

RD1-E10

1.0 Watt unregulated
dual separate output



- 8 Pin DIP8 package
- 1000 VDC isolation up to 3000 VDC isolation
- Low ripple and noise
- Efficiency up to 82%
- -40°C~85°C operation temperature range
- Non-conductive black plastic case
- EMI complies with EN55022 class B

OUTPUT SPECIFICATIONS

Voltage accuracy	± 3%
Line regulation (Per 1% Vin Charge)	± 1.2%
Load regulation (From 20% to 100% Load)	± 10%
(Output 3.3 V Model)	± 15%
Ripple & Noise (20 MHz bandwidth) (1)	100 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
Output1/Output2	1000 VDC
I/O isolation capacitance	60 pF typ.
I/O isolation resistance	1000 M Ohm
Switching frequency	variable 80 kHz
Humidity	95% rel. H
Reliability calculated MTBF (MIL-HDBK-217F)	> 1.121 Mhrs.
Safety standard (designed to meet)	IEC 60950-1

EMC SPECIFICATIONS

Radiated emissions	EN55022	Class B
	FCC 47 CFR	
	Part 15 Subpart B	Class B
ESD	IEC 61000-4-2	Perf. criteria B
RS	IEC 61000-4-3	Perf. criteria A

PHYSICAL SPECIFICATIONS

Case material	Non-conductive black plastic (UL94V-0 rated)
Pin material	Ø 0.5 mm br. solder-coated
Potting material	Epoxy (UL94V-0 rated)
Weight	1.8 g
Dimensions	0.50" 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)

3.3 modes	0~5 VDC
5 modes	0~7 VDC
12 modes	0~15 VDC
15 modes	0~18 VDC
24 modes	0~28 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.

NOTE

- 1) Ripple / Noise 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.

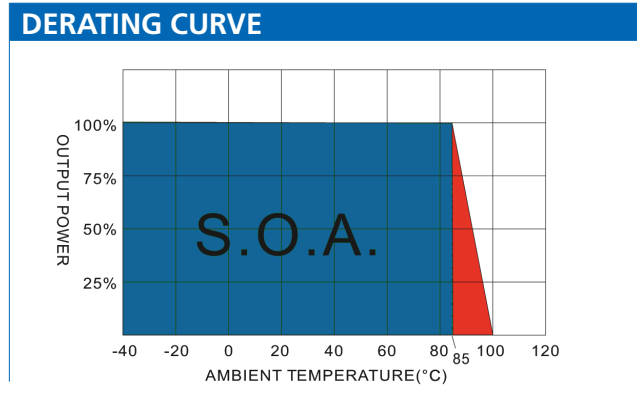
The models listed are just for standard type. If you need a special specification product, please contact our service. Phone: +49 69 984047-0, mail to: info@rsg-electronic.de or use the forms on www.rsg-electronic.de („Kontakt“).

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.

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NUMBER STRUCTURE							
RD1	-	XX	XX	E	10	A	X
Name/Package RD1=DIL8		Output 03=3.3V 05=5V 07=7.2V 09=9V 12=12V 15=15V 18=18V 24=24V		Type E=Dual separate	Power 10=1.00W	Code internal	Isolation 1=1.0 kVDC 3=3.0 kVDC
Input 03=3.3V 05=5V 12=12V							

