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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

RECOM
DC/DC Converter

RKE/H

1 Watt SIP7 Package

3 YEAR warranty

Description

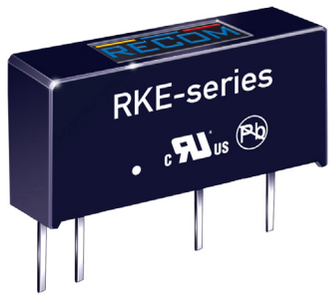
The RKE/H DC/DC converters are typically used in cost sensitive general purpose power isolation and voltage matching applications. Despite their low cost, they are fully specified converters with 4kVdc isolation, industrial operating temperature range of -40°C to +85°C without derating and UL/EN certifications.

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.



UL60950-1 Certified
EN55022 Compliant

Model Numbering

RKE-__ __ S/H

Input Voltage
Output Voltage

Ordering Examples:
RKE-0505S/H, 5Vin and 5Vout, Single Output
RKE-2405S/H, 24Vin and 5Vout, Single Output

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

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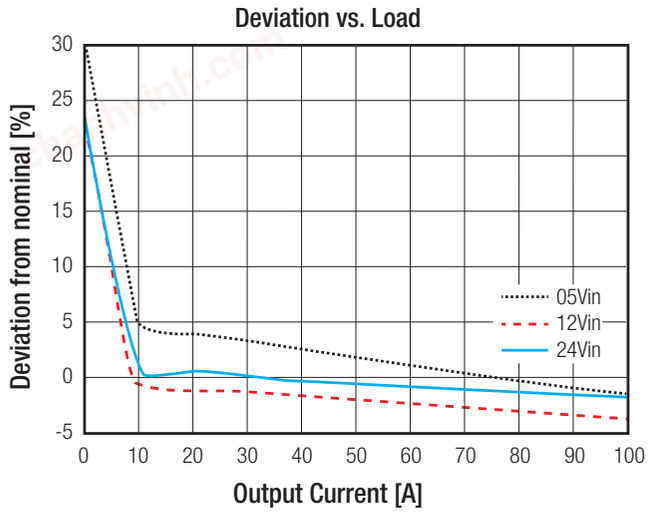
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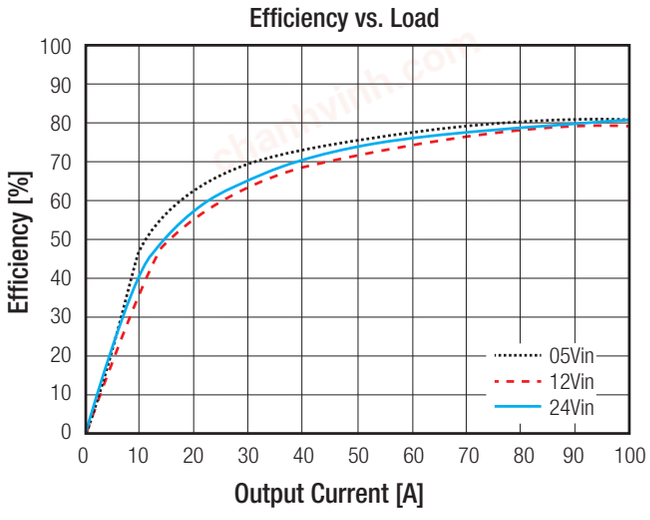
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DC/DC Converter

