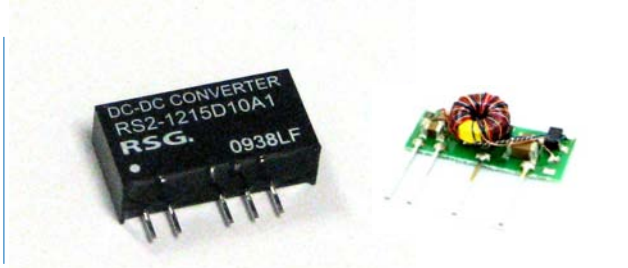


RS2/RD2-S10/D10

1.0 Watt unregulated
single & dual output



- 7 Pin SIP7 / 14 Pin DIP14 package
- 1000 VDC isolation up to 6000 VDC isolation
- Low ripple and noise
- Efficiency up to 80%
- -40°C~85°C operation temperature range
- Non-conductive black plastic case
- EN55022 class B for SIP series

OUTPUT SPECIFICATIONS

Voltage accuracy	± 3%
Line regulation (Per 1% Vin Change)	± 1.2%
Load regulation (From 20% to 100% Load)	± 10%
(Output 3.3 V Model)	± 20%
Ripple & Noise (20 MHz bandwidth) (1)	75 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 ~ 6000 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	0.5 mm Alloy42 solder-coated
Potting material	Epoxy (UL94V-0 rated)
Weight	SIP > 2.3 g, DIP > 2.6 g
Dimensions	SIP > 0.76" x 0.24" 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
48 modes (SIP)	0 ~ 54 VDC

Lead soldering temperature 260°C

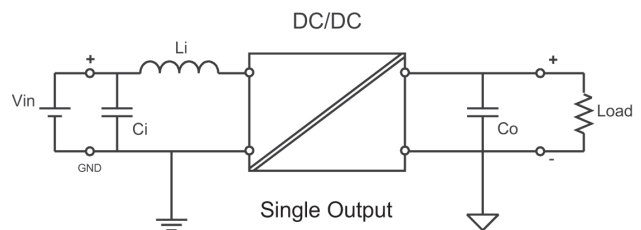
(1.5 mm from case 10 sec.)

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) 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.
- 6) To reduce converter's Ripple & Noise it is recommended to add a 4.7µF ~ 100µF capacitor in output end. For EMI performance improvement it is recommended to add a 12µH inductor and a 10µF ~ 100µF capacitor in input end.

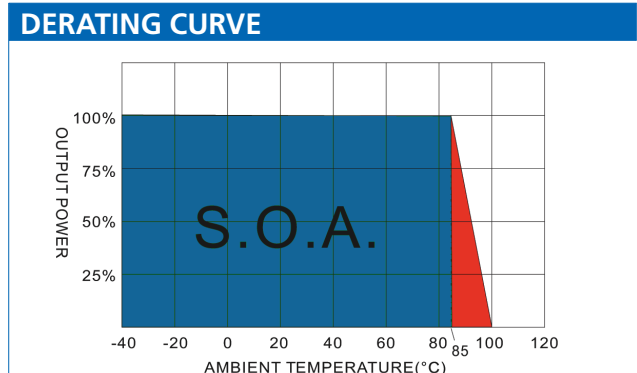


The models listed are just for standard type. If you need a special specification product, please contact our service. Phone: +49 69 984047-0, mail to: info@rsg-electronic.de or use the forms on www.rsg-electronic.de („Kontakt“).

RS2/RD2-S10/D10

1.0 Watt unregulated
single & dual output

NUMBER STRUCTURE							
RS2	-	XX	XX	S	10	A	X
Name/Package		Output		Type	Power	Code	Isolation
RS2=SIL7 RD2=DIL14		03=3.3V 05=5V 07=7.2V 09=9V 12=12V 15=15V 18=18V 24=24V		S=Single D=Dual	10=1.0W	internal	1=1.0 kVDC 2=2.0 kVDC 3=3.0 kVDC 4=4.0 kVDC 5=5.2 kVDC 6=6.0 kVDC
Input		Input					
05=5V 12=12V 24=24V 48=48V							



