

# RS2/RD2-S07/D07

0.75 Watt unregulated  
single & dual output



SIL 7 package, pic. similar

## 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

## 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

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

## 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

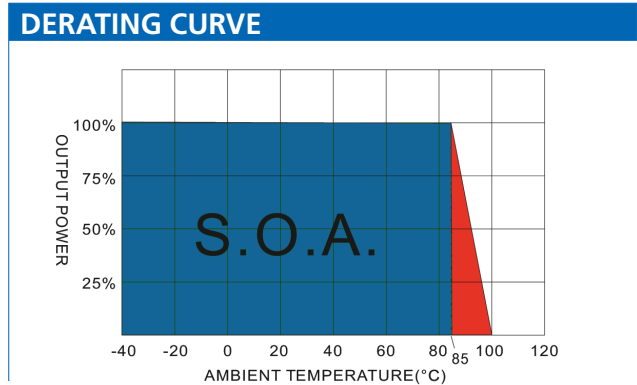
- 1) Ripple / Noise measured with 20 MHz bandwidth.
- 2) Tested by minimal Vin and constant resistive load.
- 3) Measured input reflected ripple current with a simulated source inductance of 12uH.
- 4) Exceeding the absolute ratings of the unit could cause damage. It is not allowed for continuous operating.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

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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NUMBER STRUCTURE							
<b>RS2</b>	-	<b>XX</b>	<b>XX</b>	<b>S</b>	<b>10</b>	<b>A</b>	<b>X</b>
<b>Name/Package</b>		<b>Output</b>		<b>Type</b>	<b>Power</b>	<b>Code</b>	<b>Isolation</b>
RS2=SIL7 RD2=DIL14		03=3.3V 05=5V 07=7.2V 09=9V 12=12V 12=12V 15=15V 18=18V 24=24V		S=Single D=Dual	07=0.75W	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
<b>Input</b>		<b>Output</b>					
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)
RS2-0503D07AX	5	30 / 230	±3.3	±113.6	65	±100
RS2-0505D07AX	5	30 / 211	±5	±75	71	±100
RS2-0507D07AX	5	30 / 202	±7.2	±52	74	±100
RS2-0509D07AX	5	30 / 202	±9	±41.6	74	±100
RS2-0512D07AX	5	30 / 197	±12	±31.2	76	±100
RS2-0515D07AX	5	30 / 197	±15	±25	76	±100
RS2-0518D07AX	5	30 / 189	±18	±20.8	79	±100
RS2-0524D07AX	5	30 / 189	±24	±15.6	79	±100
RS2-1203D07AX	12	20 / 126	±3.3	±113.6	65	±100
RS2-1205D07AX	12	20 / 85	±5	±75	73	±100
RS2-1207D07AX	12	20 / 84	±7.2	±52	74	±100
RS2-1209D07AX	12	20 / 84	±9	±41.6	74	±100
RS2-1212D07AX	12	20 / 80	±12	±31.2	78	±100
RS2-1215D07AX	12	20 / 78	±15	±25	80	±100
RS2-1218D07AX	12	20 / 78	±18	±20.8	80	±100
RS2-1224D07AX	12	20 / 80	±24	±15.6	78	±100
RS2-2403D07AX	24	10 / 46	±3.3	±113.6	67	±100
RS2-2405D07AX	24	10 / 42	±5	±75	74	±100
RS2-2407D07AX	24	10 / 41	±7.2	±52	76	±100
RS2-2409D07AX	24	10 / 41	±9	±41.6	76	±100
RS2-2412D07AX	24	10 / 40	±12	±31.2	78	±100
RS2-2415D07AX	24	10 / 40	±15	±25	78	±100
RS2-2418D07AX	24	10 / 40	±18	±20.8	78	±100
RS2-2424D07AX	24	10 / 40	±24	±15.6	78	±100
RS2-4803D07AX	48	6 / 25	±3.3	±113.6	62	±100
RS2-4805D07AX	48	6 / 24	±5	±75	65	±100
RS2-4807D07AX	48	6 / 22	±7.2	±52	70	±100
RS2-4809D07AX	48	6 / 21	±9	±41.6	72	±100
RS2-4812D07AX	48	6 / 21	±12	±31.2	74	±100
RS2-4815D07AX	48	6 / 21	±15	±25	74	±100
RS2-4818D07AX	48	6 / 21	±18	±20.8	72	±100
RS2-4824D07AX	48	6 / 22	±24	±15.6	70	±100