RKE/H Series

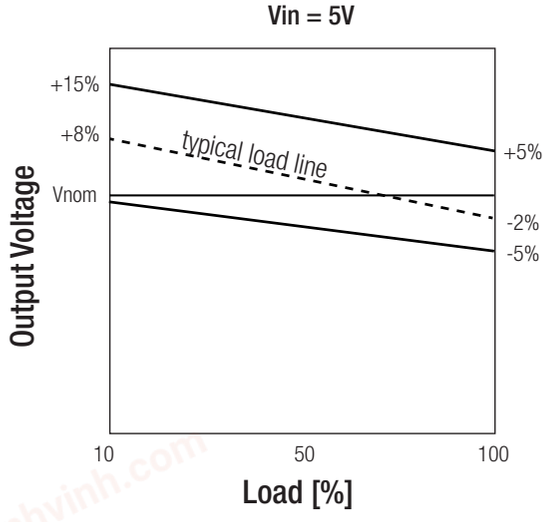
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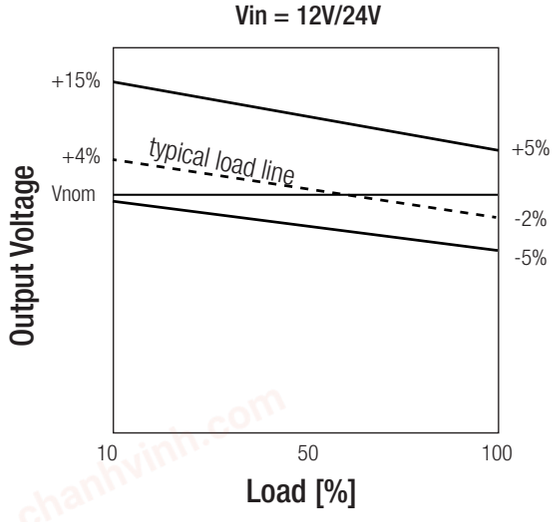




REGULATIONS			
Parameter	**Condition**		**Values**
Output Voltage Accuracy			±5% typ.
Line Voltage Regulation	low line to high line		±1.2% typ. @1% of Vin
Load Voltage Regulation	10% to 100% load	Vin= 5V	8% typ., 15% max
		Vin = 12V	3% typ., 15% max
		Vin = 24V	4% typ., 15% max

Tolerance Envelope





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

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DC/DC Converter

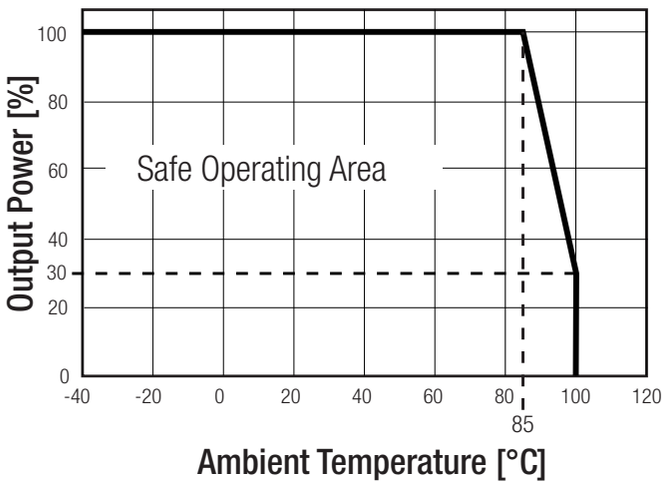
RKE/H Series

Specifications (measured at ta= 25°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 10^3hrs 5200 x 10^3hrs

Derating Graph

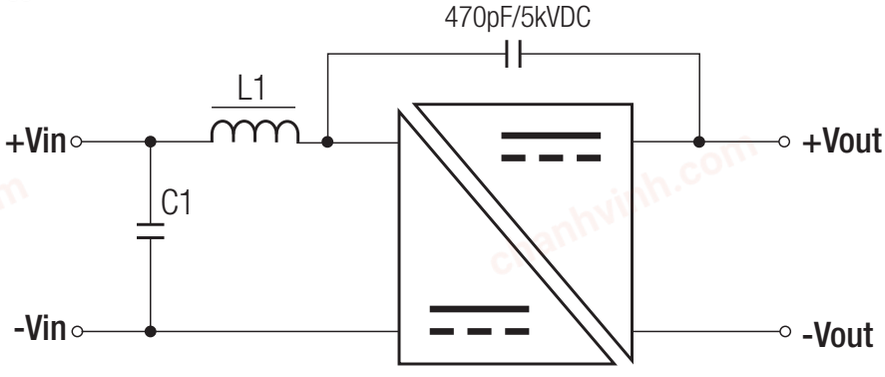


SAFETY AND CERTIFICATIONS

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	C_1	L_1
RKE-0505S/H	10µF	4.7µH
RKE-1205S/H	4.7µF	22µH
RKE-2405S/H	2.2µF	47µH

