RS4/RD4-RS10

- 7 Pin SIL/14Pin DIL Package
- 1000VDC Isolation
- Up to 3000VDC Isolation
- Low Ripple and Noise
- Efficiency up to 73%
- Operating Temperature Range: -40° ~ +85°C
- Non Conductive Black Plastic Case
- EMI Complies with EN55022 Class B

RoHS

OUTPUT SPECIFICATION	
Voltage accuracy:	±2%
Line regulation:	±0.5%
LOAD REGULATION:	from 0% to 100% Load: ±0.5%
	Output 3.3V Model: ±1.0%
Ripple noise (20Mhz bandwidth):	50mV pk-pk
Temperature coefficient:	±0.02% °C
Capacitor load:	See table

INPUT SPECIFICATIONS	
Voltage Range:	±10%
Max. Input Current:	See table
No-Load/Full-Load Input Current:	See table
Input Filter:	Capacitors
Input Reflected Ripple Current :	20mA pk-pk

GENERAL SPECIFICATIONS	
Efficiency:	See table
I/O Isolation Voltage (60sec):	1000 ~ 3000VDC
I/O Isolation Capacitance:	60pF typ.
I/O Isolation Resistance:	1000M Ohm
Switching Frequency:	Variable 50kHz
Humidity:	95% rel H
Reliability Calculated MTBF : (MIL-HDBK-217 f)	> 3.5MHrs
Safety Standard: (designed to meet):	IEC 60950-1

ENVIRONMENTAL SPECIFICATION	
Operating Temperature range:	-40°C ~+85°C (see Derating Curve)
Maximum Case Temperature:	100°C
Storage Temperature :	-40°C ~+125°C
Cooling :	Nature Convection

PHYSICAL SPECIFICATIONS:	
Case Material:	Non-conductive Black Plastic (UL94V-0 rated)
PIN Material:	Ø 0.5mm Alloy42 Solder-coated
Potting Material:	Epoxy (UL94V-0 rated)
Weight Case- Sip:	2.7g
Weight Case-DIP:	2.9g
Dimmension SIP:	0.76 x 0.28 x 0.39“
Dimmension DIP:	0.80 x 0.40 x 0.27“

ABSOLUTE MAXIMUM RATINGS	
Input Surge Voltage (100ms)/	
3,3V Models:	5VDC max
5 V Models:	7VDC max
12V Models:	15VDC max
24V Models:	28VDC max
Soldering Temperature:	260°C max [2]

EMC SPECIFICATIONS	
Radiated-/Conducted Emissions:	EN55022 Class B
ESD:	IEC 61000-4-2 Perf.Criteria A
RS:	IEC 61000-4-3 Perf.Criteria A
EFT:	IEC 61000-4-4 Perf.Criteria A
SURGE:	IEC 61000-4-5 Perf.Criteria A
CS:	IEC 61000-4-6 Perf.Criteria A
PFMF	IEC 61000-4-8 Perf.Criteria A

1) These are stress ratings. Exposure of devices to any of these conditions may adversely affect long-term reliability.
2) (1.5mm from case 10sec Max.)
3) All specifications typical at TA= 25°C, nominal input voltage and full load unless otherwise specified.
4) The information and specification contained in this data sheet are believed to be correct at time of publication. However RSG accepts no responsibility for consequences arising from printing errors or inaccuracies. Specifications are subject to change without notice.

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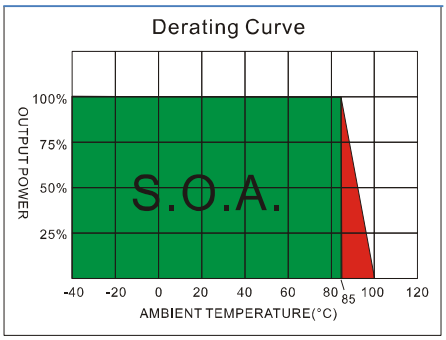
RS4/RD4-RS10

