

## Features

### Unregulated Converters

- Safety standards and approvals: EN 60950 certified, rated for 250VAC (LVD test report)
- Custom Solutions Available
- 3kVDC & 4kVDC Isolation
- UL94V-0 Package Material
- Power Sharing on Output
- Efficiency to 84%

## ECONOLINE DC/DC-Converter

# RKZ Series

### Selection Guide

Part Number	Input Voltage	Output Voltage	Output Current	Efficiency	
SIP7	4kV	(VDC)	(VDC)	(mA)	(%)
RKZ-xx3.3S (H)	5, 9, 12, 15, 24	3.3	606	70	
RKZ-xx05S (H)	5, 9, 12, 15, 24	5	400	82-84	
RKZ-xx09S (H)	5, 9, 12, 15, 24	9	222	78-84	
RKZ-xx12S (H)	5, 9, 12, 15, 24	12	168	82-84	
RKZ-xx15S (H)	5, 9, 12, 15, 24	15	132	82-84	
RKZ-xx24S (H)	5, 9, 12, 15, 24	24	83	82-84	
RKZ-xx3.3D (H)	5, 9, 12, 15, 24	±3.3	±303	70-82	
RKZ-xx05D (H)	5, 9, 12, 15, 24	±5	±200	70-82	
RKZ-xx09D (H)	5, 9, 12, 15, 24	±9	±111	82-84	
RKZ-xx12D (H)	5, 9, 12, 15, 24	±12	±84	82-84	
RKZ-xx15D (H)	5, 9, 12, 15, 24	±15	±66	82-84	
RKZ-xx24D (H)	5, 9, 12, 15, 24	±24	±42	82-84	

xx = Input Voltage

### Description

The RKZ Series of DC/DC Converters are fully certified to EN 60950: 2000. This makes them ideal for all Telecom and safety applications where approved isolation is required. EN 60950 is derived from IEC 950 and is equivalent to UL 1950 and CSA 950 standards.

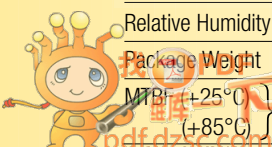
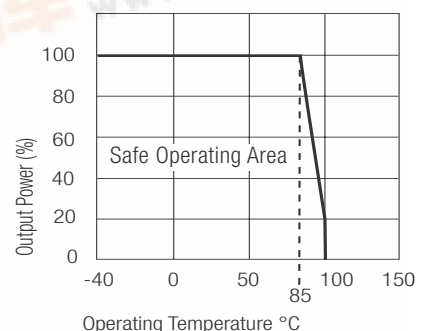
### Specifications (Core Operating Area)

Input Voltage Range		±10%
Output Voltage Accuracy		±5%
Line Voltage Regulation		1.2%/1% of Vin max.
Load Voltage Regulation (10% to 100% full load)	3.3V output types	20% max.
	5V output type	15% max.
	12V, 15V, 24V output types	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.
Isolation Voltage (tested for 1 second)		3.000VDC min.
Rated Working Voltage (long term isolation)		see Application Notes
Isolation Voltage (tested for 1 second)	H-Suffix	4.000VDC min.
Rated Working Voltage (long term isolation)	H-Suffix	see Application Notes
Isolation Capacitance		30pF min. / 110pF max.
Isolation Resistance		15 GΩ min.
Short Circuit Protection		1 Second
Operating Temperature Range (free air convection)		-40°C to +85°C (see Graph)
Storage Temperature Range		-55°C to +125°C
Relative Humidity	MSL Level 1	95% RH
Package Weight		2.8g
MTBF (+25°C)	Detailed Information see	using MIL-HDBK 217F
	Application Notes chapter "MTBF"	using MIL-HDBK 217F
		988 x 10 <sup>3</sup> hours
		135 x 10 <sup>3</sup> hours

