Features

Unregulated Converters

- SMD Case Style
- Tape and Reel Packaging
- UL-60950-1 Certified
- High Operating Temperature Range from -40°C to 100°C
- Efficiency up to 76%
- 2kVDC isolation

RECOM
DC/DC Converter

R1SE/H2

1 Watt SMD Single Output

3 YEAR warranty

Description

The R1SE/H2 series are 1W unregulated DC/DC converters that are lower cost than equivalent converters. The benefits of high volume production and semi-automatic assembly allow for a lower selling price without sacrificing our high quality standards. They are UL certified for safety, offer reasonable efficiency and still meet the full industrial operating temperature range of -40° to +100°C. All converters are 100% tested in production and carry our 3-year warranty.

Selection Guide

Part Number	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency typ. (%)	max. Capacitive Load (µF)
R1SE-3.305/H2-R	3.3	5	200	75	1000
R1SE-0505/H2-R	5	5	200	75	1000
R1SE-0512/H2-R	5	12	84	76	330
R1SE-0515/H2-R	5	15	66	76	220
R1SE-1205/H2-R	12	5	200	73	1000
R1SE-1505/H2-R	15	5	200	74	1000

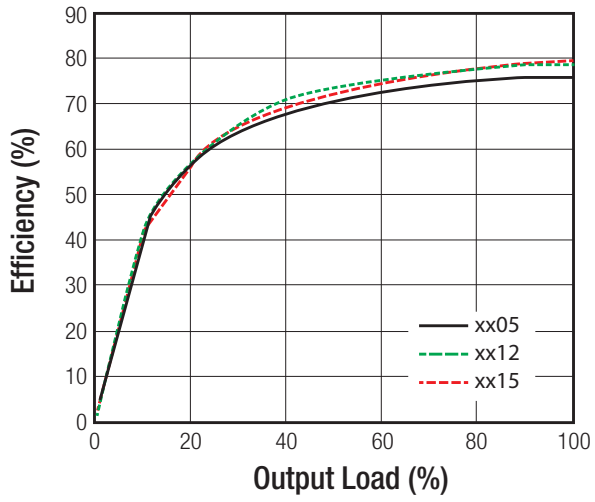




Specifications (measured at T_A= 25°C, nominal input voltage and rated current unless otherwise specified)

BASIC CHARACTERISTICS				
Parameter	**Condition**	**Min.**	**Typ.**	**Max.**
Input Voltage Range				±10%
Operating Frequency	Vin nominal	20kHz	60kHz	100kHz
Output Ripple and Noise	20MHz bandwidth		50mVp-p	100mVp-p

Efficiency vs. Load



UL-60950-1 Certified

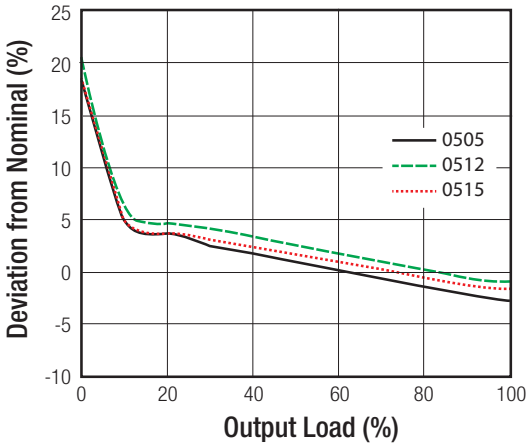
Refer to Applications Notes

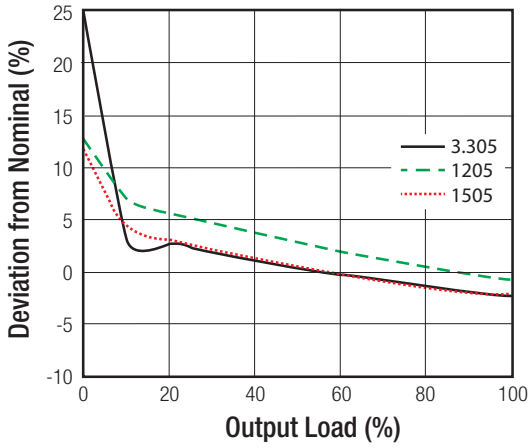
Specifications (measured at T_A= 25°C, nominal input voltage and rated current unless otherwise specified)

REGULATIONS

Parameter	Condition	Values
Output Voltage Accuracy		-2% typ. / ±5% max.
Line Voltage Regulation	low line to high line, max. load	±1% typ. / ±1.5% max.
Load Voltage Regulation	20% - 100% load	±6% typ. / ±10% max.

