

RR7-S02/D02

- 24 Pin DIL Package
- Wide 4:1 Input Range
- 1500VDC Isolation
- Up to 3500VDC Isolation
- Continuous Short Circuit Protection
- Efficiency up to 78%
- Operating Temperature Range
-40° ~ +85°C
- Metal Case Standard , Optional Plastic Case
- EMI Complies With EN55022 Class A



RoHS

OUTPUT SPECIFICATION	ENVIRONMENTAL SPECIFICATION
Voltage accuracy: ±1%	Operating Temperature range: -40°C ~+85°C (see Derating Curve)
Line regulation: Single &Dual ±0.5% max.	Maximum Case Temperature: 100°C
LOAD REGULATION: ±0.5%	Storage Temperature : -40°C ~+125°C
Output 3.3V Model: ±1.5%	Cooling : Nature Convection
Short Circuit Protection : Indefinite (Automatic Recovery)	PHYSICAL SPECIFICATIONS:
Ripple noise (20Mhz bandwidth): 60mV pk-pk	Base Material: Nickel-coated Copper
Temperature coefficient: ±0.02%<>°C	Non-conductive Black Plastic (UL94V-0 rated)
Capacitor load: See table	PIN Material: Ø 0.5mm Brass Solder coated
INPUT SPECIFICATIONS	Potting Material: Epoxy (UL94V-0 rated)
Voltage Range: See table	Weight Case-DIP: 17.0g (Metal), 13.5g (plastic)
Max. Input Current: See table	Dimmension DIP: 1.25" x 0.8" x 0.4"
No-Load/Full-Load Input Current: See table	ABSOLUTE MAXIMUM RATINGS (1)
Input Filter: PI Type	Input Surge Voltage (100ms)/
Input Reflected Ripple Current : 35mA pk-pk	24V Models: 40VDC max.
GENERAL SPECIFICATIONS	48V Models: 80VDC max.
Efficiency: See table typ.	Soldering Temperature: 260°C max. (2)
I/O Isolation Voltage Metal Case (3 sec.): 1000VDC	EMC SPECIFICATIONS
I/O Isolation Voltage (3 sec.): 1500 ~ 3500VDC	Radiated-/Conducted Emissions: EN55022 Class A
I/O Isolation Capacitance: 500pF typ.	ESD: IEC 61000-4-2 Perf.Criteria A
I/O Isolation Resistance: 1000M Ohm	RS: IEC 61000-4-3 Perf.Criteria A
Switching Frequency: 266kHz, typ.	EFT: IEC 61000-4-4 Perf.Criteria A
Humidity: 95% rel H	SURGE: IEC 61000-4-5 Perf.Criteria A
Reliability Calculated MTBF : > 1.21Mhrs (MIL-HDBK-217 f)	CS: IEC 61000-4-6 Perf.Criteria A
Safety Standard: (designed to meet): IEC 60950-1	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.

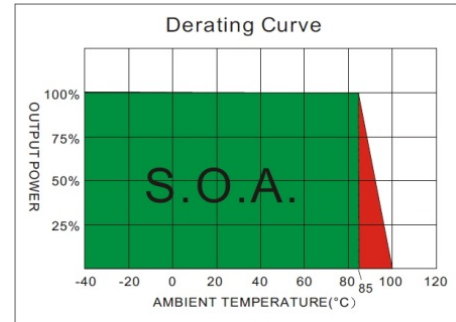
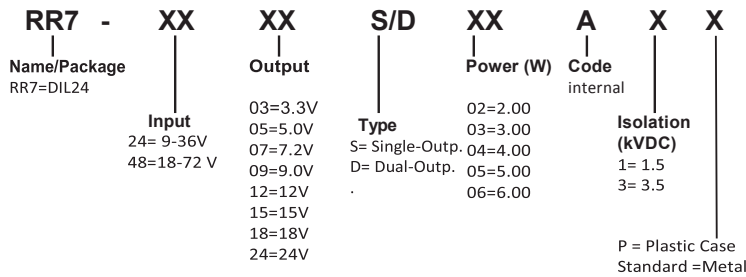
2) (1.5mm from case 10sec Max.)

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.

