



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!



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Features

Unregulated Converters

- Low Cost
- 1:1 Input Voltage Range
- Efficiency up to 81%
- 4kVDC/1 second Isolation
- IEC/EN/UL Certified

RKE/H

**1 Watt
SIP7
Package**



Description

The RKE/H DC/DC converters are typically used in cost sensitive general purpose power isolation and voltage matching applications. Despite their low cost, they are fully specified converters with 4kVdc isolation, industrial operating temperature range of -40°C to +85°C without derating and UL/EN certifications.

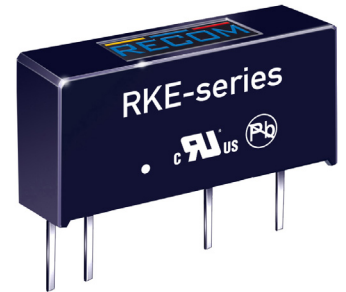
Selection Guide

Part Number	Input Voltage [VDC]	Output Voltage [VDC]	Output Current [mA]	Efficiency typ. ⁽¹⁾ [%]	max. Capacitive Load ⁽²⁾ [µF]
RKE-0505S/H	5	5	200	75	1000
RKE-1205S/H	12	5	200	80	1000
RKE-2405S/H	24	5	200	81	1000

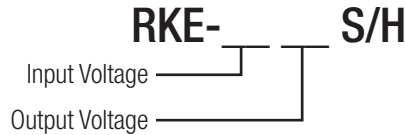
Notes:

Note1: Values at nominal input voltage and full load.

Note2: Test by minimum Vin and constant resistor load.



Model Numbering



Ordering Examples:

RKE-0505S/H, 5Vin and 5Vout, Single Output

RKE-2405S/H, 24Vin and 5Vout, Single Output



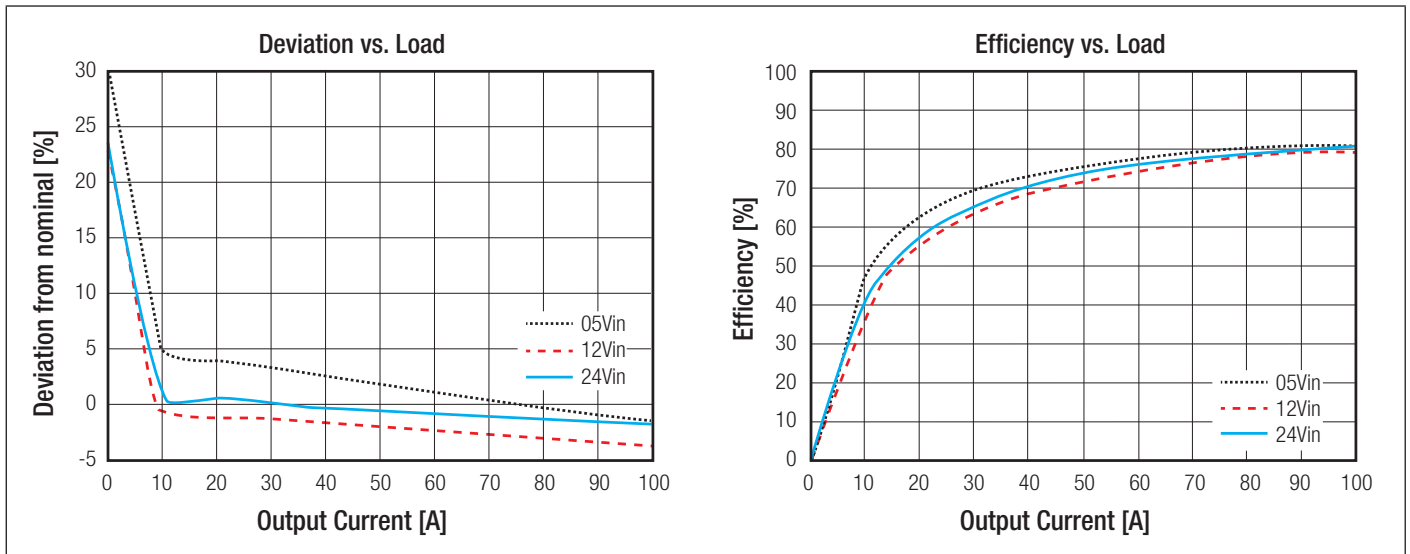
UL60950-1 Certified
EN55022 Compliant

Specifications (measured at ta= 25°C, nominal input voltage, full load, otherwise noted)

