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Features

Unregulated Converters

- Low cost 1W converter
- 1:1 input voltage range
- SIP7 package
- Efficiency up to 76%
- -40°C to +85°C operating temperature range
- EN/IEC/UL/CSA 60950-1 certified

RECOM
DC/DC Converter

REE

1 Watt SIP7 Single Output

UL60950-1 certified
CAN/CSA-C22.2 No 60950-1 certified
IEC/EN60950-1 certified
EN55032 compliant

Description

The REE-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 REE converter is pin-compatible with the RE converter series, but offers only the most popular 0505 voltage combination, offering a simple way to cost-down an existing application. The REE is certified to IEC/EN/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. [%]
REE-0505S	5	5	200	76

Notes:

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

Model Numbering

REE-0505S

- Input Voltage
- Output Voltage
- Single

Specifications (measured @ Ta= 25°C, nominal input voltage, full load and after warm-up)

BASIC CHARACTERISTICS				
Parameter	**Condition**	**Min.**	**Typ.**	**Max.**
Input Voltage Range			±10%	
Input Surge Voltage	100µs	-0.65VDC		9VDC
Input Current	full load		250mA	
Quiescent Current	nom. Vin= 5VDC		25mA	30mA
Minimum Load (2)		0%		
Internal Operating Frequency		50kHz	82kHz	105kHz
Output Ripple and Noise	20MHz BW		55mVp-p	100mVp-p
Reflected Back Ripple Current	20MHz BW		20mAp-p	

Notes:

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

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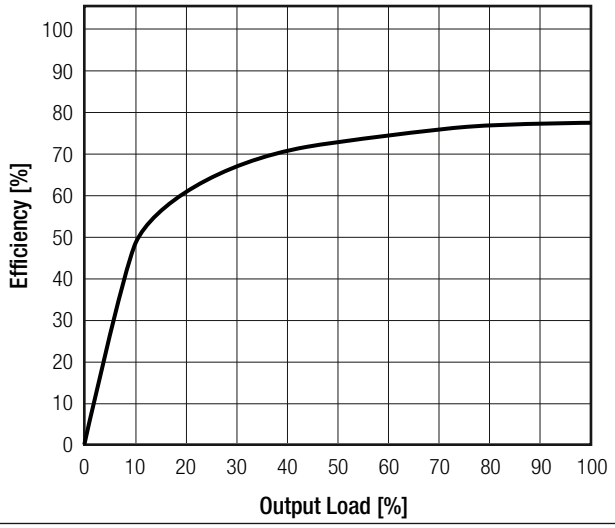
Specifications (measured @ Ta= 25°C, nominal input voltage, full load and after warm-up)

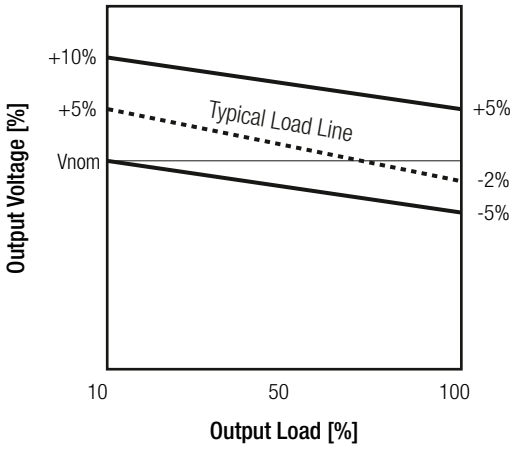
Efficiency vs. Load



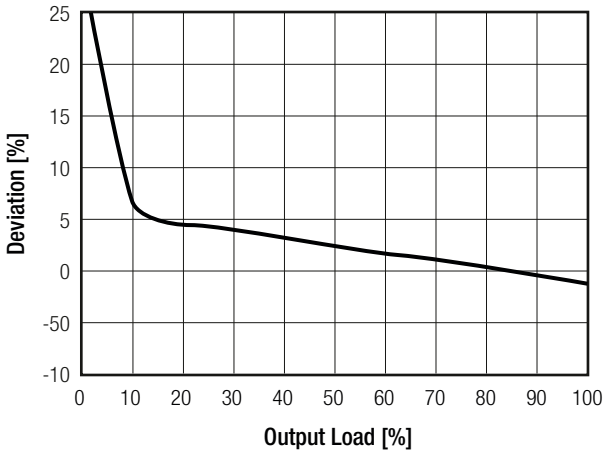
REGULATIONS

Parameter	Condition	Values
Output Accuracy		-2% typ. / ±5.0% max.
Line Regulation	low line to high line, full load	±1.2% of 1.0% Vin typ.
Load Regulation	20% to 100%	10% max.

