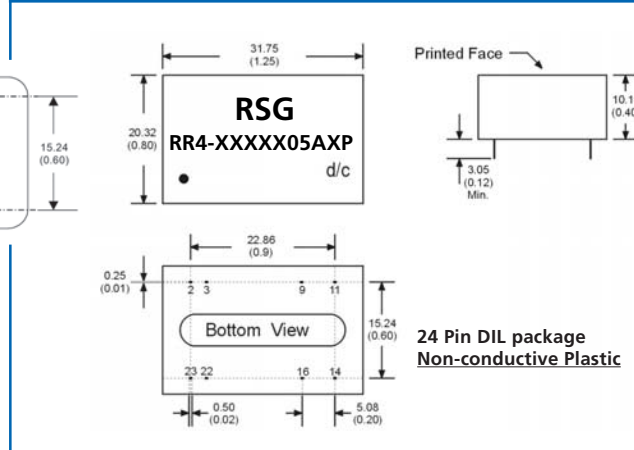
Pin Number	Single	Dual
2	-V Input	-V Input
3	-V Input	-V Input
9	N.P.	Common
11	N.C.	-V Output
14	+V Output	+V Output
16	-V Output	Common
22	+V Input	+V Input
23	+V Input	+V Input

MECHANICAL SPECIFICATIONS METAL



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

MECHANICAL SPECIFICATIONS PLASTIC



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