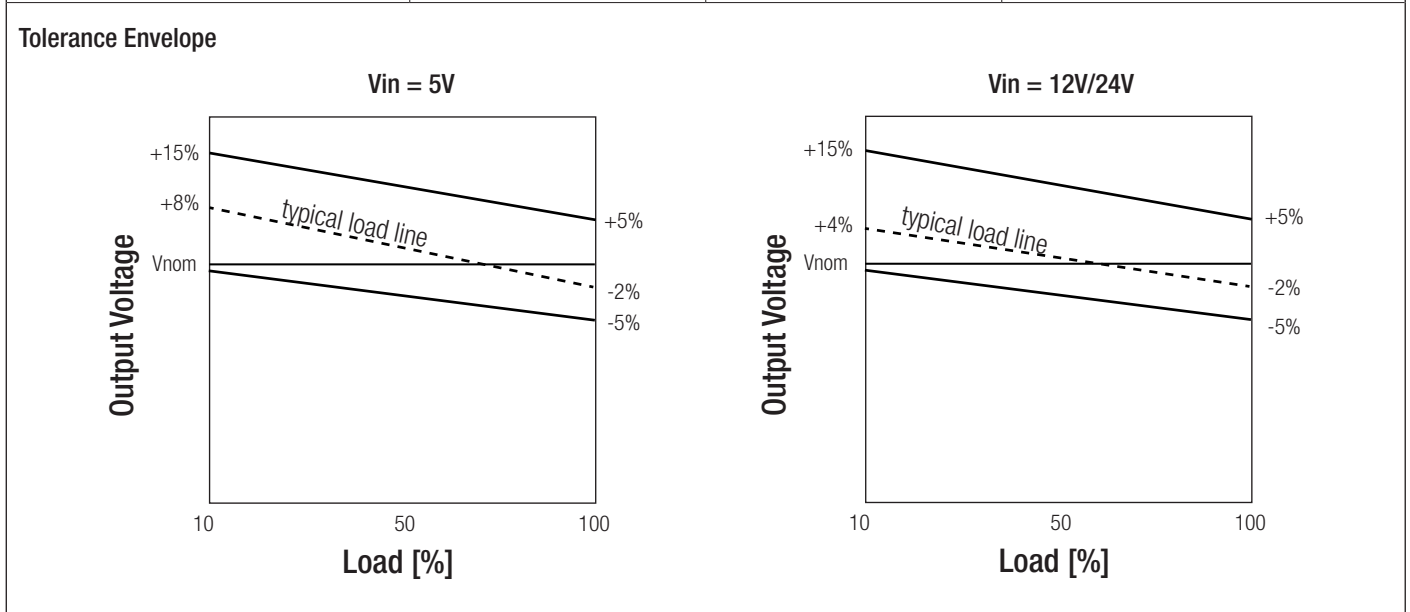
BASIC CHARACTERISTICS				
Parameter	Condition	Min.	Typ.	Max.
Input Voltage Range		-10%		+10%
Input Filter	internal capacitors			
Operating Frequency			80kHz	
Minimum Load		0%		
Output Ripple and Noise	measured with 20MHz bandwidth and a 0.1µF ceramic capacitor		40mVp-p	100mVp-p

continued on next page

Specifications (measured at $t_a = 25^\circ\text{C}$, nominal input voltage, full load, otherwise noted)



REGULATIONS		
Parameter	Condition	Values
Output Voltage Accuracy		$\pm 5\%$ typ.
Line Voltage Regulation	low line to high line	$\pm 1.2\%$ typ. @1% of V_{in}
Load Voltage Regulation	10% to 100% load	$V_{in} = 5V$ 8% typ., 15% max
		$V_{in} = 12V$ 3% typ., 15% max
		$V_{in} = 24V$ 4% typ., 15% max