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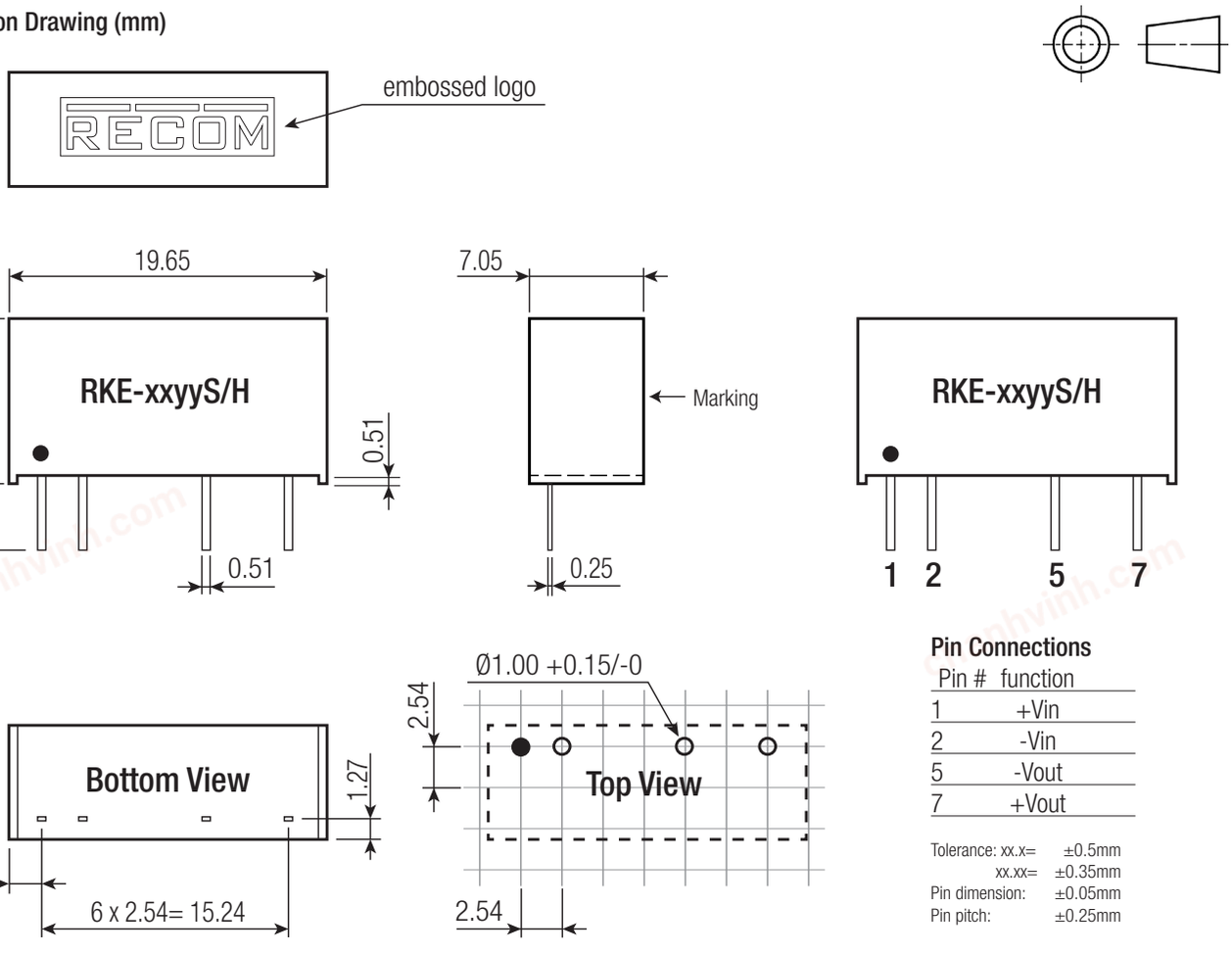
RKE/H Series

Specifications (measured at ta= 25°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)



Pin Connections

Pin #	function
1	+Vin
2	-Vin
5	-Vout
7	+Vout

Tolerance: xx.x= ±0.5mm
xx.xx= ±0.35mm
Pin dimension: ±0.05mm
Pin pitch: ±0.25mm

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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