Deviation vs. Load





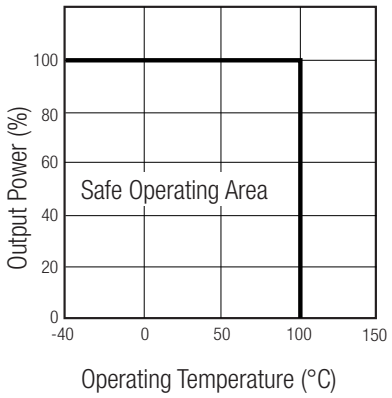
PROTECTIONS

Parameter	Condition	Value
Isolation Voltage		2kVDC / 1 second
Isolation Capacitance		75pF max.
Isolation Resistance	Viso= 500V	10GΩ min.

ENVIRONMENTAL

Parameter	Condition	Value
Operating Temperature Range		-40°C to +100°C
Storage Temperature Range		-55°C to +125°C
Humidity	non-condensing	95% RH max.
MTBF (+25°C) (+85°C)	according to MIL-HDBK-217F, full load	2992 x 10^3 hours 955 x 10^3 hours

Derating Graph

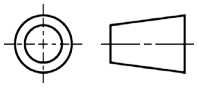


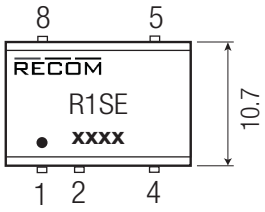
Specifications (measured at T_A= 25°C, nominal input voltage, full load and after warm-up)

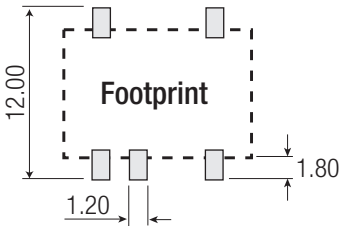
SAFETY AND CERTIFICATIONS		
Certificate Type	**Report / File Number**	**Standard**
UL General Safety	E358085-A2	UL-60950-1, 2nd Edition CAN/CSA C22.2 No. 60950-1-07, 2nd Edition

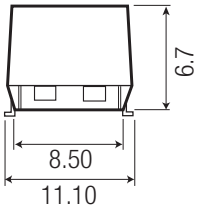
DIMENSIONS and PHYSICAL CHARACTERISTICS		
Parameter	**Type**	**Value**
Material	Case	non-conductive black plastic
Package Dimensions (LxWxH)		12.75 x 10.7 x 6.7mm
Package Weight		1.0g
Packaging Quantity	Tape and Reel	500pcs
Tape and Reel Width		24mm

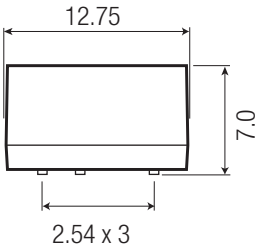
Mechanical Dimensions (mm)

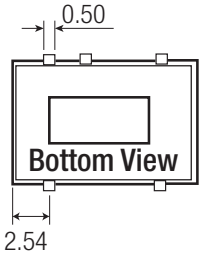












Pin Connections

Pin #	Function
1	-Vin
2	+Vin
4	-Vout
5	+Vout
8	NC

Tolerance: xx.x= ±0.50mm
xx.xx= ±0.25mm
NC: no connection

The product information and specifications are subject to change without prior notice. All products are designed for non-safety critical commercial and industrial applications.
The buyer agrees to implement safeguards that anticipate the consequences of any failures that might cause harm, loss of life and/or property damage.