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RD2-0503D07AX	5	30 / 230	$\pm$ 3.3	$\pm$ 113.6	65	$\pm$ 100
RD2-0505D07AX	5	30 / 211	$\pm$ 5	$\pm$ 75	71	$\pm$ 100
RD2-0507D07AX	5	30 / 202	$\pm$ 7.2	$\pm$ 52	74	$\pm$ 100
RD2-0509D07AX	5	30 / 202	$\pm$ 9	$\pm$ 41.6	74	$\pm$ 100
RD2-0512D07AX	5	30 / 197	$\pm$ 12	$\pm$ 31.2	76	$\pm$ 100
RD2-0515D07AX	5	30 / 197	$\pm$ 15	$\pm$ 25	76	$\pm$ 100
RD2-0518D07AX	5	30 / 189	$\pm$ 18	$\pm$ 10.8	79	$\pm$ 100
RD2-0524D07AX	5	30 / 189	$\pm$ 24	$\pm$ 15.6	79	$\pm$ 100
RD2-1203D07AX	12	20 / 126	$\pm$ 3.3	$\pm$ 113.6	65	$\pm$ 100
RD2-1205D07AX	12	20 / 85	$\pm$ 5	$\pm$ 75	73	$\pm$ 100
RD2-1207D07AX	12	20 / 84	$\pm$ 7.2	$\pm$ 52	74	$\pm$ 100
RD2-1209D07AX	12	20 / 84	$\pm$ 9	$\pm$ 41.6	74	$\pm$ 100
RD2-1212D07AX	12	20 / 80	$\pm$ 12	$\pm$ 31.2	78	$\pm$ 100
RD2-1215D07AX	12	20 / 78	$\pm$ 15	$\pm$ 25	80	$\pm$ 100
RD2-1218D07AX	12	20 / 78	$\pm$ 18	$\pm$ 10.8	80	$\pm$ 100
RD2-1224D07AX	12	20 / 80	$\pm$ 24	$\pm$ 15.6	78	$\pm$ 100
RD2-2403D07AX	24	10 / 46	$\pm$ 3.3	$\pm$ 113.6	67	$\pm$ 100
RD2-2405D07AX	24	10 / 42	$\pm$ 5	$\pm$ 75	74	$\pm$ 100
RD2-2407D07AX	24	10 / 41	$\pm$ 7.2	$\pm$ 52	76	$\pm$ 100
RD2-2409D07AX	24	10 / 41	$\pm$ 9	$\pm$ 41.6	76	$\pm$ 100
RD2-2412D07AX	24	10 / 40	$\pm$ 12	$\pm$ 31.2	78	$\pm$ 100
RD2-2415D07AX	24	10 / 40	$\pm$ 15	$\pm$ 25	78	$\pm$ 100
RD2-2418D07AX	24	10 / 40	$\pm$ 18	$\pm$ 10.8	78	$\pm$ 100
RD2-2424D07AX	24	10 / 40	$\pm$ 24	$\pm$ 15.6	78	$\pm$ 100
RS2-0503S07AX	5	30 / 205	3.3	227.3	73	220
RS2-0505S07AX	5	30 / 200	5	150	75	220
RS2-0507S07AX	5	30 / 202	7.2	104.2	74	220
RS2-0509S07AX	5	30 / 200	9	83.3	75	220
RS2-0512S07AX	5	30 / 197	12	62.5	76	220
RS2-0515S07AX	5	30 / 197	15	50	76	220
RS2-0518S07AX	5	30 / 197	18	41.7	76	220
RS2-0524S07AX	5	30 / 194	24	31.2	77	220
RS2-1203S07AX	12	20 / 85	3.3	227.3	73	220
RS2-1205S07AX	12	20 / 84	5	150	74	220
RS2-1207S07AX	12	20 / 84	7.2	104.2	74	220
RS2-1209S07AX	12	20 / 83	9	83.3	75	220
RS2-1212S07AX	12	20 / 81	12	62.5	77	220
RS2-1215S07AX	12	20 / 80	15	50	78	220
RS2-1218S07AX	12	20 / 80	18	41.7	78	220
RS2-1224S07AX	12	20 / 80	24	31.2	78	220
RS2-2403S07AX	24	10 / 42	3.3	227.3	74	220
RS2-2405S07AX	24	10 / 42	5	150	74	220
RS2-2407S07AX	24	10 / 41	7.2	104.2	75	220
RS2-2409S07AX	24	10 / 41	9	83.3	75	220
RS2-2412S07AX	24	10 / 40	12	62.5	78	220
RS2-2415S07AX	24	10 / 40	15	50	78	220
RS2-2418S07AX	24	10 / 40	18	41.7	78	220
RS2-2424S07AX	24	10 / 39	24	31.2	80	220



