

Features

Unregulated Converters

Rev.0

- High Isolation 2W Converter
- Approved for Medical Applications
- Custom Solutions Available
- 3kVDC & 4kVDC Isolation Options
- UL94V-0 Package Material
- Optional Continuous Short Circuit Protected
- Efficiency to 84 %

Description

The RKZ Series of 2W DC/DC Converters are certified to EN 60950-1 and to the medical standard EN-60601-1. This makes them suitable for high end industrial applications such as IGBT driver circuitry as well as standard medical applications.

The RUZ converters are pin-compatible with the RK and RH converter series, offering a simple way to upgrade a 1W high isolation supply to 2W.

Selection Guide

Part Number	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)
RKZ-xx05S (H)	5, 12	5	400	82-84
RKZ-xx12S (H)	5, 12	12	168	82-84
RKZ-xx15S (H)	5, 12	15	132	82-84
RKZ-xx05D (H)	5, 12	±5	±200	70-82
RKZ-xx12D (H)	5, 12	±12	±84	82-84
RKZ-xx15D (H)	5, 12	±15	±66	82-84

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

* add Suffix "P" for Continuous Short Circuit Protection, e.g. RKZ-0524D/P,

e.g. RKZ-0524D/HP has 4kV Isolation and is Short Circuit Protected.

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

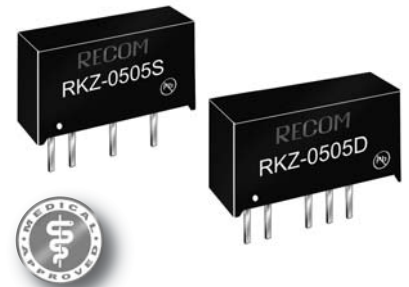
Input Voltage Range		±10%
Output Voltage Accuracy		±5%
Line Voltage Regulation		1.2%/1% of V_{in} typ.
Load Voltage Regulation (10% to 100% full load)	5V output type 12V, 15V output types	15% max. 10% max.
Output Ripple and Noise (20MHz limited)		150mVp-p max.
Operating Frequency		35kHz min. / 50kHz typ. / 85kHz max.
Efficiency at Full Load		70% min. / 80% typ.
No Load Power Consumption		134mW min. / 212mW typ. / 350mW max.
Maximum Capacitive Load		47µF / ±33µF
Isolation Voltage	(tested for 1 second)	3000VDC min.
Rated Working Voltage	(long term isolation)	see Application Notes
Isolation Voltage	H-Suffix (tested for 1 second)	4000VDC min.
Rated Working Voltage	H-Suffix (long term isolation)	see Application Notes
Isolation Capacitance		30pF min. / 110pF max.
Isolation Resistance		15 GΩ min.
Short Circuit Protection		1 Second
P-Suffix		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		2.8g
MTBF (+25°C)	Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F
(+85°C)		using MIL-HDBK 217F
		988 x 10 ³ hours
		135 x 10 ³ hours

ECONOLINE

DC/DC-Converter

RKZ Series

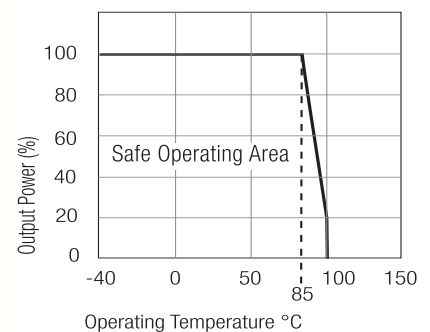
2 Watt SIP7 Single & Dual Output



EN-60950-1 Certified
EN-60601-1 Certified

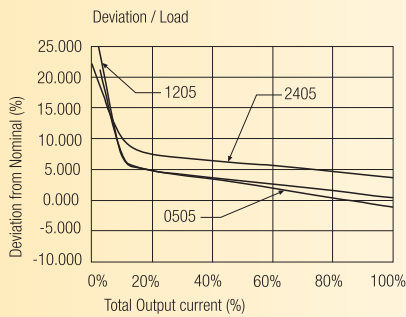
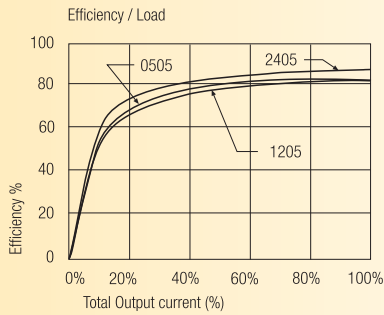
RECOM

Derating-Graph (Ambient Temperature)

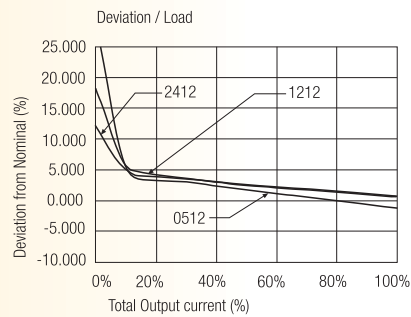
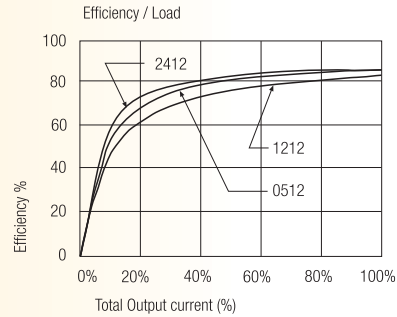


