

Features

Regulated Converters

- 1kVDC & 2kVDC Isolation
- UL94V-0 Package Material
- No Heatsink Required
- No External Components Required
- Toroidal Magnetics
- Optional Continuous Short Circuit Protected

Description

The RSZ series DC/DC converter has been designed for isolating or converting DC power rails where an SMD format with regulated output is required, although it is no larger than a standard unregulated SMD converter.

Selection Guide

Part Number		Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)
SMD	2kVDC			
Regulated without short circuit protection				
RSZ-xx05	(H)	3.3, 5, 12, 15, 24	5	200
RSZ-xx09	(H)	3.3, 5, 12, 15, 24	9	111
RSZ-xx12	(H)	3.3, 5, 12, 15, 24	12	42
Regulated with short circuit protection				
RSZ-xx3.3/P	(H)	3.3, 5, 12, 15, 24	3.3	200
RSZ-xx05/P	(H)	3.3, 5, 12, 15, 24	5	200

xx= Input Voltage (other input and output voltage combinations available on request)
add suffix -R for tape & reel packing e.g. RSZ-0505-R

Specifications (measured at $T_A = 25^\circ\text{C}$, nominal input voltage, full load and after warm-up)

Input Voltage Range			±5%
Output Voltage Accuracy			±2%
Line Voltage Regulation			1% max.
Load Voltage Regulation			1% max.
Output Ripple and Noise (at 20MHz BW)			100mVp-p max.
Operating Frequency			20kHz min. / 50kHz typ. / 85kHz max.
Efficiency at Full Load			50% min. / 60% typ.
No Load Power Consumption			134mW min. / 217mW typ. / 350mW max.
Maximum Capacitive Load			47µF
Isolation Voltage		(tested for 1 second)	1000VDC min.
Rated Working Voltage		(long term isolation)	see Application Notes
Isolation Voltage	H-Suffix	(tested for 1 second)	2000VDC min.
Rated Working Voltage	H-Suffix	(long term isolation)	see Application Notes
Isolation Capacitance			70pF typ.
Isolation Resistance			10 GΩ min.
Short Circuit Protection			1 Second
P-Suffix			Continuous
Operating Temperature Range (free air)			-40°C to +70°C (see Graph)
Storage Temperature Range			-55°C to +125°C
Reflow Temperature		ROHS compliant	245°C (30 sec) max.
Vapour Phase Process			230°C (90 sec) max.
(for more details see Application Notes)			
Relative Humidity			95% RH
Package Weight			2.7g
P-Suffix			2.6g
Packing Quantity			33 pcs per tube
			500 pcs per Reel
MTBF (+25°C)		For detailed information see Application Notes chapter "MTBF"	RSZ types
(+70°C)			RSZ/P types
			RSZ types
			RSZ/P types
using MIL-HDBK 217F			

ECONOLINE

DC/DC-Converter

RECOM

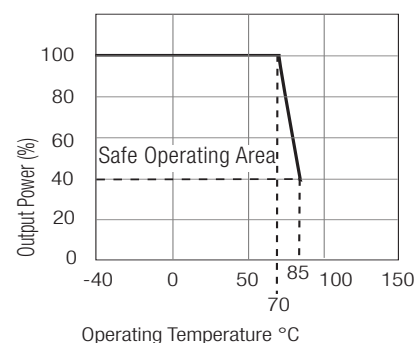
1 Watt SMD Miniature Isolated Single Output



EN-60950-1 Certified

RSZ

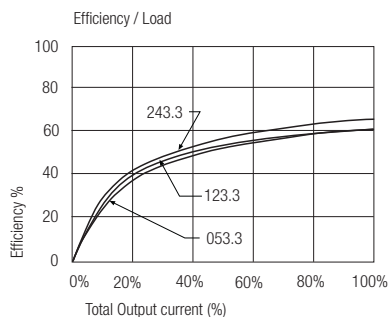
Derating-Graph (Ambient Temperature)



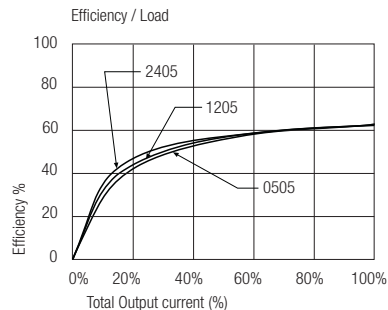
Refer to Application Notes

Typical Characteristics

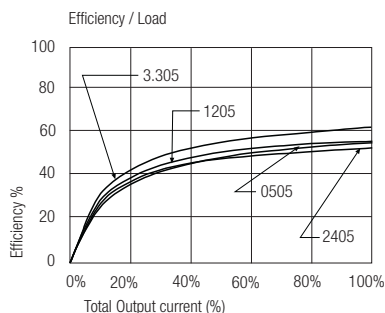
RSZ-xx3.3/P



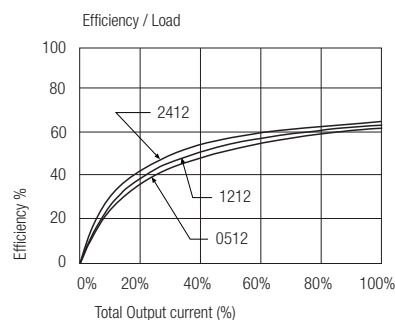
RSZ-xx05/P



RSZ-xx05



RSZ-xx12

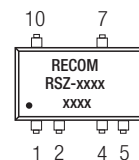
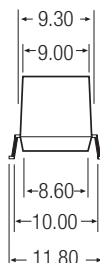
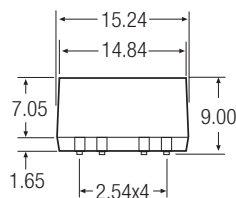


Package Style and Pinning (mm)

Ordering Example: RSZ-0505 (5V Input, 5V Output, not short circuit protected)
RSZ-0505/HP (5V Input, 5V Output, 2kVDC Isolation and short circuit protection)

3rd angle projection

10 PIN Single SMD Package



Pin Connections

Pin #	Function
1	-Vin
2	+Vin
4	-Vout
5	+Vout
7	+Vout
10	NC

NC= No Connection

XX.X ± 0.5 mm

XX.XX ± 0.25 mm

Recommended Footprint Details