Tolerance Envelope



Deviation vs. Load



Specifications (measured @ Ta= 25°C, nominal input voltage, full load and after warm-up)

PROTECTIONS

Parameter	Condition		Value
Short Circuit Protection (SCP)	below 100mΩ		1 second
Isolation Voltage [3]	I/P to O/P	tested for 1 second rated for 1 minute	1kVDC 500VAC/60Hz
Isolation Resistance			1GΩ min.
Isolation Capacitance			75pF max.
Insulation Grade			basic

Notes:

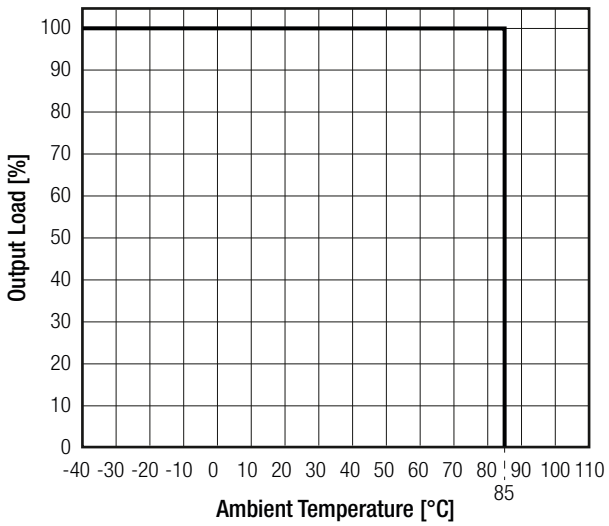
Note3: For repeat Hi-Pot testing, reduce the time and/or the test voltage

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 derating (see graph)		-40°C to +85°C
Maximum Case Temperature			+105°C
Temeperature Coefficient			±0.05%/°C
Thermal Impedance	0.1m/s, horizontal direction		40°C/W
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

Derating Graph



Specifications (measured @ Ta= 25°C, nominal input voltage, full load and after warm-up)

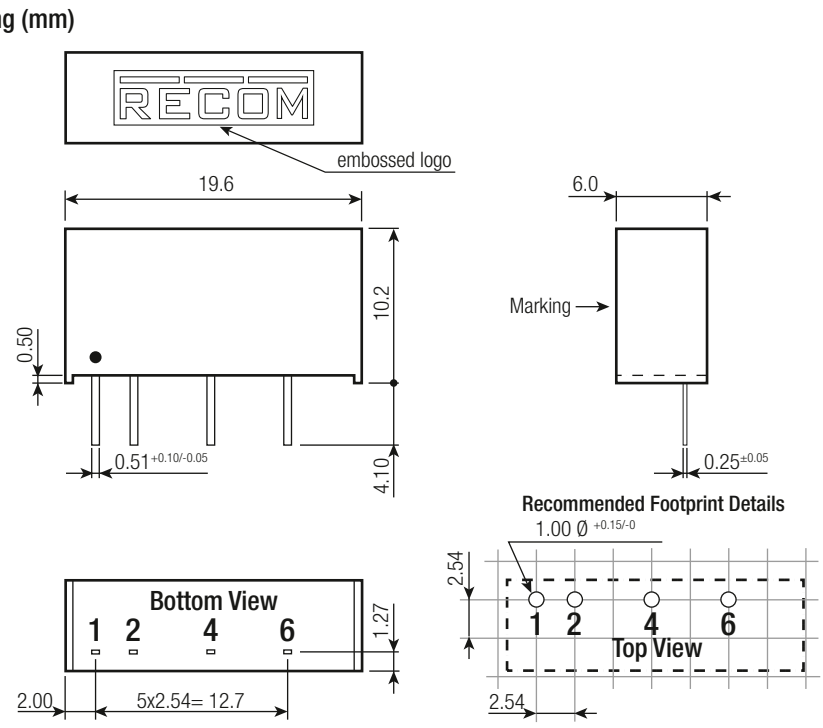
SAFETY AND CERTIFICATIONS

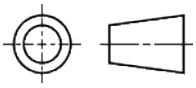
Certificate Type (Safety)	Report/File Number	Standard
Information Technology Equipment, General Requirements for Safety	E358085-A4	UL60950-1, 2nd Edition, 2007 CSA C22.2 No. 60950-1-07, 2nd Edition, 2007
Information Technology Equipment, General Requirements for Safety	1602031	IEC60950-1:2005, 2nd Edition + A2:2013 EN60950-1:2006 + A2:2013
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	non-conductive black plastic (UL94 V-0) epoxy (UL94 V-0)
Dimension (LxWxH)		19.6 x 6.0 x 10.2mm
Weight		2.2g typ.

Dimension Drawing (mm)





Pin Connections

Pin #	Function
1	+Vin
2	-Vin
4	-Vout
6	+Vout

Tolerance: xx.x= ±0.5mm
xx.xx= ±0.25mm

PACKAGING INFORMATION

Parameter	Type	Value
Packaging Dimension (LxWxH)	tube	520.0 x 16.0 x 9.0mm
Packaging Quantity		25pcs
Storage Temperature Range		-55°C to +125°C
Storage Humidity		5% - 95%, RH