## 2 Watt SIP7 Single & Dual Output

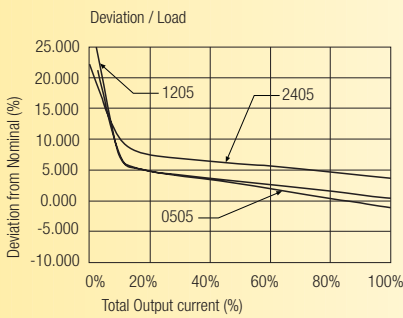
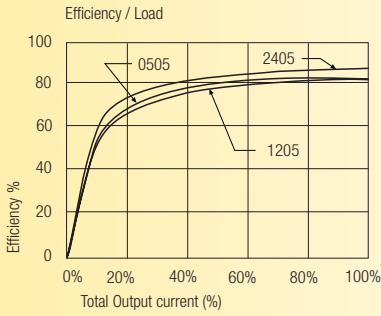


## Derating-Graph (Ambient Temperature)

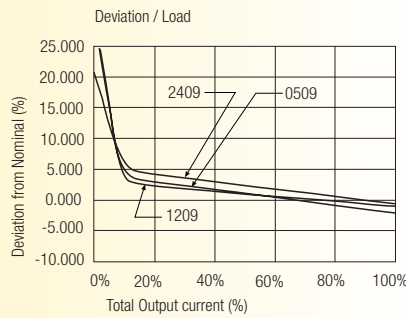
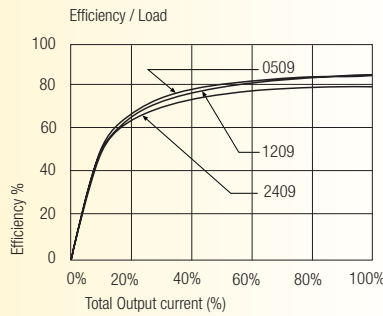


**Typical Characteristics**

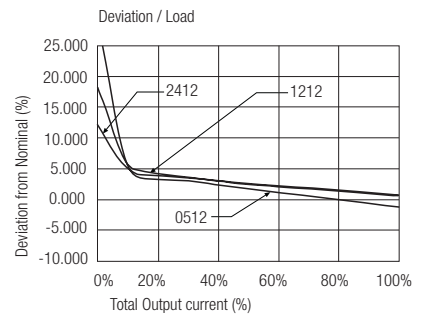
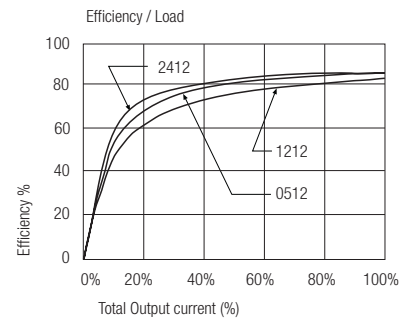
**RKZ-xx05S**



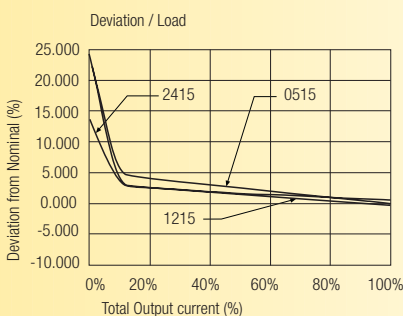
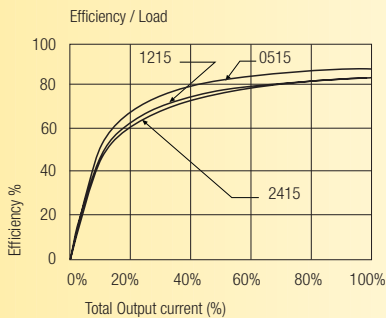
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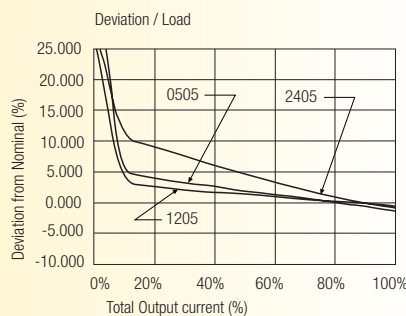
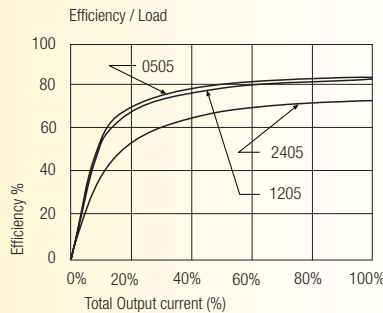
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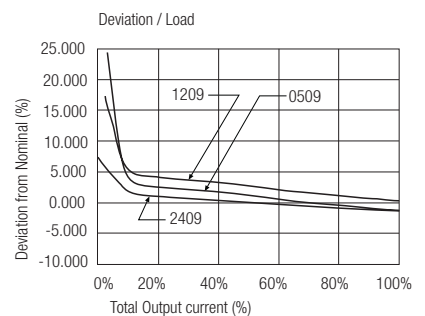
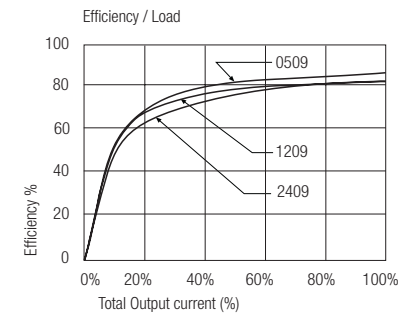
**RKZ-xx15S**



