Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

Features

Unregulated Converters

- 2W Single and Dual Outputs in DIP14
- 3kVDC or 4kVDC Isolation
- Optional Continuous Short Circuit Protected
- Custom Solutions Available
- UL94V-0 Package Material
- Efficiency up to 85%
- Suitable for IGBT Applications

Description

The RJZ and RGZ series converters are available in DIP14 packages, so can be used for applications where component height is restricted. The wide selection of input voltage and output voltage options plus an I/O-Isolation of 3kVDC or 4kVDC as standard makes these converters suitable for many industrial, medical and IGBT applications.

Selection Guide

Part Number DIP 14	4kV	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)	Max Capacitive Load[1]
RJZ-xx3.3S*	(H)	3.3,5,9,12,15,24	3.3	606	70-75	3300µF
RJZ-xx05S*	(H)	3.3,5,9,12,15,24	5	400	78-85	1200µF
RJZ-xx09S*	(H)	3.3,5,9,12,15,24	9	222	78-84	1200µF
RJZ-xx12S*	(H)	3.3,5,9,12,15,24	12	166	80-85	680µF
RJZ-xx15S*	(H)	3.3,5,9,12,15,24	15	133	82-85	680µF
RJZ-xx24S*	(H)	3.3,5,9,12,15,24	24	83	80-85	220µF
RGZ-xx3.3D*	(H)	3.3,5,9,12,15,24	±3.3	±303	75	±1500µF
RGZ-xx05D*	(H)	3.3,5,9,12,15,24	±5	±200	75-82	±470µF
RGZ-xx09D*	(H)	3.3,5,9,12,15,24	±9	±111	75-80	±470µF
RGZ-xx12D*	(H)	3.3,5,9,12,15,24	±12	±84	78-82	±220µF
RGZ-xx15D*	(H)	3.3,5,9,12,15,24	±15	±66	80-84	±220µF
RGZ-xx24D*	(H)	3.3,5,9,12,15,24	±24	±42	82-84	±100µF
RGZ-xx1509D*	(H)	5, 12, 24	+15/-9	+67/-111	70-81	±330µF

xx = Input Voltage. Other input and output voltage combinations available on request.

* add Suffix "P" for Continuous Short Circuit Protection, e.g. RGZ-0524D/P, RJZ-0505S/HP

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

Input Voltage Range			±10%
Output Voltage Accuracy			±5%
Line Voltage Regulation			1.2%/1% of Vin typ.
Load Voltage Regulation		3.3V Types	±20% max.
(10% to 100% full load)		5V Types	±15% max.
		All other Types, RGZ-xx1509D	±10% max.
Output Ripple and Noise (20MHz limited)			±150mVp-p max.
Temperature Coefficient			0.02%/°C max.
Operating Frequency			20kHz min. / 50kHz typ. / 90kHz max.
		RGZ-xx1509D	20kHz min. / 45kHz typ.
Efficiency at Full Load			70% min. / 80% typ.
Minimum Load = 0%			Specifications valid for 10% minimum load only.
Isolation Voltage		(tested for 1 second)	3000VDC
		(rated for 1 minute)	1500VAC / 60Hz
Isolation Voltage	H-Suffix	(tested for 1 second)	4000VDC min.
	H-Suffix)	(rated for 1 minute)	2000VAC / 60Hz
Isolation Capacitance			120pF max.
Isolation Resistance			15GΩ min.
Short Circuit Protection			1 Second
P-Suffix			Continuous
Operating Temperature Range (free air convection, without derating)			-40°C to +90°C (see Graph)
Case Temperature			110°C max.

continued on next page

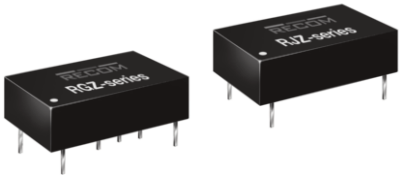
ECONOLINE

DC/DC-Converter

with 3 year Warranty

RECOM

2 Watt DIP14 Single & Dual Output



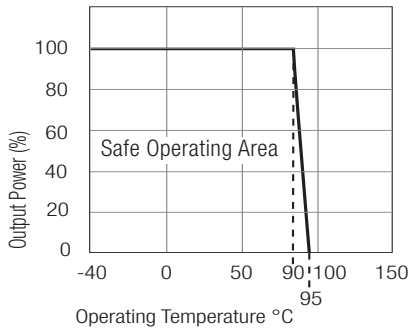
RoHS 2011/65/EU 6/6

EN-60950-1 Certified
IEC/EN-60601-1 Certified*
***+15/-9 Version excluded**

RJZ_RGZ

Derating-Graph

(Ambient Temperature)



**Any data referred to in this datasheet are of indicative nature and based on our practical experience only. For further details, please refer to our Application Notes.