RR7-S02/D02

NUMBER STRUCTURE



MODEL SELECTION GUIDE

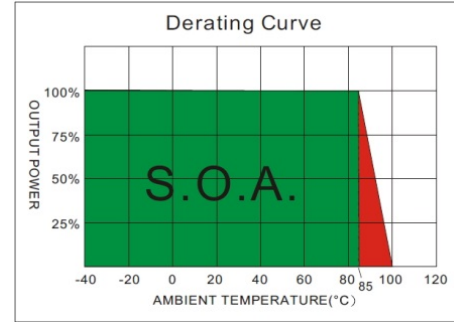
MODEL NUMBER	INPUT Voltage Range (Vdc)	INPUT Current		OUTPUT Voltage (Vdc)	OUTPUT Current		EFFICIENCY @FL(%)	Capacitor Load(µF)
		No-Load (mA)	Full Load (mA)		Min. load (mA)	Full load (mA)		
RR7-2403S02AX	9-36	15	110.0	3.3	0	600	75	470
RR7-2405S02AX	9-36	15	109.6	5	0	400	76	330
RR7-2407S02AX	9-36	15	106.8	7.2	0	277	78	68
RR7-2409S02AX	9-36	15	106.8	9	0	222	78	68
RR7-2412S02AX	9-36	15	106.8	12	0	166	78	47
RR7-2415S02AX	9-36	15	106.8	15	0	133	78	22
RR7-2418S02AX	9-36	15	106.8	18	0	111	78	22
RR7-2424S02AX	9-36	15	106.8	24	0	83	78	10
RR7-2403D02AX	9-36	15	110.0	±3.3	0	±303	75	±220
RR7-2405D02AX	9-36	15	109.6	±5	0	±200	76	±100
RR7-2407D02AX	9-36	15	106.8	±7.2	0	±138	78	±33
RR7-2409D02AX	9-36	15	106.8	±9	0	±111	78	±33
RR7-2412D02AX	9-36	15	106.8	±12	0	±83	78	±22
RR7-2415D02AX	9-36	15	106.8	±15	0	±66	78	±10
RR7-2418D02AX	9-36	15	106.8	±18	0	±55	78	±10
RR7-2424D02AX	9-36	15	106.8	±24	0	±41	78	±10
RR7-4803S02AX	18-72	12	55.0	3.3	0	600	75	470
RR7-4805S02AX	18-72	12	54.82	5	0	400	76	330
RR7-4807S02AX	18-72	12	53.4	7.2	0	277	78	68
RR7-4809S02AX	18-72	12	53.4	9	0	222	78	68
RR7-4812S02AX	18-72	12	53.4	12	0	166	78	47
RR7-4815S02AX	18-72	12	53.4	15	0	133	78	22
RR7-4818S02AX	18-72	12	53.4	18	0	111	78	22
RR7-4824S02AX	18-72	12	53.4	24	0	83	78	10
RR7-4803D02AX	18-72	12	55.5	±3.3	0	±303	75	±220
RR7-4805D02AX	18-72	12	54.82	±5	0	±200	76	±100
RR7-4807D02AX	18-72	12	53.4	±7.2	0	±138	78	±33
RR7-4809D02AX	18-72	12	53.4	±9	0	±111	78	±33
RR7-4812D02AX	18-72	12	53.4	±12	0	±83	78	±22
RR7-4815D02AX	18-72	12	53.4	±15	0	±66	78	±10
RR7-4818D02AX	18-72	12	53.4	±18	0	±55	78	±10
RR7-4824D02AX	18-72	12	53.4	±24	0	±41	78	±10

Suffix "3" means 3.5KVdc isolation
Suffix "P" means Plastic case instead of standard Metal Case

STAND Juni 2016 Rev 01

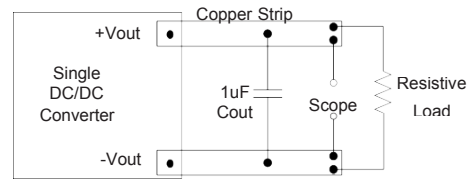
RR7-S02/D02

NUMBER STRUCTURE						
RR7	-	XX	XX	S/D	XX	A X X
Name/Package RR7=DIL24		Input 24= 9-36V 48=18-72 V	Output 03=3.3V 05=5.0V 07=7.2V 09=9.0V 12=12V 15=15V 18=18V 24=24V	Type S= Single-Outp. D= Dual-Outp.	Power (W) 02=2.00 03=3.00 04=4.00 05=5.00 06=6.00	Code internal Isolation (kVDC) 1= 1.5 3= 3.5 P = Plastic Case Standard =Metal



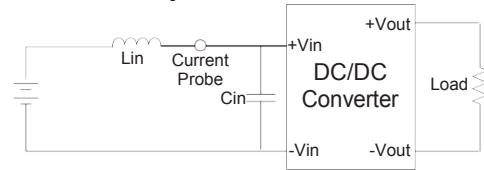
Output Ripple & Noise Measurement Test

Use a capacitor Cout(1.0uF) measurement.
The Scope measurement bandwidth is 0-20MHz.



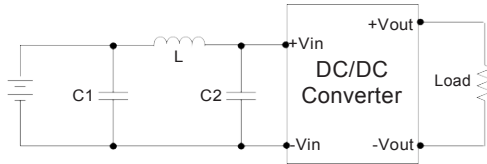
Input Reflected Ripple Current Test Step

Input reflected ripple current is measured through a source inductor Lin(12uH) and a source capacitor Cin(47uF, ESR<1.0Ω at 100KHz) at nominal input and full load.

