

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

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	$\pm 10\%$ max.	
Output Voltage Accuracy	-1% typ., $\pm 5\%$ 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 $+85^\circ\text{C}$	
Storage Temperature	-55°C to $+125^\circ\text{C}$	
Relative Humidity	95% RH	
Package Weight	1.6g	
MTBF ($+25^\circ\text{C}$)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F 3914 x 10^3 hours
MTBF ($+85^\circ\text{C}$)		using MIL-HDBK 217F 855 x 10^3 hours

Certifications

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

**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.

ECONOLINE

DC/DC-Converter

RECOM

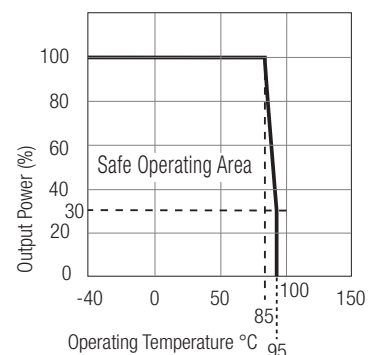
1 Watt SMD Single Output



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

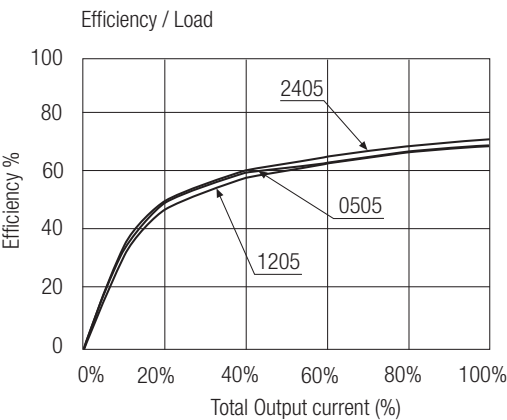
RAZ

Derating-Graph (Ambient Temperature)



Refer to Application Notes

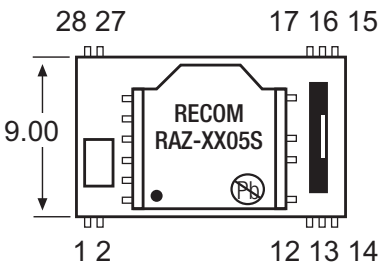
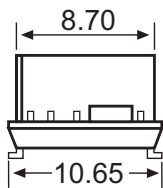
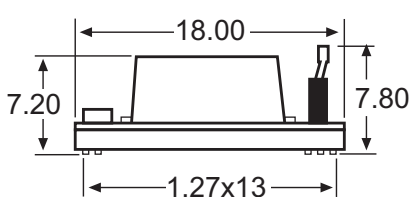
Typical Characteristics



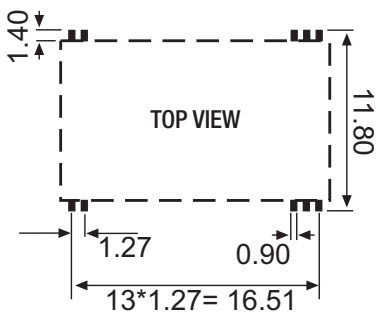
Note

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



Recommended Footprint Details



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