**RKZ-xx05D**

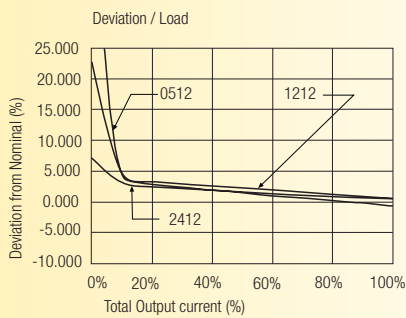
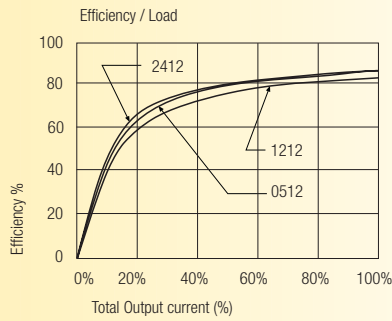


**RKZ-xx09D**

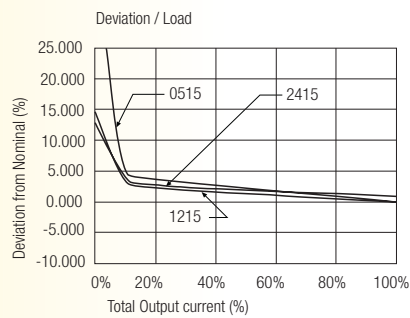
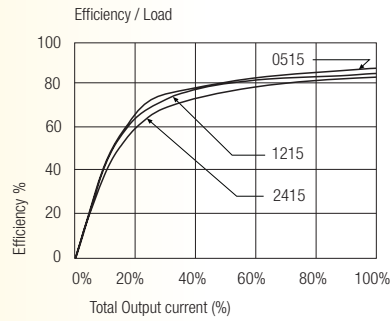


**Typical Characteristics**

**RKZ-xx12D**

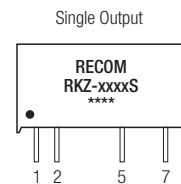
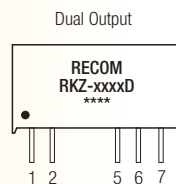
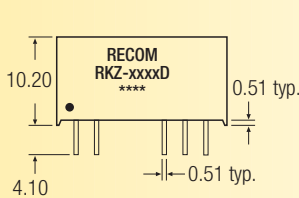


**RKZ-xx15D**

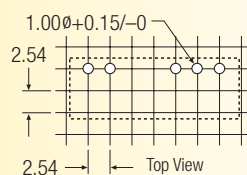
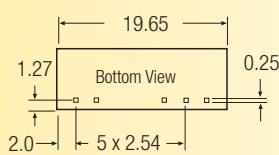


**Package Style and Pinning (mm)**

**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