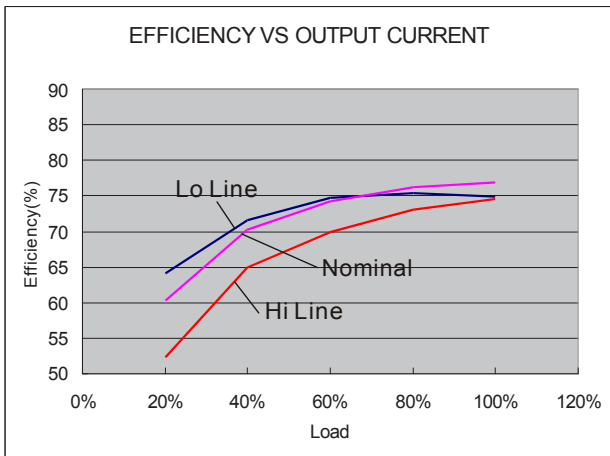


EMI Filter

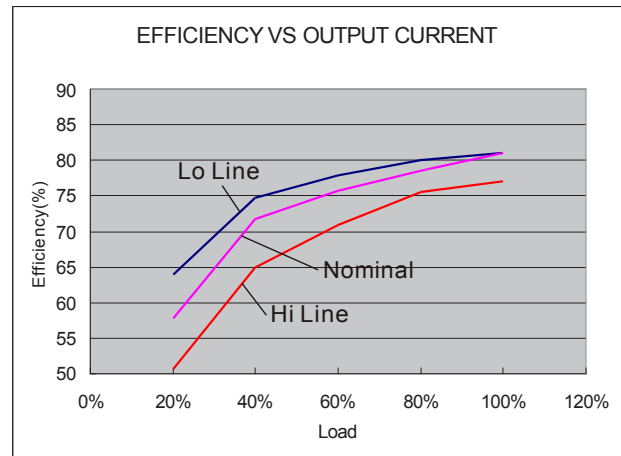
Input filter components (C1,C2, L) are used to help meet conducted emissions requirement for the module. These components should be mounted as close as possible to the module; and all leads should be minimized to decrease radiated noise.



C1	L	C2
68uF, 100V	12uH	33uF, 100V

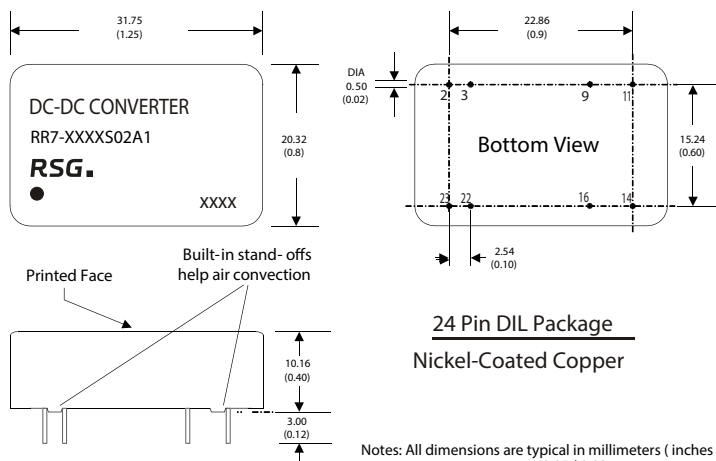


24 Models



48 Models

MECHANICAL SPECIFICATIONS

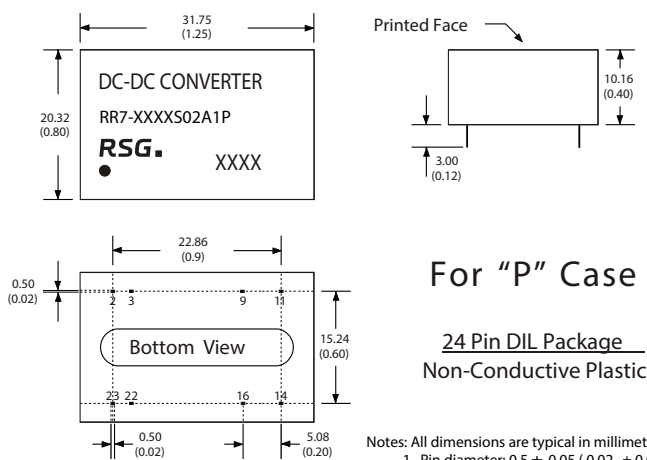


24 Pin DIL Package
Nickel-Coated Copper

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)

PIN CONNECTIONS		
PIN NUMBER	SINGLE	DUAL
2	-V Input	-V Input
3	-V Input	-V Input
9	N.P.	Common
11	N.C.	-V Output
14	+V Output	+V Output
16	-V Output	Common
22	+V Input	+V Input
23	+V Input	+V Input

(The Pin Connection of high isolation one is the same with normal one.)



For "P" Case

24 Pin DIL Package
Non-Conductive Plastic

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)

PIN CONNECTIONS		
PIN NUMBER	SINGLE	DUAL
2	-V Input	-V Input
3	-V Input	-V Input
9	N.P.	Common
11	N.C.	-V Output
14	+V Output	+V Output
16	-V Output	Common
22	+V Input	+V Input
23	+V Input	+V Input

(The Pin Connection of high isolation one is the same with normal one.)

The models listed here are just standard type. If you need a product with special specification or you have questions regarding packing standards (Tube oder Tape/Reel) as well as application support, please contact our specialists: sales@rsg-electronic.de or +49 69-984047-41/-28