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)
RS2-0503D10AX	5	30 / 307	±3.3	±151.5	65	±100
RS2-0505D10AX	5	30 / 270	±5	±100	74	±100
RS2-0507D10AX	5	30 / 259	±7.2	±69.44	77	±100
RS2-0509D10AX	5	30 / 256	±9	±55.55	78	±100
RS2-0512D10AX	5	30 / 256	±12	±41.67	78	±100
RS2-0515D10AX	5	30 / 250	±15	±33.33	80	±100
RS2-0518D10AX	5	30 / 253	±18	±27.77	79	±100
RS2-0524D10AX	5	30 / 250	±24	±20.83	80	±100
RS2-1203D10AX	12	20 / 126	±3.3	±151.5	66	±100
RS2-1205D10AX	12	20 / 111	±5	±100	75	±100
RS2-1207D10AX	12	20 / 109	±7.2	±69.44	76	±100
RS2-1209D10AX	12	20 / 109	±9	±55.55	76	±100
RS2-1212D10AX	12	20 / 106	±12	±41.67	78	±100
RS2-1215D10AX	12	20 / 104	±15	±33.33	80	±100
RS2-1218D10AX	12	20 / 104	±18	±27.77	80	±100
RS2-1224D10AX	12	20 / 109	±24	±20.83	76	±100
RS2-2403D10AX	24	10 / 61	±3.3	±151.5	68	±100
RS2-2405D10AX	24	10 / 56	±5	±100	74	±100
RS2-2407D10AX	24	10 / 54	±7.2	±69.44	76	±100
RS2-2409D10AX	24	10 / 54	±9	±55.55	76	±100
RS2-2412D10AX	24	10 / 53	±12	±41.67	78	±100
RS2-2415D10AX	24	10 / 53	±15	±33.33	78	±100
RS2-2418D10AX	24	10 / 53	±18	±27.77	78	±100
RS2-2424D10AX	24	10 / 53	±24	±20.83	78	±100
RS2-4803D10AX	48	6 / 34	±3.3	±151.5	60	±100
RS2-4805D10AX	48	6 / 30	±5	±100	70	±100
RS2-4807D10AX	48	6 / 30	±7.2	±69.44	70	±100
RS2-4809D10AX	48	6 / 29	±9	±55.55	72	±100
RS2-4812D10AX	48	6 / 28	±12	±41.67	74	±100
RS2-4815D10AX	48	6 / 28	±15	±33.33	74	±100
RS2-4818D10AX	48	6 / 29	±18	±27.77	72	±100
RS2-4824D10AX	48	6 / 30	±24	±20.83	70	±100



