

# Features

## Regulated Converters

- 1:1 Input Range
- Efficiency up to 69%
- 1kVDC and 2kVDC Isolation Option
- 1W SMD Package
- -40°C to +85°C Operating Temperature Range
- Continuous Short Circuit Protection

# ECONOLINE

DC/DC-Converter

# RECOM

## Selection Guide

Part Number SMD	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (typ.)	Capacitive Load (max.)
RAZ-0505S*	5	5	200	67%	2200µF
RAZ-1205S*	12	5	200	68%	2200µF
RAZ-2405S*	24	5	200	69%	2200µF

\* add Suffix "/H" for 2kVDC/1min. Isolation - e.g. RAZ-0505S/H

\* add Suffix "-R" for tape & reel packing - e.g. RAZ-1205S-R, RAZ-2405S/H-R

## Specifications (measured at $T_A = 25^\circ\text{C}$ , nominal input voltage and rated output current unless otherwise specified)

Input Voltage Range			±10% max.
Output Voltage Accuracy			-1% typ., ±5% max.
Line Voltage Regulation	(low line to high line at max. load)	1% max.	
Load Voltage Regulation	(10% to 100% full load)	1% max.	
Output Ripple and Noise (20MHz BW)			50mVp-p typ., 75mVp-p max.
Operating Frequency ( $V_{in}$ =nominal input)			20kHz min. / 35kHz typ. / 60kHz max.
Efficiency at Full Load			see Selection Guide
Minimum Load = 0%			Specifications valid for 10% minimum load only
Isolation Voltage	(tested for 1 second)		1250 VDC
	(rated for 1 minute**)		1000 VDC
Isolation Voltage	H-Suffix	(tested for 1 second)	2500 VDC
	H-Suffix	(rated for 1 minute**)	2000 VDC
Isolation Capacitance			6pF typ., 10pF max.
Isolation Resistance	( $V_{iso}$ =500V)	10GΩ min.	
Short-Circuit Protection			continuous
Operating Temperature Range			-40°C to +85°C
Storage Temperature			-55°C to +125°C
Relative Humidity			95% RH
Package Weight			1.6g
MTBF (+25°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F	3914 x 10 <sup>3</sup> hours
MTBF (+85°C)		using MIL-HDBK 217F	855 x 10 <sup>3</sup> hours

### Certifications

EN General Safety	Report: SPCLVD1112018	EN60950-1, 2nd Edition
EN Medical Safety	Report: MDD1112018 + RM1112018 Medical Report + ISO14971 Risk Assessment	IEC/EN 60601-1 3rd Edition

\*\*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.

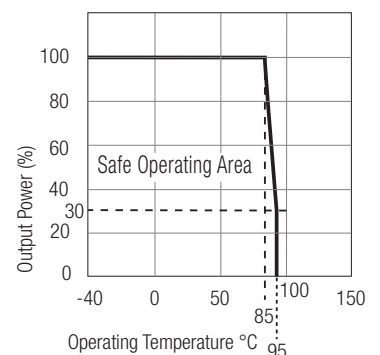
# 1 Watt SMD Single Output



**EN-60950-1 Certified**  
**EN-60601-1 Certified\***  
(\* /H suffix)

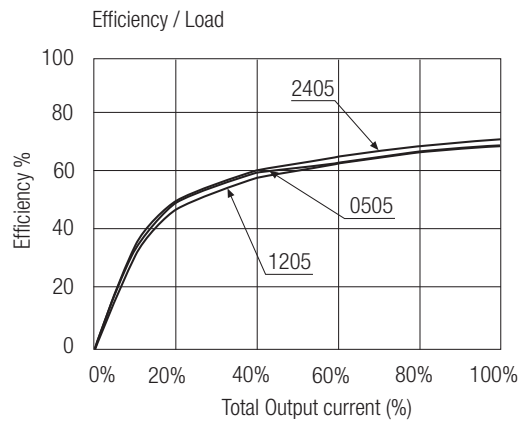
# RAZ

## Derating-Graph (Ambient Temperature)



Refer to Application Notes

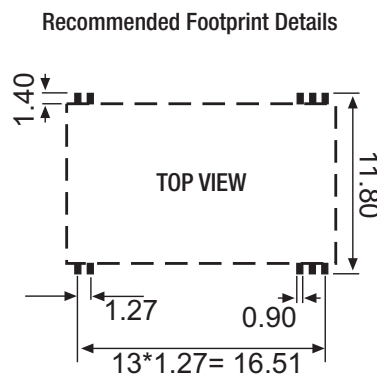
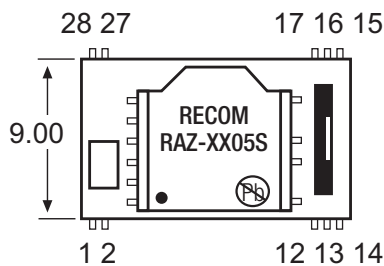
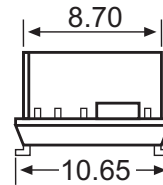
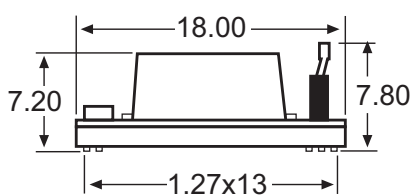
**Typical Characteristics**



Note

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.

**Package Style and Pinning**



Pin Connections

Pin #	Function
1,2	+Vin
12,15~17,28	NC
13	-Vout
14	+Vout
27	-Vin

NC = No Connection

Unit: mm  
Tolerance: ± 0.25 mm