Refer to Application Notes

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

Storage Temperature Range				-55°C to +125°C
Relative Humidity				95% RH
Thermal Impedance				56.66°C / W
Package Weight				2.8g
Packing Quantity				24 pcs per Tube
MTBF (+25°C)	*Detailed Information see Application Notes chapter "MTBF"*	using MIL-HDBK 217F	RJZ types	893 x 10^3 hours
			RGZtypes	810 x 10^3 hours
(+85°C)		using MIL-HDBK 217F	RJZ types	208 x 10^3 hours
			RGZ types	151 x 10^3 hours

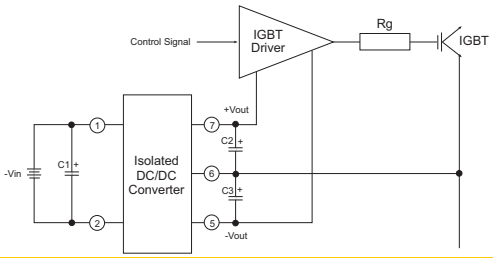
Certifications

EN General Safety	Report: SPCLVD1109103	EN60950-1:2006 + A12:2011
EN Medical Safety	Report: SPCMDD120598-4	IEC/EN 60601-1:2006, 3rd Edition

Notes

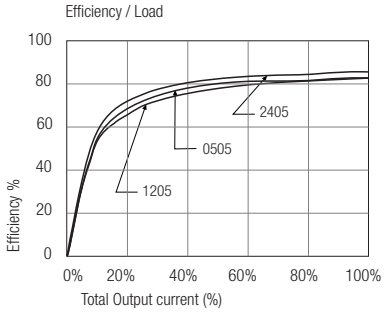
Note 1 Maximum capacitive load is defined as the capacitive load that will allow start up in under 1 second without damage to the converter.