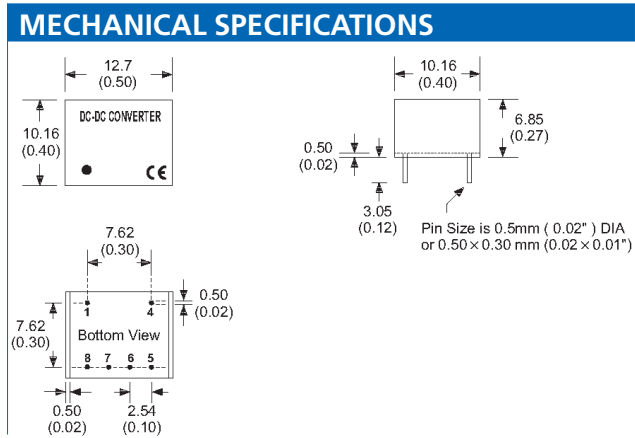


MODEL SELECTION GUIDE

Model Number	Input Range VDC	Input current (mA) No Load / Full Load	Output VDC	Output current Full Load (mA)	Efficiency @FL (%)	Capacitor Load (μF)
RD1-0303E10AX	3.3	30 / 409	3.3, 3.3	152, 152	74	100
RD1-0305E10AX	3.3	30 / 404	5, 5	100, 100	75	100
RD1-0307E10AX	3.3	30 / 398	7.2, 7.2	69, 69	76	100
RD1-0309E10AX	3.3	30 / 398	9, 9	56, 56	76	100
RD1-0312E10AX	3.3	30 / 466	12, 12	50, 50	78	100
RD1-0315E10AX	3.3	30 / 388	15, 15	33, 33	78	100
RD1-0318E10AX	3.3	30 / 398	18, 18	28, 28	76	100
RD1-0324E10AX	3.3	30 / 472	24, 24	25, 25	77	100
RD1-0503E10AX	5	25 / 266	3.3, 3.3	152, 152	75	100
RD1-0505E10AX	5	25 / 250	5, 5	100, 100	80	100
RD1-0507E10AX	5	25 / 256	7.2, 7.2	69, 69	78	100
RD1-0509E10AX	5	25 / 256	9, 9	56, 56	78	100
RD1-0512E10AX	5	25 / 300	12, 12	50, 50	80	100
RD1-0515E10AX	5	25 / 250	15, 15	33, 33	80	100
RD1-0518E10AX	5	25 / 256	18, 18	28, 28	78	100
RD1-0524E10AX	5	25 / 307	24, 24	25, 25	78	100
RD1-1203E10AX	12	15 / 111	3.3, 3.3	152, 152	75	100
RD1-1205E10AX	12	15 / 108	5, 5	100, 100	77	100
RD1-1207E10AX	12	15 / 108	7.2, 7.2	69, 69	77	100
RD1-1209E10AX	12	15 / 106	9, 9	56, 56	78	100
RD1-1212E10AX	12	15 / 121	12, 12	50, 50	82	100
RD1-1215E10AX	12	15 / 104	15, 15	33, 33	80	100
RD1-1218E10AX	12	15 / 104	18, 18	28, 28	80	100
RD1-1224E10AX	12	15 / 125	24, 24	25, 25	80	100
RD1-1503E10AX	15	15 / 88	3.3, 3.3	152, 152	75	100
RD1-1505E10AX	15	15 / 86	5, 5	100, 100	77	100
RD1-1507E10AX	15	15 / 86	7.2, 7.2	69, 69	77	100
RD1-1509E10AX	15	15 / 85	9, 9	56, 56	78	100
RD1-1512E10AX	15	15 / 97	12, 12	50, 50	82	100
RD1-1515E10AX	15	15 / 83	15, 15	33, 33	80	100
RD1-1518E10AX	15	15 / 83	18, 18	28, 28	80	100
RD1-1524E10AX	15	15 / 100	24, 24	25, 25	80	100
RD1-2403E10AX	24	10 / 54	3.3, 3.3	152, 152	76	100
RD1-2405E10AX	24	10 / 52	5, 5	100, 100	80	100
RD1-2407E10AX	24	10 / 53	7.2, 7.2	69, 69	78	100
RD1-2409E10AX	24	10 / 53	9, 9	56, 56	78	100
RD1-2412E10AX	24	10 / 60	12, 12	50, 50	82	100
RD1-2415E10AX	24	10 / 52	15, 15	33, 33	80	100
RD1-2418E10AX	24	10 / 52	18, 18	28, 28	80	100
RD1-2424E10AX	24	10 / 60	24, 24	25, 25	82	100

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Notes:

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)

PIN CONNECTIONS	
Pin Number	Dual 8 Pin DIL
1	-V Input
4	+V Input
5	+V1 Output
6	-V1 Output
7	+V2 Output
8	-V2 Output

The Pin connections of high isolation models are the same as normal ones.