

Features

Unregulated Converter

- Designed to meet AEC-Q200
- TS-16949 Certified Manufacturing
- 4kVDC / 1 sec High Isolation
- Low Output Ripple
- Wide Operating Temperature Range of -40°C to +105°C
- EN55022 + EN55024, Class B (With External Filter)

Selection Guide

Part Number	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency typ. (%)	Max. Capacitive Load
RKE-0505S/H/Q	5	5	200	80	1000µF

Specifications (measured at $T_A = 25^\circ\text{C}$, nominal input voltage, full load and after warm-up)

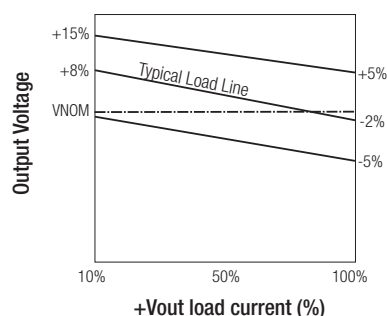
Input Filter	Internal Capacitors	
Input Voltage Range	±10%	
Output Voltage Accuracy	±5%	
Efficiency	100% load and nominal V_{in}	80% typ.
Operating Frequency	100% load and nominal V_{in}	50kHz min / 79kHz typ.
Output Ripple & Noise	@ 20MHz BW and nominal V_{in}	60mVp-p typ. / 100mVp-p max.
Line Voltage Regulation	low line to high line, 100% load	1.2% typ. of 1% V_{in}
Load Voltage Regulation	10% to 100% load, $V_{in} = 5V$	6% min. / 15% typ.
Isolation Voltage	I/P to O/P, tested for 1 second*	4kVDC
Isolation Capacitance	45pF max.	
Isolation Resistance	1GΩ min.	
Operating Temperature Range	full load and nature convection, without derating	-40°C to +105°C
Max. Case Temperature	120°C	
Storage Temperature Range	-55°C to 125°C	
Humidity	5% to 95% max.	
Dimensions (L x W x H)	19.60 x 10.20 x 7.05mm	
Material	Case	UL94V-0 black plastic
	Potting	UL94V-0 Epoxy
Weight	2.7g	
MTBF (+25°C)	using MIL-HDBK 217F	2296 x 10 ³ hours
(+85°C)	using MIL-HDBK 217F	986 x 10 ³ hours

Certifications:

UL General Safety	Report: E358085-A4	UL 60950-1 2nd Edition
ISO/TS-16949	TS 505497	ISO/TS 16949:2009
EMC	without external filter	EN55022 + EN55024, Class A
(design to meet)	with external Filter	EN55022 + EN55024, Class B
AEC-Q200 testing	Thermal Cycling	1000hrs
(design to meet)	Vibration	MIL-STD-202G

*Any data referred to in this datasheet are of indicative nature and based on our practical experience only. For further details, please refer to our Application Notes.

Tolerance Envelope



ECONOLINE

DC/DC-Converter

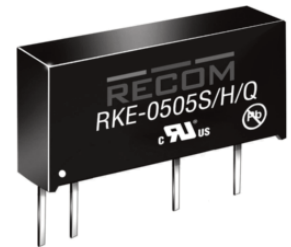
with 3 year Warranty

RECOM

1 Watt

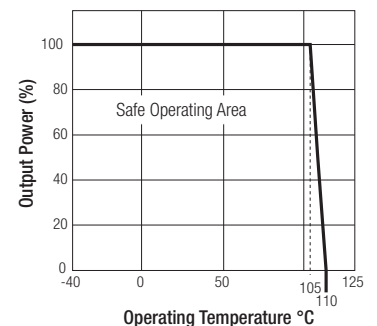
SIP7 Single

Output



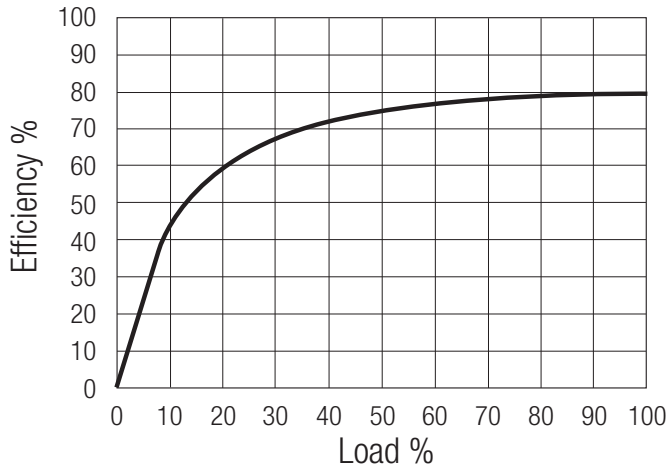
RKE-0505S /H/Q

Derating-Graph (Ambient Temperature)

