



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!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



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

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 ⁽¹⁾ (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

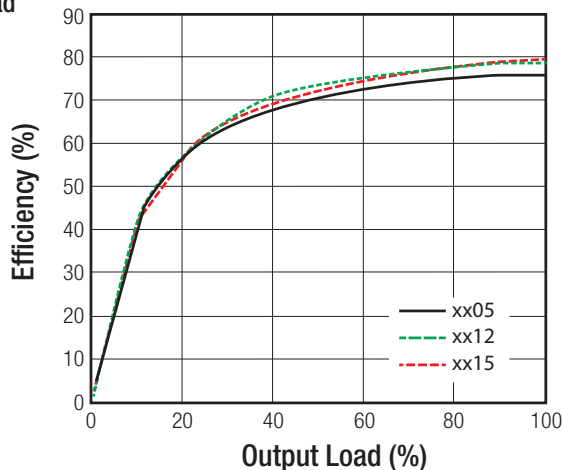
Notes:

Note1: Max. capacitive load is defined as the capacitive load that will allow start up in under 1 second without damage to the converter.

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 Range	V _{in} nominal	20kHz	60kHz	100kHz
Output Ripple and Noise ⁽²⁾	20MHz BW		50mVp-p	100mVp-p

Efficiency vs. Load



Notes:

Note2: Measurements are made with a 100nF MLCC across output. (low ESR)

R1SE/H2

1 Watt
SMD
Single Output



UL
E358085

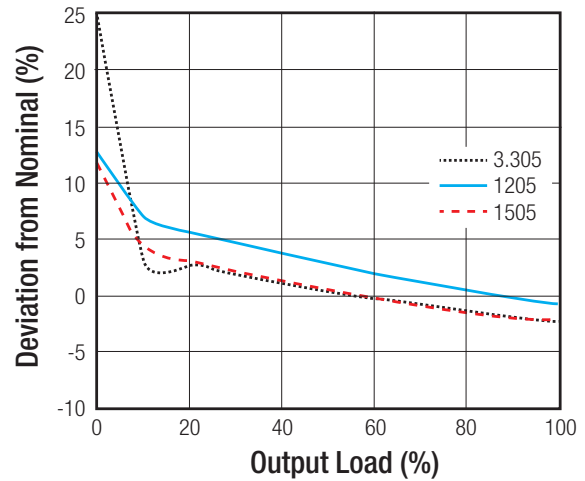
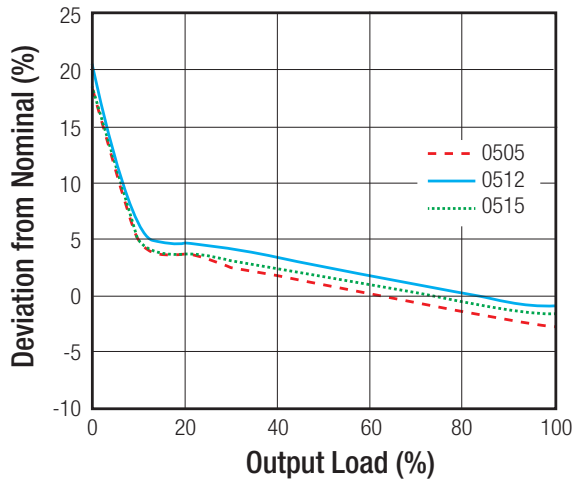
UL-60950-1 Certified

Refer to Applications Notes

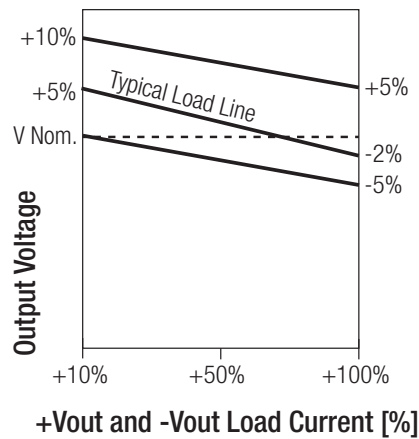
Specifications (measured at $T_a = 25^\circ\text{C}$, nominal input voltage and rated current unless otherwise specified)