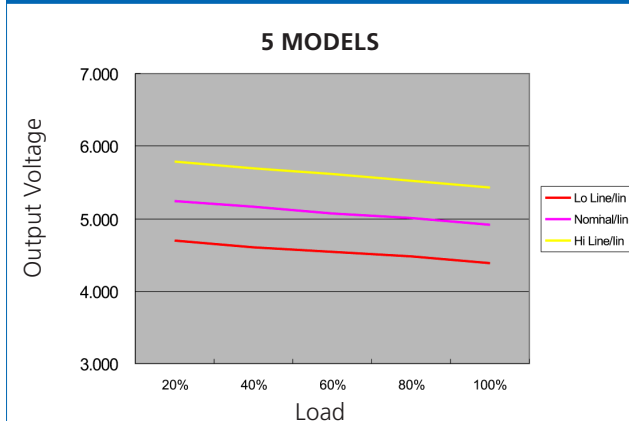
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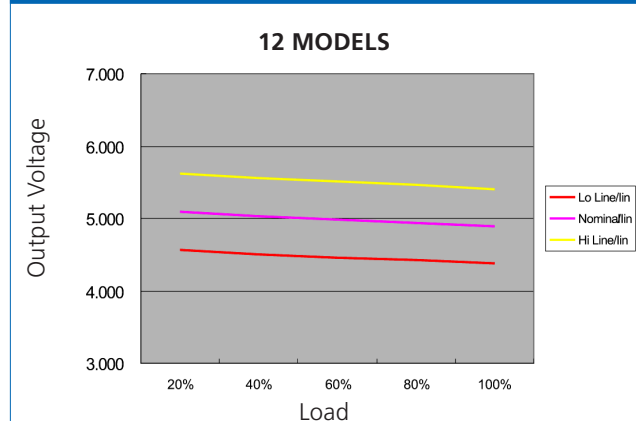
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RS2-4803S07AX	48	6 / 21	3.3	227.3	72	220
RS2-4805S07AX	48	6 / 21	5	150	72	220
RS2-4807S07AX	48	6 / 21	7.2	104.2	72	220
RS2-4809S07AX	48	6 / 21	9	83.3	74	220
RS2-4812S07AX	48	6 / 21	12	62.5	74	220
RS2-4815S07AX	48	6 / 20	15	50	75	220
RS2-4818S07AX	48	6 / 20	18	41.7	75	220
RS2-4824S07AX	48	6 / 21	24	31.2	73	220
RD2-0503S07AX	5	30 / 205	3.3	227.3	73	220
RD2-0505S07AX	5	30 / 200	5	150	75	220
RD2-0507S07AX	5	30 / 202	7.2	104.2	74	220
RD2-0509S07AX	5	30 / 200	9	83.3	75	220
RD2-0512S07AX	5	30 / 197	12	62.5	76	220
RD2-0515S07AX	5	30 / 197	15	50	76	220
RD2-0518S07AX	5	30 / 197	18	41.7	76	220
RD2-0524S07AX	5	30 / 194	24	31.2	77	220
RD2-1203S07AX	12	20 / 85	3.3	227.3	73	220
RD2-1205S07AX	12	20 / 84	5	150	74	220
RD2-1207S07AX	12	20 / 84	7.2	104.2	74	220
RD2-1209S07AX	12	20 / 83	9	83.3	75	220
RD2-1212S07AX	12	20 / 81	12	62.5	77	220
RD2-1215S07AX	12	20 / 80	15	50	78	220
RD2-1218S07AX	12	20 / 80	18	41.7	78	220
RD2-1224S07AX	12	20 / 80	24	31.2	78	220
RD2-2403S07AX	24	10 / 42	3.3	227.3	74	220
RD2-2405S07AX	24	10 / 42	5	150	74	220
RD2-2407S07AX	24	10 / 41	7.2	104.2	75	220
RD2-2409S07AX	24	10 / 41	9	83.3	75	220
RD2-2412S07AX	24	10 / 40	12	62.5	78	220
RD2-2415S07AX	24	10 / 40	15	50	78	220
RD2-2418S07AX	24	10 / 40	18	41.7	78	220
RD2-2424S07AX	24	10 / 39	24	31.2	80	220

