

Features

- 1:1 input range
- Low cost 1W converter
- Efficiency up to 76%
- -40°C to +85°C operating temperature range
- EN/IEC/UL60950-1 certified

Unregulated Converters



RBE

**1 Watt
SIP7
Single Output**



Description

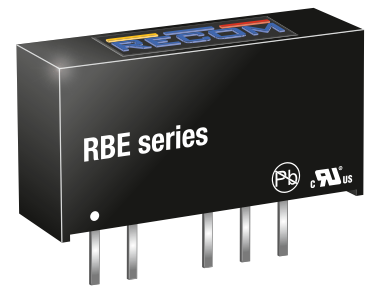
The RBE-0505S is a low cost 1W DC/DC converters in a standard SIP7 footprint. This makes it suitable for price sensitive industrial, test and measurement and high volume applications. The RBE converter is pin-compatible with the RB converter series, but offers only the most popular 0505 voltage combination, offering a simple way to cost-down an existing application. The RBE is fully certified to EN/IEC/UL/CSA/EAC and comes with a 3 year warranty.

Selection Guide

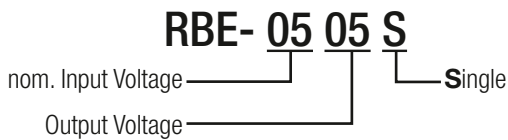
Part Number	Input Voltage [VDC]	Output Voltage [VDC]	Output Current [mA]	Efficiency ⁽¹⁾ max. [%]
RBE-0505S	5	5	200	76

Notes:

Note1: Efficiency is tested at nominal input and full load at +25°C ambient



Model Numbering



Ordering Examples:

RBE-0505S: 5VDC Input Voltage, 5VDC Output Voltage, Single Output



UL60950-1 certified
CAN/CSA-C22.2 No 60950-1 certified
EN60950-1 certified
IEC60950-1 certified

Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up otherwise stated)

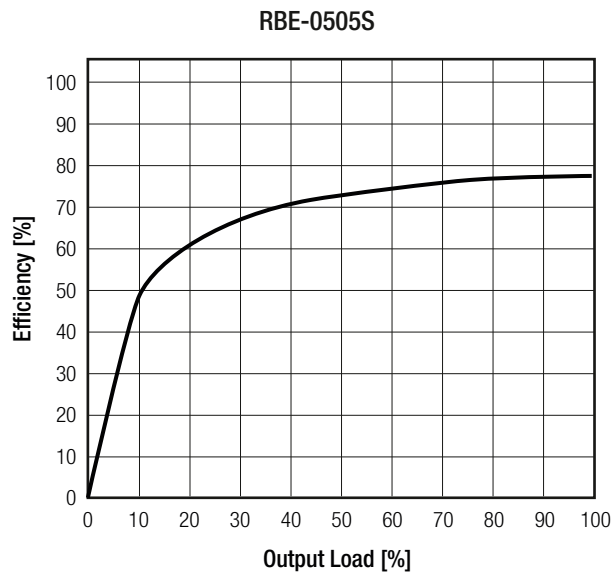
BASIC CHARACTERISTICS

Parameter	Condition	Min.	Typ.	Max.
Input Voltage Range			±10%	
Minimum Load ⁽²⁾		0%		
Internal Operating Frequency		50kHz	82kHz	105kHz
Output Ripple and Noise	20MHz BW		52mVp-p	100mVp-p

Notes:

Note2: Operation below 10% load will not harm the converter, but specifications may not be met

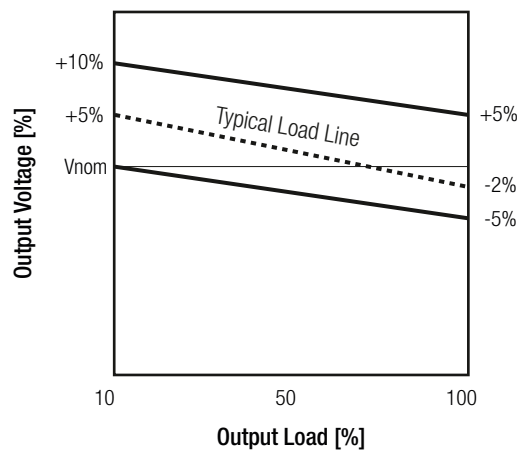
Efficiency vs. Load



REGULATIONS

Parameter	Condition	Value
Output Accuracy		-2% typ. / ±5.0% max.
Line Regulation	low line to high line	±1.2% typ.
Load Regulation	20% to 100% load	10.0% typ.