RS2/RD2-S10/D10

1.0 Watt unregulated
single & dual output

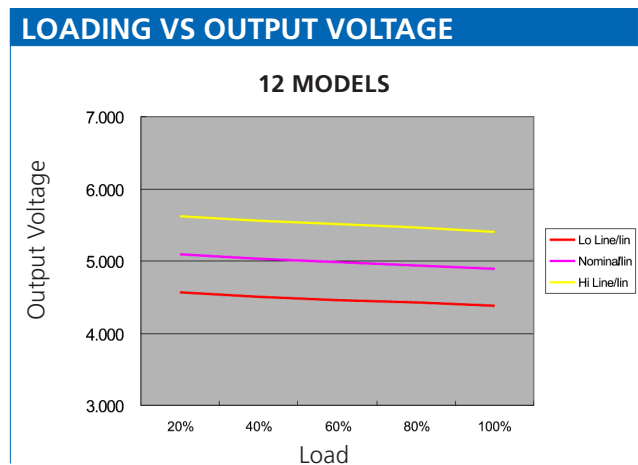
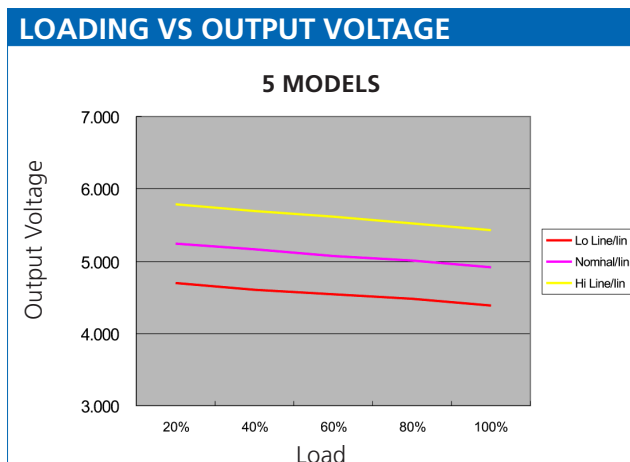
Model Number	Input Range VDC	Input current (mA) No Load / Full Load	Output VDC	Output current Full Load (mA)	Efficiency @FL (%)	Capacitor Load (μF)
RD2-0503D10AX	5	30 / 307	±3.3	±151.5	65	±100
RD2-0505D10AX	5	30 / 270	±5	±100	74	±100
RD2-0507D10AX	5	30 / 159	±7.2	±69.44	77	±100
RD2-0509D10AX	5	30 / 156	±9	±55.55	78	±100
RD2-0512D10AX	5	30 / 156	±12	±41.67	78	±100
RD2-0515D10AX	5	30 / 150	±15	±33.33	80	±100
RD2-0518D10AX	5	30 / 156	±18	±27.77	78	±100
RD2-0524D10AX	5	30 / 166	±24	±20.83	75	±100
RD2-1203D10AX	12	20 / 126	±3.3	±151.5	66	±100
RD2-1205D10AX	12	20 / 111	±5	±100	75	±100
RD2-1207D10AX	12	20 / 115	±7.2	±69.44	72	±100
RD2-1209D10AX	12	20 / 111	±9	±55.55	75	±100
RD2-1212D10AX	12	20 / 106	±12	±41.67	78	±100
RD2-1215D10AX	12	20 / 106	±15	±33.33	78	±100
RD2-1218D10AX	12	20 / 111	±18	±27.77	75	±100
RD2-1224D10AX	12	20 / 111	±24	±20.83	75	±100
RD2-2403D10AX	24	10 / 62	±3.3	±151.5	67	±100
RD2-2405D10AX	24	10 / 57	±5	±100	72	±100
RD2-2407D10AX	24	10 / 59	±7.2	±69.44	70	±100
RD2-2409D10AX	24	10 / 55	±9	±55.55	75	±100
RD2-2412D10AX	24	10 / 53	±12	±41.67	78	±100
RD2-2415D10AX	24	10 / 55	±15	±33.33	75	±100
RD2-2418D10AX	24	10 / 57	±18	±27.77	72	±100
RD2-2424D10AX	24	10 / 59	±24	±20.83	70	±100
RS2-0503S10AX	5	30 / 267	3.3	303	75	220
RS2-0505S10AX	5	30 / 256	5	200	78	220
RS2-0507S10AX	5	30 / 270	7.2	138.9	74	220
RS2-0509S10AX	5	30 / 267	9	111.1	75	220
RS2-0512S10AX	5	30 / 263	12	83.3	76	220
RS2-0515S10AX	5	30 / 263	15	66.7	76	220
RS2-0518S10AX	5	30 / 267	18	55.6	75	220
RS2-0524S10AX	5	30 / 278	24	41.7	72	220
RS2-1203S10AX	12	20 / 113	3.3	303	74	220
RS2-1205S10AX	12	20 / 113	5	200	74	220
RS2-1207S10AX	12	20 / 113	7.2	138.9	74	220
RS2-1209S10AX	12	20 / 111	9	111.1	75	220
RS2-1212S10AX	12	20 / 108	12	83.3	77	220
RS2-1215S10AX	12	20 / 106	15	66.7	78	220
RS2-1218S10AX	12	20 / 106	18	55.6	78	220
RS2-1224S10AX	12	20 / 113	24	41.7	75	220
RS2-2403S10AX	24	10 / 56	3.3	303	75	220
RS2-2405S10AX	24	10 / 54	5	200	77	220
RS2-2407S10AX	24	10 / 56	7.2	138.9	75	220
RS2-2409S10AX	24	10 / 56	9	111.1	75	220
RS2-2412S10AX	24	10 / 53	12	83.3	78	220
RS2-2415S10AX	24	10 / 53	15	66.7	78	220
RS2-2418S10AX	24	10 / 53	18	55.6	78	220
RS2-2424S10AX	24	10 / 53	24	41.7	78	220