Typical Characteristics

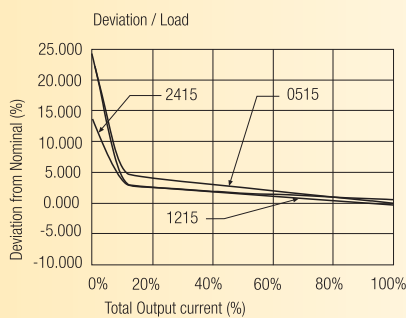
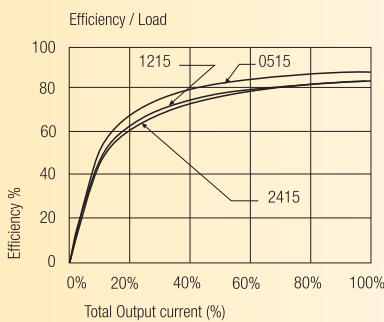
RKZ-xx05S



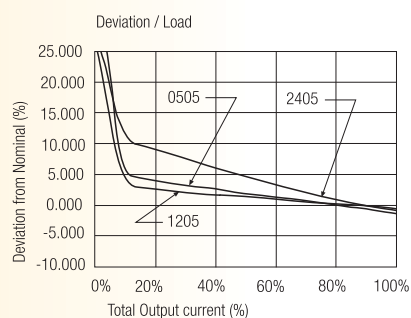
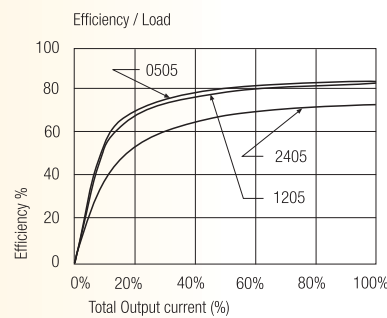
RKZ-xx12S



RKZ-xx15S

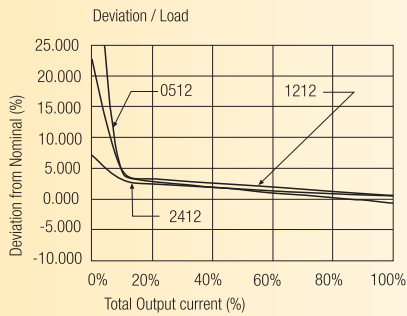
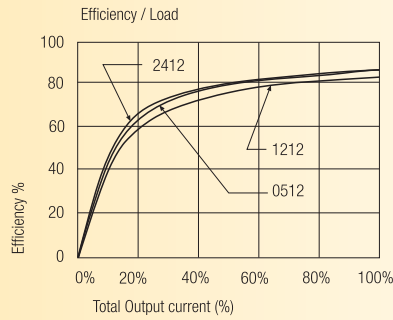


RKZ-xx05D

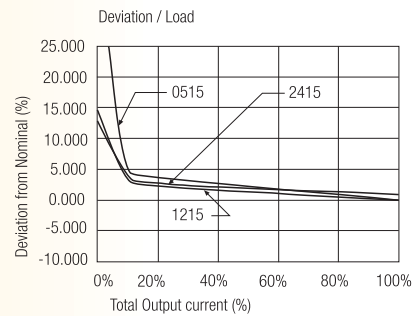
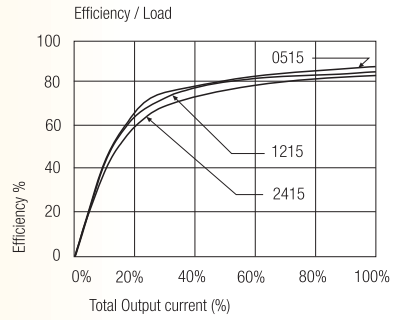


Typical Characteristics

RKZ-xx12D

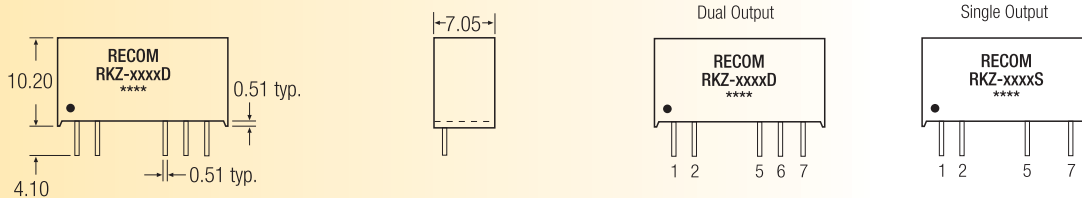


RKZ-xx15D

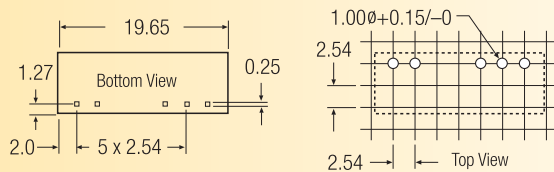


Package Style and Pinning (mm)

7 PIN SIP Package



Recommended Footprint Details



Pin Connections

Pin #	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
5	-Vout	-Vout
6	No Pin	Com
7	+Vout	+Vout

NC = No Connection

XX.X ± 0.5 mm

XX.XX ± 0.25 mm