NUMBER STRUCTURE

RS4 - XX XX X XX A X

- **Name/Package**: RS4=SIL7, RD4=DIL14
- **Input**: 03=3.3V, 05=5.0V, 12=12V, 24=24V
- **Output**: 03=3.3V, 05=5.0V, 07=7.2V, 09=9.0V, 12=12V, 15=15V
- **Type**: RS=Regulated Single
- **Power (W)**: 10=1.00
- **Code**: internal
- **Isolation (kVDC)**: 1= 1.0, 3= 3.0



MODEL SELECTION GUIDE

MODEL NUMBER	INPUT	INPUT Current		OUTPUT	OUTPUT Current	EFFICIENCY	Capacitor
	Voltage Range (Vdc)	No-Load (mA)	Full Load (mA)	Voltage (Vdc)	Full load (mA)	@FL(%)	Load(uF)
RS4-0503 RS10AX	5	30	385	3.3	333	57	220
RS4-0505 RS10AX	5	30	307	5	200	65	220
RS4-0507 RS10AX	5	30	307	7.2	138.9	65	220
RS4-0509 RS10AX	5	35	307	9	111.1	65	220
RS4-0512 RS10AX	5	35	294	12	83.3	68	220
RS4-0515 RS10AX	5	35	294	15	66.7	68	220
RS4-1203 RS10AX	12	20	160	3.3	333	57	220
RS4-1205 RS10AX	12	20	132	5	200	63	220
RS4-1207 RS10AX	12	20	128	7.2	138.9	65	220
RS4-1209 RS10AX	12	20	126	9	111.1	66	220
RS4-1212 RS10AX	12	20	122	12	83.3	68	220
RS4-1215 RS10AX	12	20	126	15	66.7	66	220
RS4-2403 RS10AX	24	10	76	3.3	333	60	220
RS4-2405 RS10AX	24	10	64	5	200	65	220
RS4-2407 RS10AX	24	10	64	7.2	138.9	65	220
RS4-2409 RS10AX	24	10	61	9	111.1	68	220
RS4-2412 RS10AX	24	10	61	12	83.3	68	220
RS4-2415 RS10AX	24	10	61	15	66.7	68	220
RD4-0503 RS10AX	5	30	350	3.3	333	57	220
RD4-0505 RS10AX	5	35	317	5	200	63	220
RD4-0507 RS10AX	5	45	327	7.2	138.9	61	220
RD4-0509 RS10AX	5	40	298	9	111.1	67	220
RD4-0512 RS10AX	5	35	298	12	83.3	67	220
RD4-0515 RS10AX	5	35	298	15	66.7	67	220
RD4-1203 RS10AX	12	20	146	3.3	333	57	220
RD4-1205 RS10AX	12	20	132	5	200	63	220
RD4-1207 RS10AX	12	20	132	7.2	138.9	63	220
RD4-1209 RS10AX	12	20	128	9	111.1	65	220
RD4-1212 RS10AX	12	20	122	12	83.3	68	220
RD4-1215 RS10AX	12	20	126	15	66.7	66	220
RD4-2403 RS10AX	24	10	73	3.3	333	57	220
RD4-2405 RS10AX	24	10	76	5	200	60	220
RD4-2407 RS10AX	24	10	76	7.2	138.9	60	220
RD4-2409 RS10AX	24	10	61	9	111.1	68	220
RD4-2412 RS10AX	24	10	63	12	83.3	66	220
RD4-2415 RS10AX	24	10	63	15	66.7	66	220

X = 1 means 1kVDC, X = 3 means 3kVDC isolation

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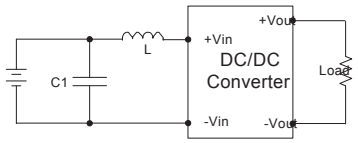
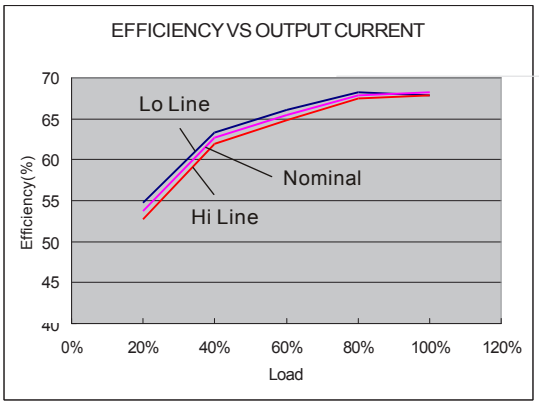
RS4/RD4-RS10