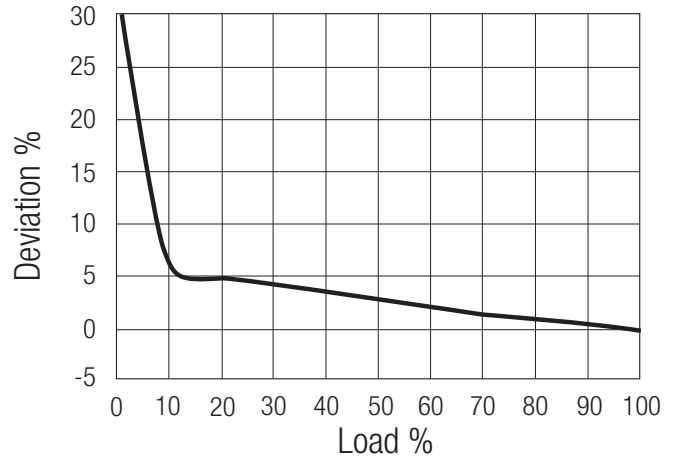


Typical Characteristics

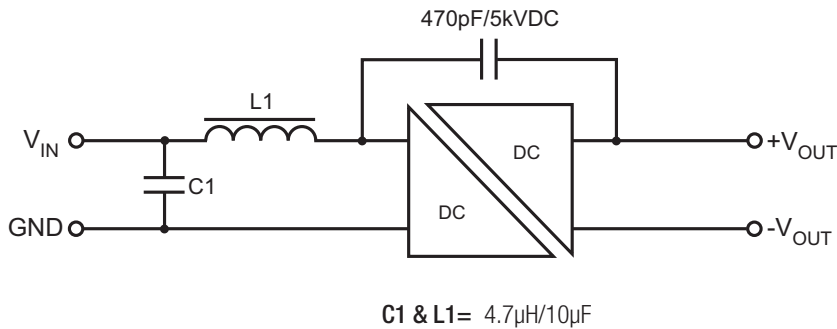
Efficiency vs. Load



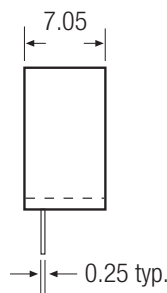
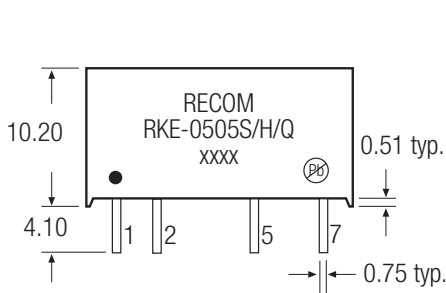
Deviation vs. Load



EMC Filter Suggestion for EN55022 + EN55024 Class B



Package Style and Pinning (mm)

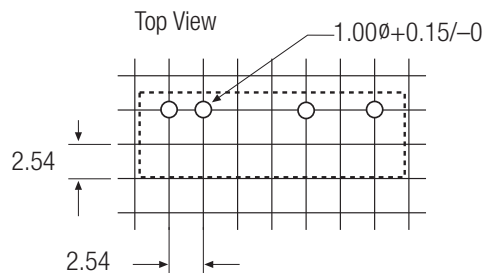
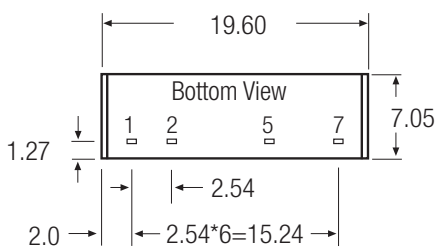


**Pin Connections
RKE-0505S/H**

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

XX.X ± 0.5 mm
XX.XX ± 0.25 mm

Recommended Footprint Details



The product information and specifications are subject to change without prior notice. RECOM products are not authorized for use in safety-critical applications (such as life support) without RECOM's explicit written consent. A safety-critical application is defined as an application where a failure of a RECOM product may reasonably be expected to endanger or cause loss of life, inflict bodily harm or damage property. The buyer shall indemnify and hold harmless RECOM, its affiliated companies and its representatives against any damage claims in connection with the unauthorized use of RECOM products in such safety-critical applications.