### LOADING VS OUTPUT VOLTAGE

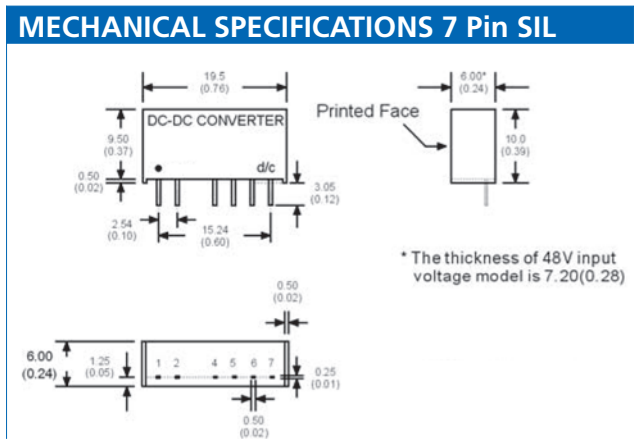
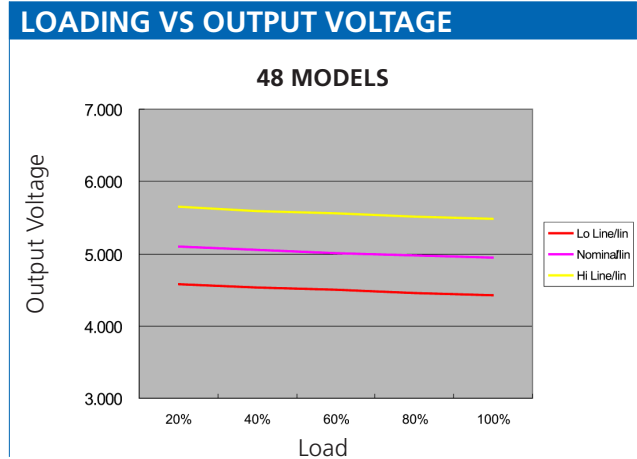
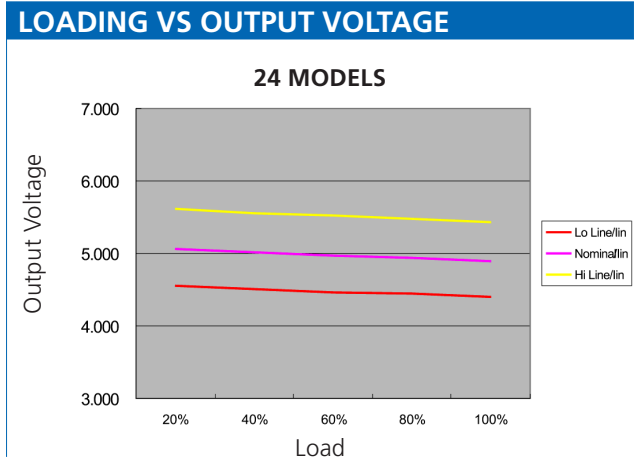


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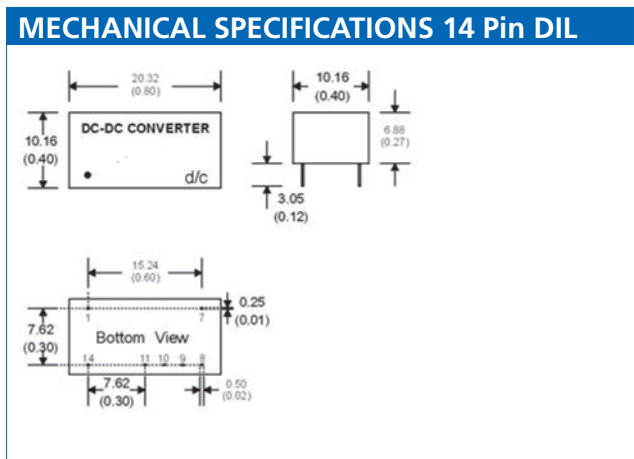
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### PIN CONNECTIONS 7 Pin SIL

PIN NUMBER	SINGLE	DUAL	SINGLE-H	DUAL-H
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 NUMBER	SINGLE	DUAL	SINGLE-H	DUAL-H
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:  $0.5 \pm 0.05$  ( $0.02 \pm 0.002$ )
- 2) Pin pitch tolerance:  $\pm 0.35$  ( $\pm 0.014$ )
- 3) Case tolerance:  $\pm 0.5$  ( $\pm 0.02$ )