

0.5 Watt SIP4 Single Output DC/DC-Converter



FEATURES

- ◆ Industry Standard Pin out
- ◆ 1kVDC Isolation
- ◆ UL94V-0 Package Material
- ◆ Optional Continuous Short Circuit Protected
- ◆ Fully Encapsulated
- ◆ Custom Solutions Available
- ◆ Efficiency to 87%
- ◆ 3 year Warranty

MODEL SELECTION

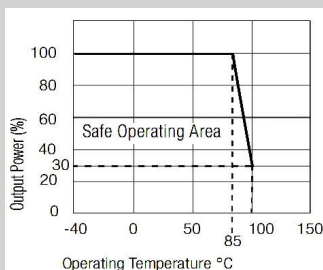
RB^①05^②05^③X^④S^⑤

- ① Product Series
- ② Input Voltage
- ③ Output Voltage
- ④ Fixed Input
- ⑤ SIP Package

APPLICATIONS

The RB-XS DC/DC converters are typically used in general purpose low power isolation and voltage matching applications, and feature a full industrial operating temperature range of -40°C~ +85°C without derating.

Derating-Graph(Ambient Temperature)



SELECTION GUIDE

Model	Input Voltage (V)	Output Voltage (V)	Output Current (MA)	Efficiency (%)	Max. Capacitive Load
RB0505XS	5	5	100	80	470μF
RB1205XS	12	5	100	82	470μF
RB0512XS	5	12	42	83	150μF
RB1212XS	12	12	42	86	150μF
RB0515XS	5	15	33	84	150μF
RB1215XS	12	15	33	87	150μF

add "P" for Continuous Short Circuit Protection, e.g.:RB0505XSP

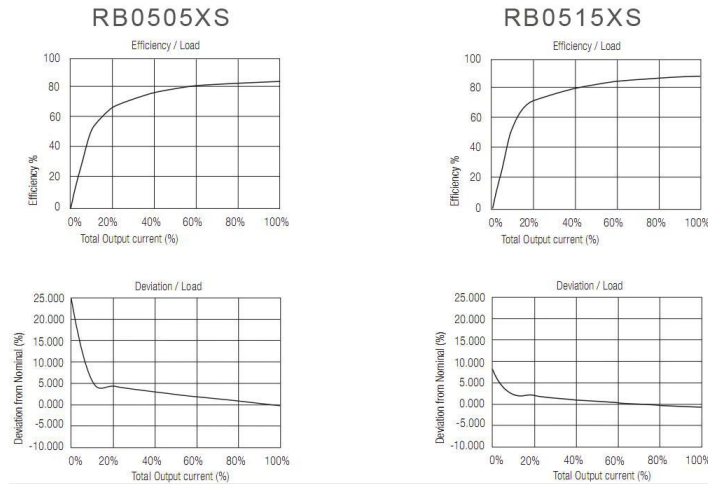
Specifications

Input Voltage Range	±10%	
Output Voltage Accuracy	±5%	
Line Voltage Regulation	1.2%/1% of Vin typ..	
Load Voltage Regulation (10% to 100% full load)	10% max. / 4% typ..	
Output Ripple and Noise (20MHz limited)	100mVp-p max.	
Operating Frequency	20kHz min. / 54kHz typ.	
Efficiency at Full Load	70% min. / 85% typ.	
Efficiency at 50%I Load	65% min. / 80% typ.	
Minimum Load = 0%	Specifications valid for 10% minimum load only.	
Isolation Voltage	(tested for 1 second)	1000VDC
	(rated for 1 minute)	500VAC / 60Hz
Isolation Capacitance	20pF min. / 75pF max.	
Isolation Resistance	10 GΩmin.	
Short Circuit Protection	1 Second	
Suffix "P"	Continuous	
Operating Temperature Range (free air convection)	-40°C to +85°C (see Graph)	
Storage Temperature Range	-55°C to +125°C	
Relative Humidity	95% RH	
Package Weight	1.4g	
Packing Quantity	42 pcs per Tube	
MTBF (+25°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F 985 x 10 ³ hours
(+85°C)		using MIL-HDBK 217F 200 x 10 ³ hours

(measured at T_A= 25°C, nominal input voltage, full load and after warm-up)



Typical Characteristics



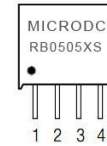
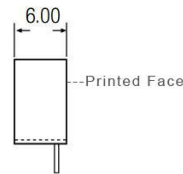
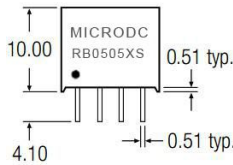
Notes

Note 1 Maximum capacitive load is defined as the capacitive load that will allow start up in under 1 second without damage to the converter .

Certifications IEC62321:2008 BSTDG13061091RC-4 E0611042E-1

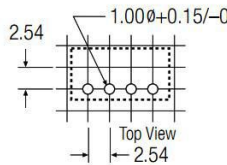
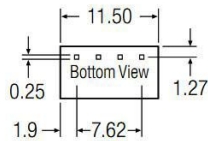
Package Style and Pinning (mm)

4 PIN SIP Package



3rd angle projection

Recommended Footprint Details



Pin Connections

Pin #	Single
1	-Vin
2	+Vin
3	-Vout
4	+Vout

XX.X ± 0.5 mm
XX.XX ± 0.25 mm



RoHS COMPLIANT INFORMATION

This series is compatible with RoHS soldering systems with a peak wave solder temperature of 300°C for 10 seconds. The pin termination finish on the SIP package type is Tin Plate, Hot Dipped over Matte Tin with Nickel Preplate. The DIP types are Matte Tin over Nickel Preplate. Both types in this series are backward compatible with Sn/Pb soldering systems.



REACH COMPLIANT INFORMATION

This series has proven that this product does not contain harmful chemicals, it also has harmful chemical substances through the registration, inspection and approval.