RS2/RD2-S10/D10

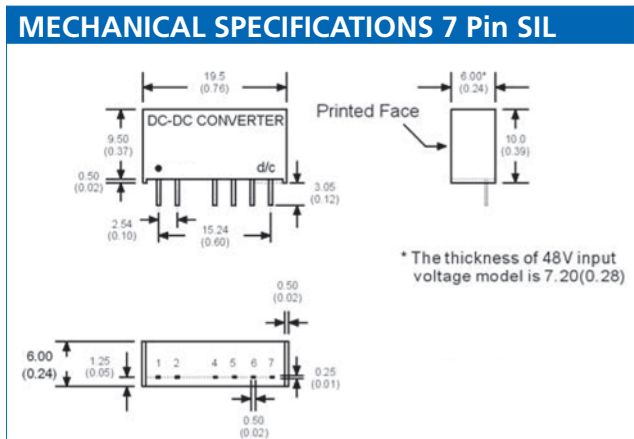
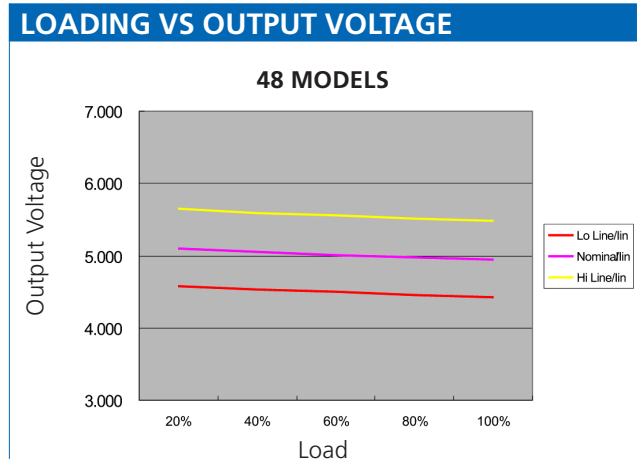
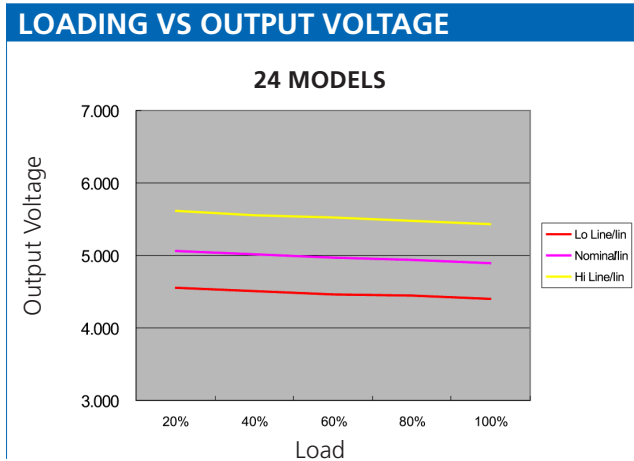
1.0 Watt unregulated
single & dual output

