

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 minute)			1000 VDC
	(tested for 1 second)			1250 VDC
Isolation Voltage	H-Suffix	(tested for 1 minute)		2000 VDC
	H-Suffix	(tested for 1 second)		2500 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 ³ hours
MTBF (+85°C)		using MIL-HDBK 217F		855 x 10 ³ hours
Certifications				
EN General Safety				EN60950-1, 2nd Edition
EN Medical Safety	Report: MDD1112018 + RM1112018		IEC/EN 60601-1 3rd Edition	
	Medical Report + ISO14971 Risk Assessment			

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.

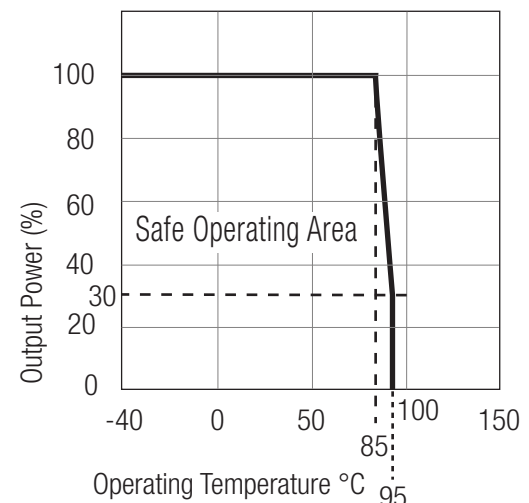
1 Watt SMD Single Output



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

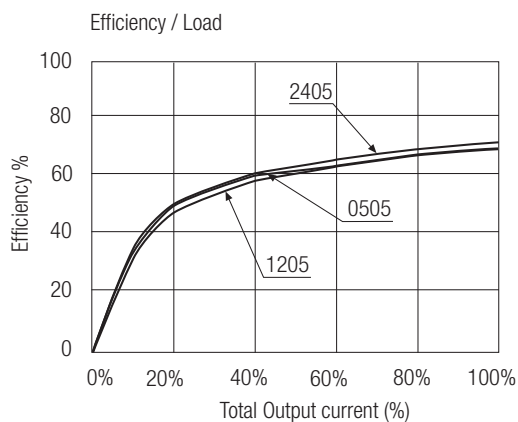
RAZ

Derating-Graph (Ambient Temperature)

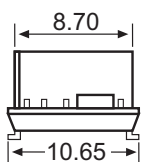
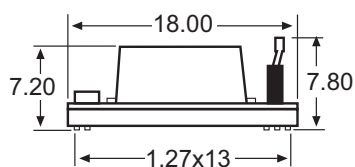


Refer to Application Notes

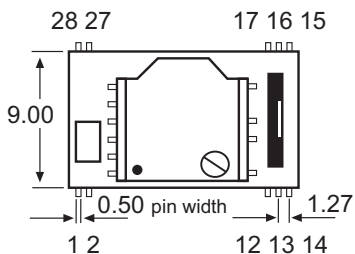
Typical Characteristics



Package Style and Pinning



3rd angle projection



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