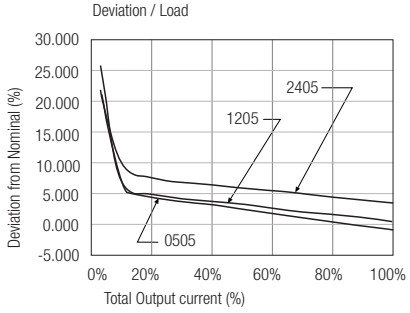
IGBT Application Circuit



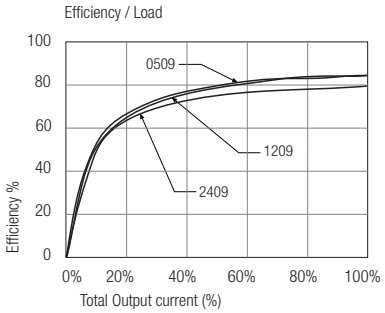
Typical Characteristics

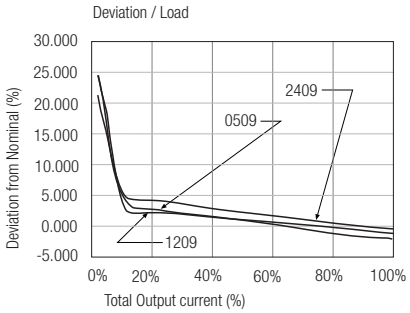
RJZ-xx05S



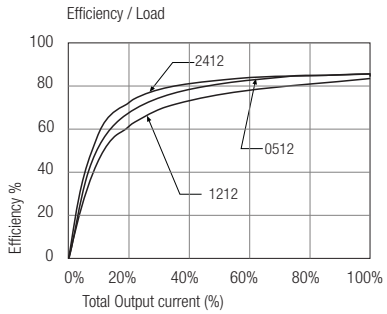


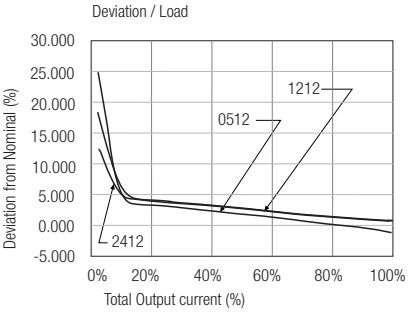
RJZ-xx09S





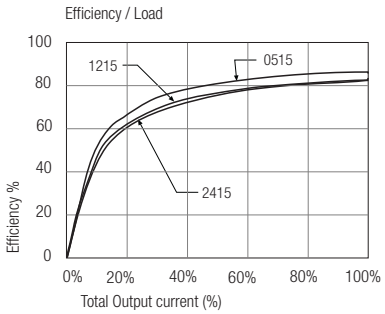
RJZ-xx12S

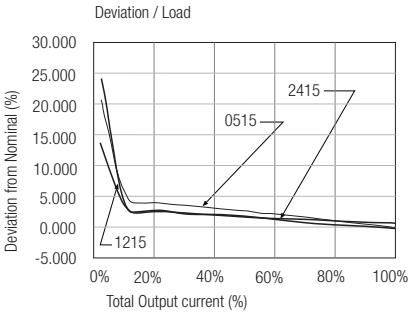




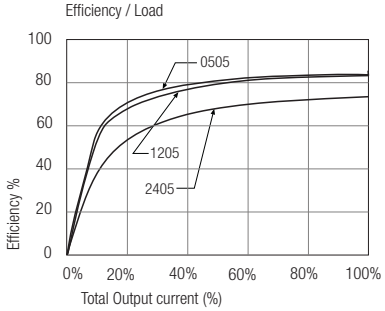
Typical Characteristics

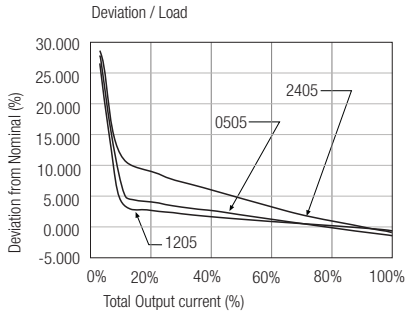
RJZ-xx15S



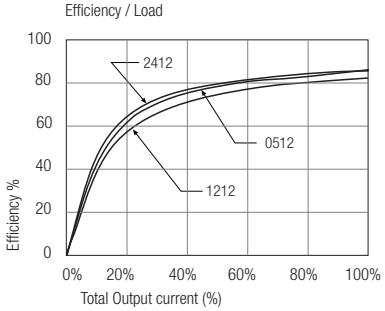


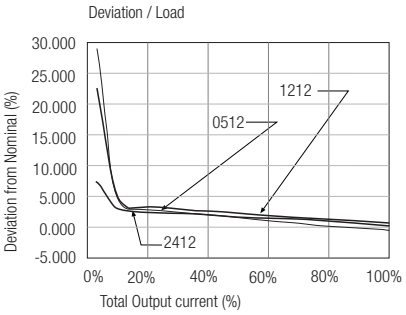
RGZ-xx05D



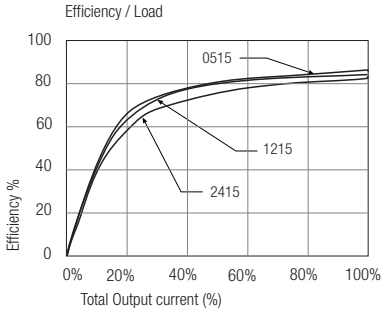


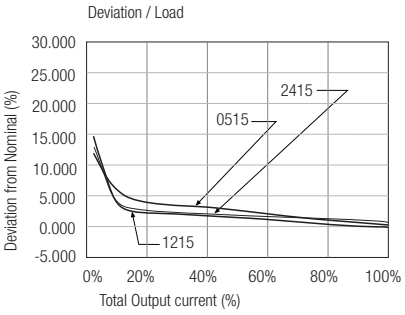
RGZ-xx12D





RGZ-xx15D

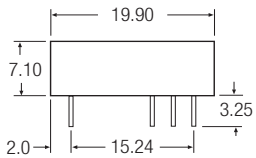


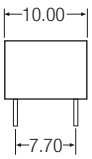


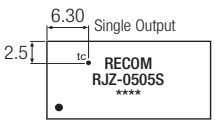
RJZ_RGZ

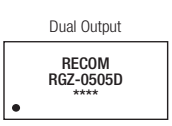
Package Style and Pinning (mm)

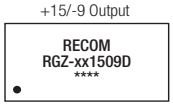
14 PIN DIP Package



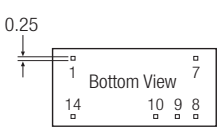


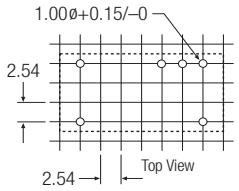






Recommended Footprint Details





Pin Connections

Pin #	RJZ	RGZ
1	–Vin	–Vin
7	NC	NC
8	+Vout	+Vout
9	No Pin	Com
10	–Vout	–Vout
14	+Vin	+Vin

NC = No Connection

XX.X ± 0.5 mm
XX.XX ± 0.25 mm