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

Deviation vs. Load



Tolerance Envelope



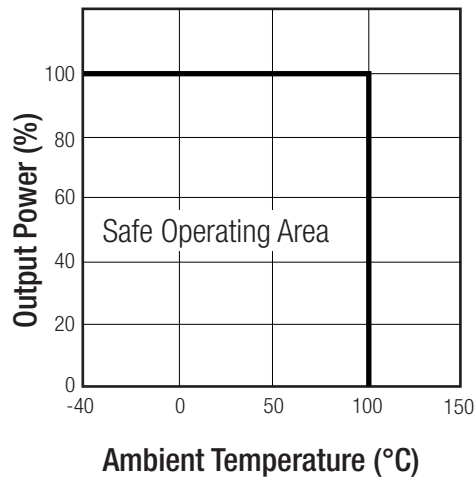
PROTECTIONS		
Parameter	Condition	Value
Isolation Voltage		2kVDC / 1 second
Isolation Capacitance		75pF max.
Isolation Resistance	Viso= 500V	10G Ω min.

ENVIRONMENTAL		
Parameter	Condition	Value
Operating Temperature Range		-40°C to +100°C
Operating 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

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Specifications (measured at $T_a = 25^\circ\text{C}$, nominal input voltage and rated current unless otherwise specified)

Derating Graph



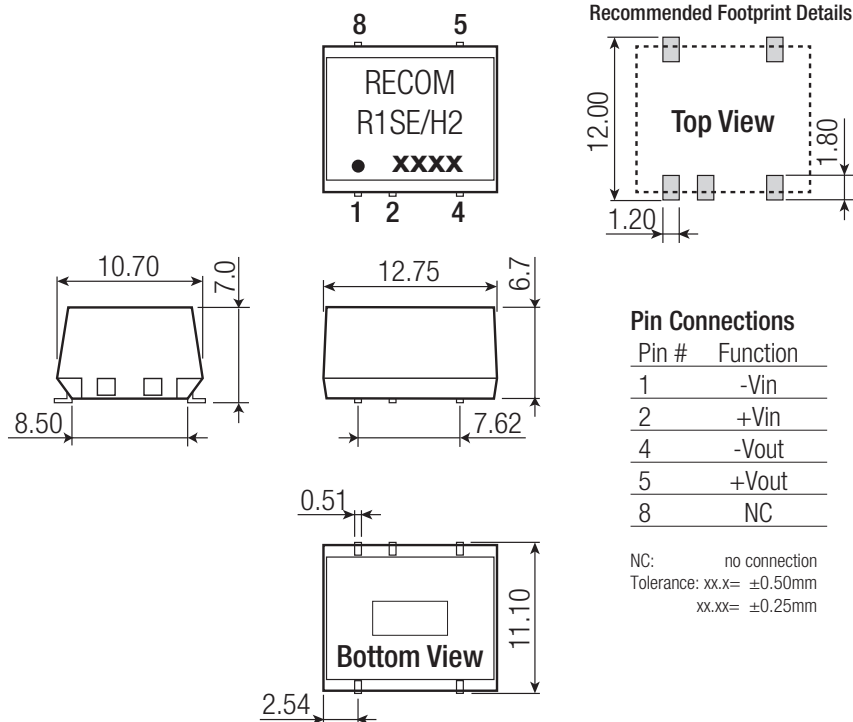
SAFETY AND CERTIFICATIONS

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

DIMENSION and PHYSICAL CHARACTERISTICS

Parameter	Type	Value
Case Material		non-conductive black plastic
Package Dimension (LxWxH)		12.75 x 10.7 x 6.7mm
Package Weight		1.0g

Dimension Drawing (mm)



Specifications (measured at $T_a = 25^\circ\text{C}$, nominal input voltage and rated current unless otherwise specified)

PACKAGING INFORMATION		
Parameter	Type	Value
Storage Temperature Range		-55°C to +125°C
Packaging Dimension (LxWxH)	Tape and Reel	355.0 x 342.0 x 36.0mm
Packaging Quantity		500pcs