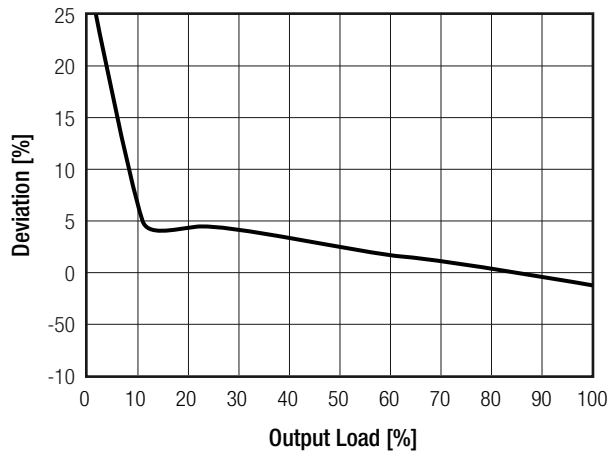
Tolerance Envelope



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Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up otherwise stated)

Deviation vs. Load



PROTECTIONS

Parameter	Type		Value
Short Circuit Protection (SCP)			1 second
Isolation Voltage ⁽³⁾	I/P to O/P	tested for 1 second rated for 1 minute	1kVDC 500VAC
Isolation Resistance			1GΩ min.
Isolation Capacitance			75pF max.
Insulation Grade			basic

Notes:

Note3: For repeat Hi-Pot testing, reduce the time and/or the test voltage

Note4: Refer to local wiring regulations if input over-current protection is also required. Recommended fuse: T1A slow blow type

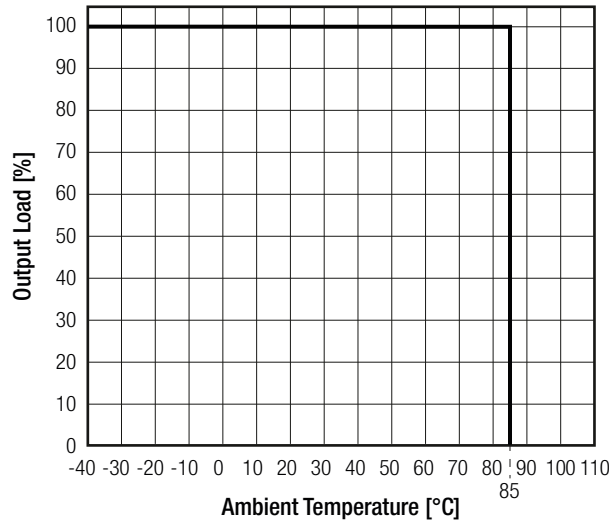
ENVIRONMENTAL

Parameter	Condition		Value
Operating Temperature Range	full load (see graph)		-40°C to + 85°C
Operating Altitude			2000m
Operating Humidity	non-condensing		95% RH max.
Pollution Degree			PD2
MTBF	according to MIL-HDBK-217F, G.B.	+25°C +85°C	2400 x 10 ³ hours 650 x 10 ³ hours

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Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up otherwise stated)