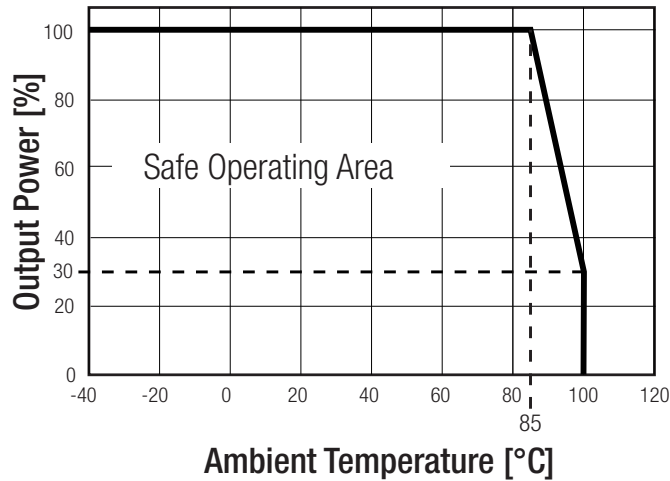


PROTECTIONS		
Parameter	Condition	Value
Isolation Voltage	I/P to O/P	4kVDC / 1sec.
Isolation Capacitance		45pF max.
Isolation Resistance		1G Ω min.

Specifications (measured at $t_a = 25^\circ\text{C}$, nominal input voltage, full load, otherwise noted)

ENVIRONMENTAL		
Parameter	Condition	Value
Operating Temperature Range		-40°C to +85°C
Maximum Case Temperature		+105°C
Operating Humidity	non-condensing	5% to 95% RH
Vibration		MIL-STD-202G
MTBF	MIL-HDBK-217F +25°C +85°C	13200 x 10 ³ hrs 5200 x 10 ³ hrs

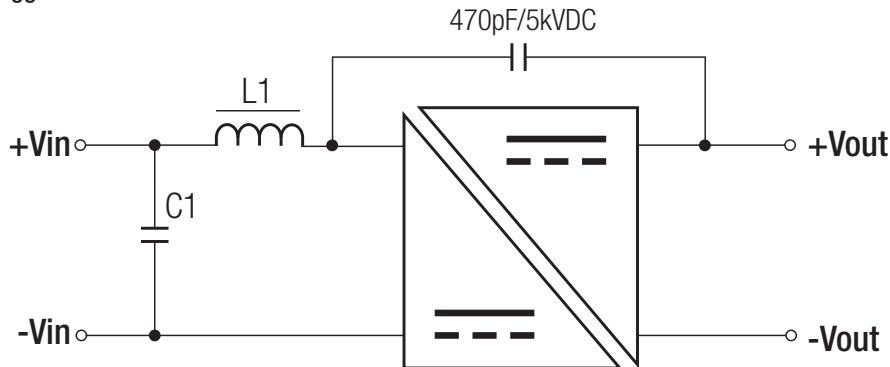
Derating Graph



SAFETY AND CERTIFICATIONS		
Certificate Type	Report / File Number	Standard
IEC/EN General Safety	LVD1602031	IEC/EN60950-1, 2nd Edition, 2013
UL General Safety	E358085-A4	UL60950-1, 2nd Edition, 2007
CAN/CSA General Safety		CSA C22.2 No. 60601-1, 2nd Edition, 2007

EMC Compliance	Condition	Standard / Criterion
EMI conducted and radiated emission	with external filter	EN55022, Class B

