

RS4/RD4-R10

1.0 Watt regulated
single output



SIL 7 package, pic. similar

- 7 Pin SIP7 / 14 Pin DIP14 package
- 1000 VDC isolation up to 3000 VDC isolation
- Low ripple and noise
- Efficiency up to 68%
- -40°C~85°C operation temperature range
- Non-conductive black plastic case

OUTPUT SPECIFICATIONS

Voltage accuracy	± 2%
Line regulation	± 0.5%
Load regulation (From 0% to 100% Load)	± 0.5%
(Output 3.3 V Model)	± 1.0%
Ripple & Noise (20 MHz bandwidth) (1)	50 mV pk-pk
Temperature coefficient	± 0.02%/°C
Capacitor load (2)	See table

INPUT SPECIFICATIONS

Voltage range	± 10%
Max. input current	See table
No-load input current	See table
Input filter	Capacitors
Input reflected ripple current (3)	20 mA pk-pk

GENERAL SPECIFICATIONS

Efficiency	See table
I/O isolation voltage (3 sec.)	
Input / output	1000 ~ 3000 VDC
I/O isolation capacitance	60 pF typ.
I/O isolation resistance	1000 M Ohm
Switching frequency	variable 50 kHz
Humidity	95% rel. H
Reliability calculated MTBF (MIL-HDBK-217F)	> 4.261 Mhrs.
Safety standard (designed to meet)	IEC 60950-1

PHYSICAL SPECIFICATIONS

Case material	Non-conductive black plastic (UL94V-0 rated)
Pin material	0.5 mm Alloy42 solder-coated
Potting material	Epoxy (UL94V-0 rated)
Weight	2.7 g
Dimensions	SIP 0.76" x 0.28" x 0.39" DIP 0.80" x 0.40" x 0.27"

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 (4)

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

Input voltage (100 mS)

5 modes	0 ~ 7 VDC
12 modes	0 ~ 15 VDC
24 modes	0 ~ 28 VDC

Lead soldering temperature 260°C

(1.5 mm from case 10 sec.)

All specifications typical at $T_a = 25^\circ\text{C}$, 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) Ripple / Noise measured with 20 MHz bandwidth.
- 2) Tested by minimal V_{in} 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“).

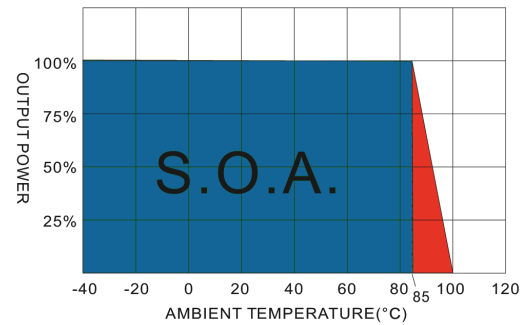
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1.0 Watt regulated
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NUMBER STRUCTURE

RS4	-	XX	XX	R	10	A	X
Name/Package RS4=SIL7 RD4=DIL14		Input 05=5V 12=12V 24=24V	Output 03=3.3V 05=5V 07=7.2V 09=9V 12=12V 15=15V	Type R=Single regulated	Power 10=1.0W	Code internal	Isolation 1=1.0 kVDC 3=3.0 kVDC

DERATING CURVE



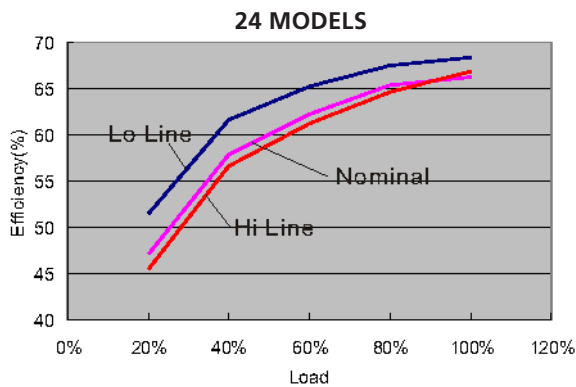
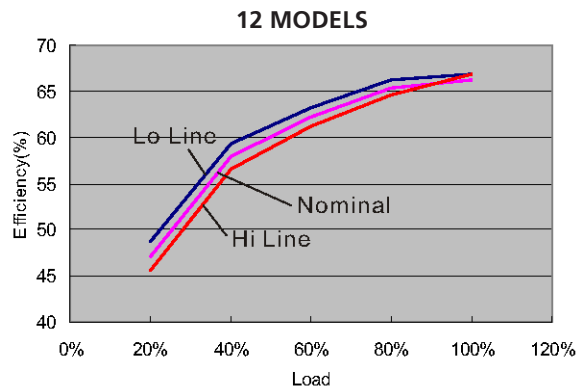
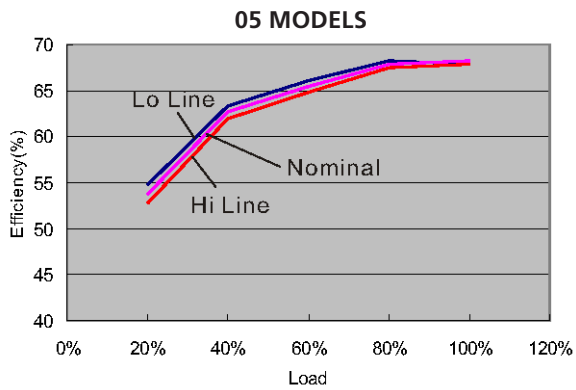
MODEL SELECTION GUIDE

