



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.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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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# 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

## 1 Watt SMD Single Output



### Specifications (measured at T<sub>A</sub> = 25°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 (Vin=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	(Viso=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

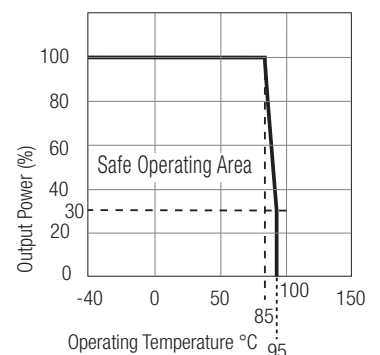
#### Certifications

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

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

# RAZ

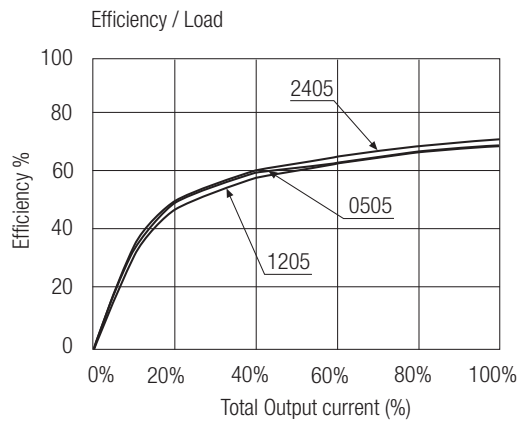
## Derating-Graph (Ambient Temperature)



Refer to Application Notes

\*\*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.

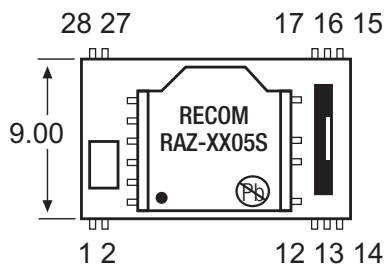
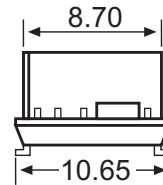
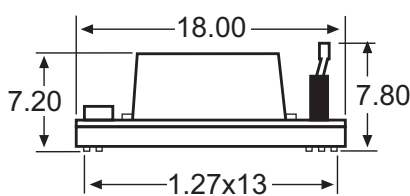
**Typical Characteristics**



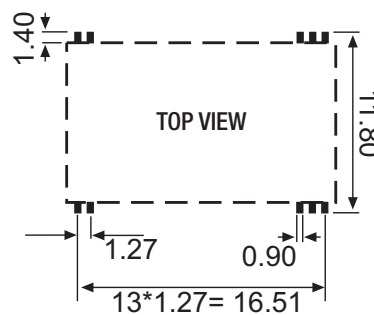
Note

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