Model Number	Input Range VDC	Input current (mA) No Load / Full Load	Output VDC	Output current Full Load (mA)	Efficiency @FL (%)	Capacitor Load (μF)
RS2-4803S10AX	48	6 / 29	3.3	303	72	220
RS2-4805S10AX	48	6 / 29	5	200	72	220
RS2-4807S10AX	48	6 / 29	7.2	138.9	72	220
RS2-4809S10AX	48	6 / 28	9	111.1	74	220
RS2-4812S10AX	48	6 / 28	12	83.3	74	220
RS2-4815S10AX	48	6 / 28	15	66.7	75	220
RS2-4818S10AX	48	6 / 29	18	55.6	72	220
RS2-4824S10AX	48	6 / 30	24	41.7	70	220
RD2-0503S10AX	5	30 / 267	3.3	303	75	220
RD2-0505S10AX	5	30 / 256	5	200	78	220
RD2-0507S10AX	5	30 / 267	7.2	138.9	75	220
RD2-0509S10AX	5	30 / 267	9	111.1	75	220
RD2-0512S10AX	5	30 / 263	12	83.3	76	220
RD2-0515S10AX	5	30 / 263	15	66.7	76	220
RD2-0518S10AX	5	30 / 267	18	55.6	75	220
RD2-0524S10AX	5	30 / 278	24	41.7	72	220
RD2-1203S10AX	12	20 / 113	3.3	303	74	220
RD2-1205S10AX	12	20 / 113	5	200	74	220
RD2-1207S10AX	12	20 / 113	7.2	138.9	74	220
RD2-1209S10AX	12	20 / 111	9	111.1	75	220
RD2-1212S10AX	12	20 / 108	12	83.3	77	220
RD2-1215S10AX	12	20 / 106	15	66.7	78	220
RD2-1218S10AX	12	20 / 106	18	55.6	78	220
RD2-1224S10AX	12	20 / 111	24	41.7	75	220
RD2-2403S10AX	24	10 / 56	3.3	303	75	220
RD2-2405S10AX	24	10 / 54	5	200	77	220
RD2-2407S10AX	24	10 / 56	7.2	138.9	75	220
RD2-2409S10AX	24	10 / 56	9	111.1	75	220
RD2-2412S10AX	24	10 / 53	12	83.3	78	220
RD2-2415S10AX	24	10 / 53	15	66.7	78	220
RD2-2418S10AX	24	10 / 53	18	55.6	78	220
RD2-2424S10AX	24	10 / 53	24	41.7	78	220



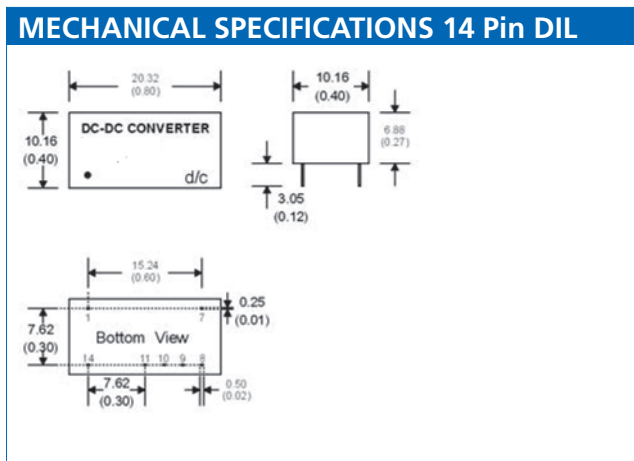
RS2/RD2-S10/D10

1.0 Watt unregulated
single & dual output



PIN CONNECTIONS 7 Pin SIL

Pin No.	Single -A1	Dual -A1	Single -A2/A3/A4/A5/A6	Dual -A2/A3/A4/A5/A6
1	+V Input	+V Input	+V Input	+V Input
2	-V Input	-V Input	-V Input	-V Input
4	-V Output	-V Output	N.P.	N.P.
5	N.P.	Common	-V Output	-V Output
6	+V Output	+V Output	N.P.	Common
7	N.P.	N.P.	+V Output	+V Output



PIN CONNECTIONS 14 Pin DIL

Pin No.	Single -A1	Dual -A1	Single -A2/A3/A4/A5/A6	Dual -A2/A3/A4/A5/A6
1	-V Input	-V Input	-V Input	-V Input
7	N.C.	N.C.	N.C.	N.C.
8	N.P.	Common	+V Output	+V Output
9	+V Output	+V Output	N.P.	Common
10	N.P.	N.P.	-V Output	-V Output
11	-V Output	-V Output	N.P.	N.P.
14	+V Input	+V Input	+V Input	+V Input

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)