Model Number	Input Range VDC	Input current (mA) No Load / Full Load	Output VDC	Output current Full Load (mA)	Efficiency @FL (%)	Capacitor Load (μF)
RS4-0503R10AX	5	30 / 385	3.3	333	57	220
RS4-0505R10AX	5	30 / 307	5	200	65	220
RS4-0507R10AX	5	30 / 307	7.2	138.9	65	220
RS4-0509R10AX	5	35 / 307	9	111.1	65	220
RS4-0512R10AX	5	35 / 294	12	83.3	68	220
RS4-0515R10AX	5	35 / 294	15	66.7	68	220
RS4-1203R10AX	12	20 / 160	3.3	333	57	220
RS4-1205R10AX	12	20 / 132	5	200	63	220
RS4-1207R10AX	12	20 / 128	7.2	138.9	65	220
RS4-1209R10AX	12	20 / 126	9	111.1	66	220
RS4-1212R10AX	12	20 / 122	12	83.3	68	220
RS4-1215R10AX	12	20 / 126	15	66.7	66	220
RS4-2403R10AX	24	10 / 76	3.3	333	60	220
RS4-2405R10AX	24	10 / 64	5	200	65	220
RS4-2407R10AX	24	10 / 64	7.2	138.9	65	220
RS4-2409R10AX	24	10 / 61	9	111.1	68	220
RS4-2412R10AX	24	10 / 61	12	83.3	68	220
RS4-2415R10AX	24	10 / 61	15	66.7	68	220
RD4-0503R10AX	5	30 / 350	3.3	333	57	220
RD4-0505R10AX	5	35 / 317	5	200	63	220
RD4-0507R10AX	5	45 / 327	7.2	138.9	61	220
RD4-0509R10AX	5	40 / 298	9	111.1	67	220
RD4-0512R10AX	5	35 / 298	12	83.3	67	220
RD4-0515R10AX	5	35 / 298	15	66.7	67	220
RD4-1203R10AX	12	20 / 146	3.3	333	57	220
RD4-1205R10AX	12	20 / 132	5	200	63	220
RD4-1207R10AX	12	20 / 132	7.2	138.9	63	220
RD4-1209R10AX	12	20 / 128	9	111.1	65	220
RD4-1212R10AX	12	20 / 122	12	83.3	68	220
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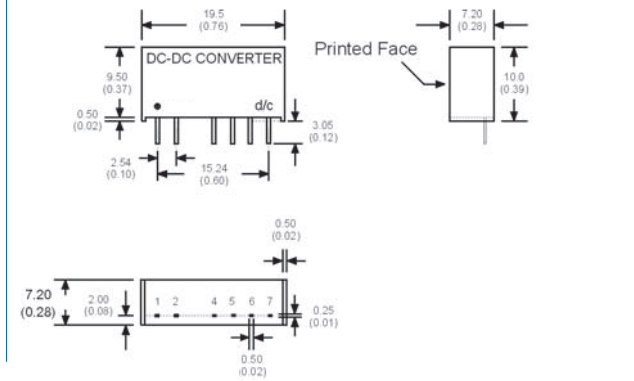
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EFFICIENCY VS OUTPUT CURRENT



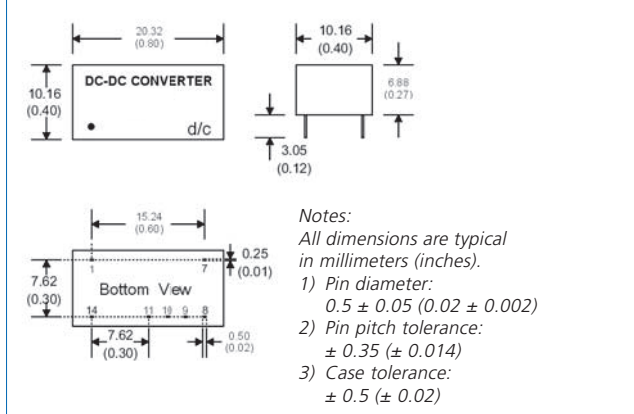
MECHANICAL SPECIFICATIONS 7 Pin SIL



PIN CONNECTIONS 7 Pin SIL

PIN NUMBER	SINGLE	SINGLE-H
1	+V Input	+V Input
2	-V Input	-V Input
4	-V Output	N.P.
5	N.P.	-V Output
6	+V Output	N.P.
7	N.P.	+V Output

MECHANICAL SPECIFICATIONS 14 Pin DIL



PIN CONNECTIONS 14 Pin DIL

PIN NUMBER	SINGLE	SINGLE-H
1	-V Input	-V Input
7	N.C.	N.C.
8	N.P.	+V Output
9	+V Output	N.P.
10	N.P.	-V Output
11	-V Output	N.P.
14	+V Input	+V Input