EMC Class B Filter suggestion



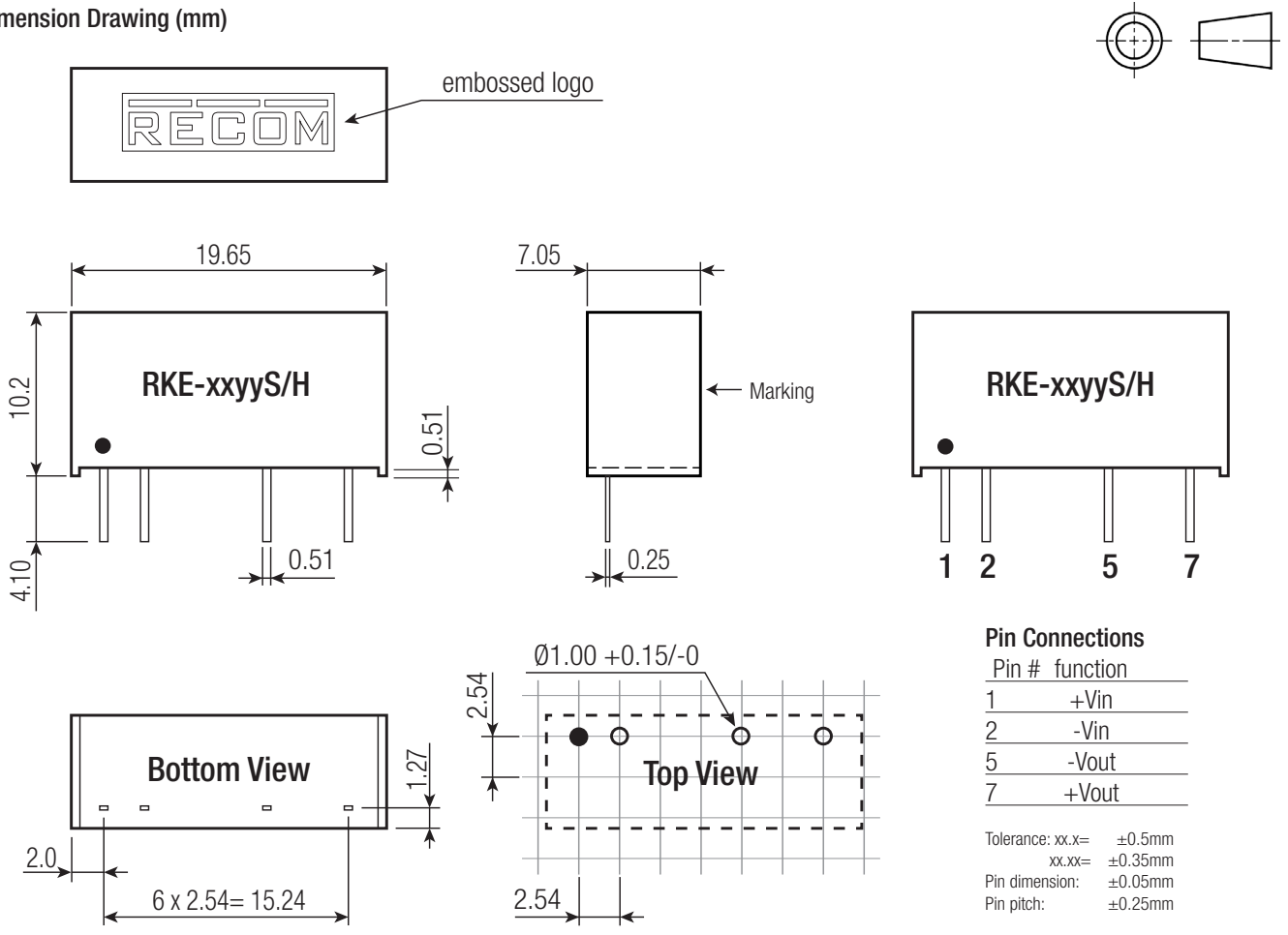
MODEL	C1	L1
RKE-0505S/H	10μF	4.7μH
RKE-1205S/H	4.7μF	22μH
RKE-2405S/H	2.2μF	47μH

Specifications (measured at $t_a = 25^\circ\text{C}$, nominal input voltage, full load, otherwise noted)

DIMENSION and PHYSICAL CHARACTERISTICS

Parameter	Type	Value
Material	Case Potting	black plastic (UL94V-0) Epoxy (UL94V-0)
Package Dimension (LxWxH)		19.65 x 7.05 x 10.2mm
Package Weight		2.7g typ.

Dimension Drawing (mm)



PACKAGING INFORMATION

Packaging Dimension (LxWxH)	Tube	520 x 9.3 x 16.5mm
Packaging Quantity		25pcs
Storage Temperature Range		-55°C to +125°C

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