EMI Filter

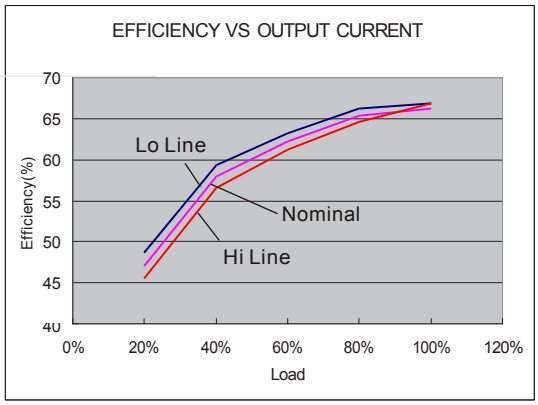
Input filter components (C1, L) are used to help meet conducted emissions requirement for the module. These components should be mounted as close as possible to the module; and all leads should be minimized to decrease radiated noise.



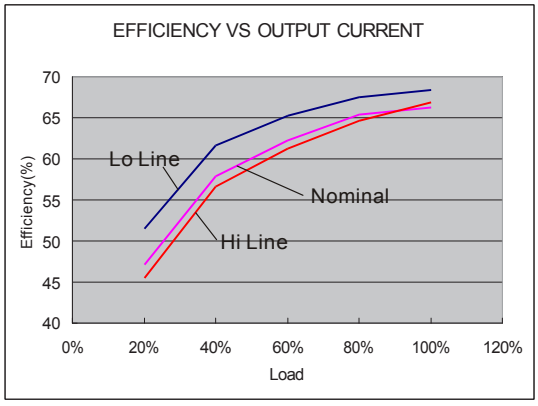
	C1	L
RS4-05XXRS10AX	220uF/100V	12uH
RS4-12XXRS10AX	220uF/100V	12uH
RS4-24XXRS10AX	220uF/100V	12uH



05 Models



12 Models



24 Models

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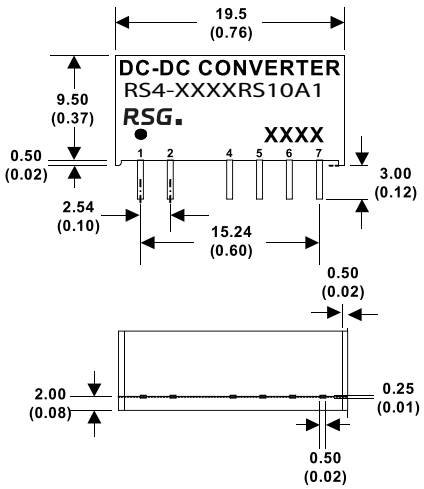
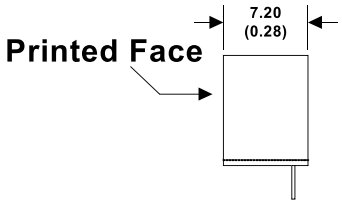
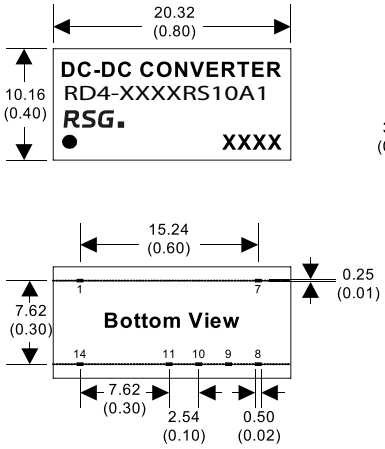




7 Pin SIL Package

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



14 Pin DIL Package

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

SIL 7

PIN CONNECTIONS		
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

DIL 14

PIN CONNECTIONS		
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

The models listed above are standard types. If you need special specifications or have questions regarding packing (Tube or Tape&Reel) or need application support, please contact our specialists: sales@rsg-electronic.de or +49 69-984047-0

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