Derating Graph



SAFETY AND CERTIFICATIONS

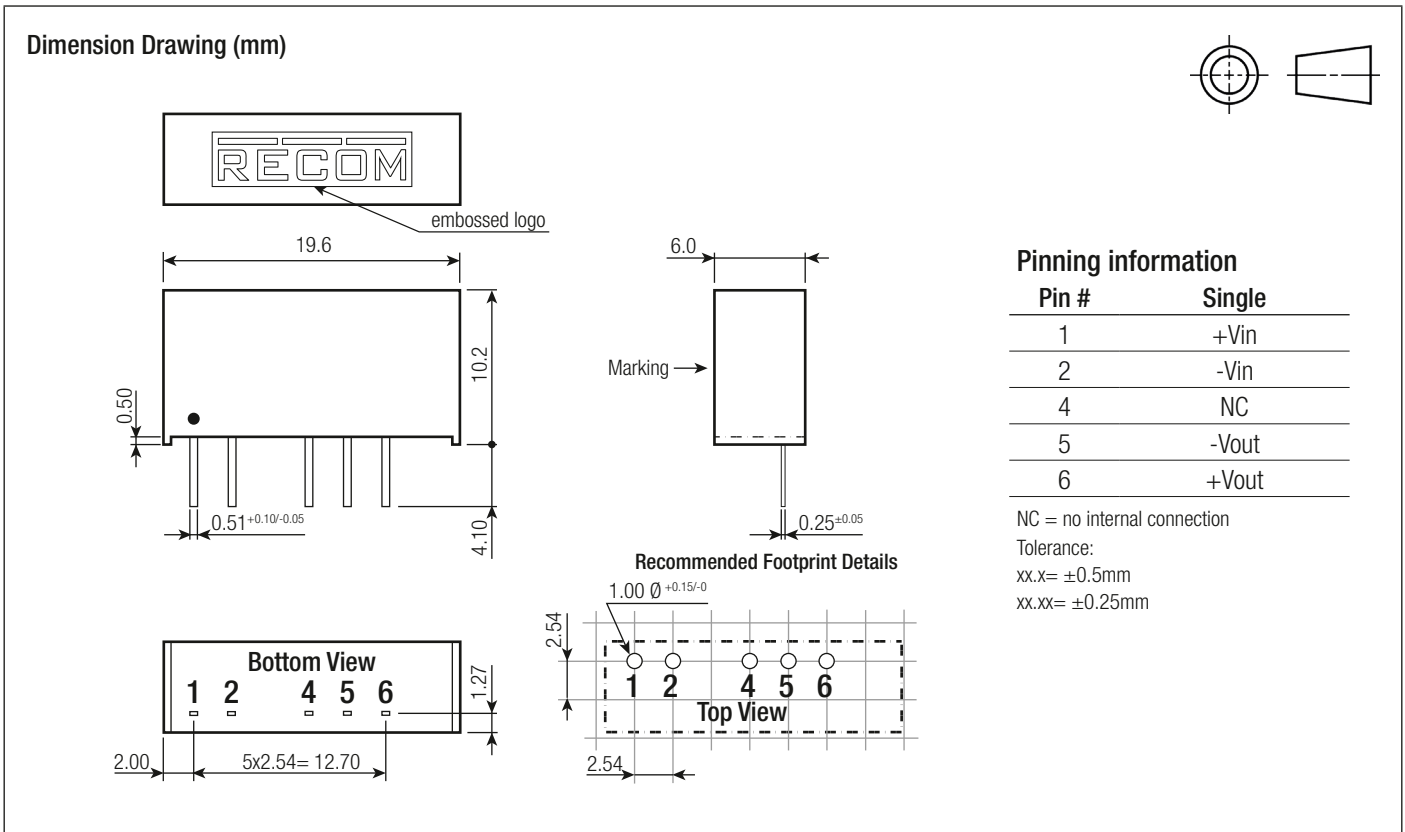
Certificate Type (Safety)	Report / File Number	Standard
Information Technology Equipment, General Requirements for Safety	1602031	IEC60950-1:2005, 2nd Edition + A2:2013 EN60950-1:2006 + A2:2013
Information Technology Equipment, General Requirements for Safety	E358085-A4-UL	UL60950-1, 2nd Edition:2007 CAN/CSA C22.2 No. 60950-1-03, 2nd Edition:2007
EAC	RU-AT.49.09571	TP TC 004/2011
RoHs 2+		RoHS-2011/65/EU + AM-2015/863

DIMENSION AND PHYSICAL CHARACTERISTICS

Parameter	Type	Value
Material	case potting PCB	non-conductive black plastic (UL94 V-0) epoxy, (UL94 V-0) FR4, (UL94 V-0)
Dimension (LxWxH)		19.6 x 6.0 x 10.2mm
Weight		2.2g typ.

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Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up otherwise stated)



PACKAGING INFORMATION

Parameter	Type	Value
Packaging Dimension (LxWxH)	tube	520.0 x 16.0 x 9.0mm
Packaging Quantity	tube	25pcs
Storage Temperature Range		-55°C to +125°C
Storage Humidity		95% RH max.

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