Features

Unregulated Converters

- High 6.4kVDC/1s isolation
- Wide operating temperature range from
 - -40°C to +90°C without derating
- High capacitive load capability
- Continuous short circuit protection
- Efficiency up to 80%

Description

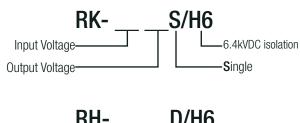
The RK/H6 and RH/H6 series 1W DC/DC converters feature high 6.4kVDC isolation and an extended operating temperature range up to +90°C without derating, yet are lower cost than standard high isolation converters. They are suitable for demanding industrial and high isolation test and measurement applications.

Selection Guide					
Part Number	nom. Input Voltage Range [VDC]	Output Voltage [VDC]	Output Current [mA]	Efficiency typ. [%]	Max. Capacitive Load ⁽¹⁾ [μF]
RK-xx3.3S/H6	5, 12, 15, 24	3.3	303	71-74	1000
RK-xx05S/H6	5, 12, 15, 24	5	200	74-77	1000
RK-xx12S/H6	5, 12, 15, 24	12	84	77-79	220
RK-xx15S/H6	5, 12, 15, 24	15	66	77-80	220
RH-xx3.3D/H6	5, 12, 15, 24	±3.3	±152	73-74	±330
RH-xx05D/H6	5, 12, 15, 24	±5	±100	74-77	±330
RH-xx12D/H6	5, 12, 15, 24	±12	±42	77-80	±100
RH-xx15D/H6	5, 12, 15, 24	±15	±33	78-80	±100

Notes:

Note1: Max. capacitive load is tested at nominal input voltage and full load

Model Numbering





Notes:

Note2: add suffix "K" for Single output or suffix "H" for Dual output

Ordering Examples:

RK-123.3S/H6 = 12VDC Input Voltage, 3.3VDC Output Voltage, Single Output, 6.4kVDC/1s isolation RH-0505D/H6 = 5VDC Input Voltage, 5VDC Output Voltage, Dual Output, 6.4kVDC/1s isolation



RK/H6 & RH/H6

1 Watt SIP7 Single and Dual Output













UL60950-1 certified CAN/CSA C22.2 No. 60950-1-07 certified UL62368-1 certified CAN/CSA C22.2 No. 62368-1-14 certified IEC/EN60950-1 certified IEC/EN62368-1 certified CB report

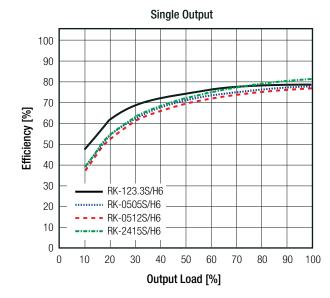


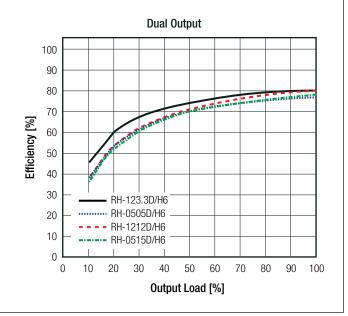
Series

Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated)

BASIC CHARACTERISTICS				
Parameter	Condition	Min.	Тур.	Max.
Internal Input Filter				capacitor
Input Voltage Range			±10%	
Start-up Time			20ms	
Internal Operating Frequency			80kHz	
Minimum Load			0%	
Output Ripple and Noise	20MHz BW		60mVp-p	120mVp-p

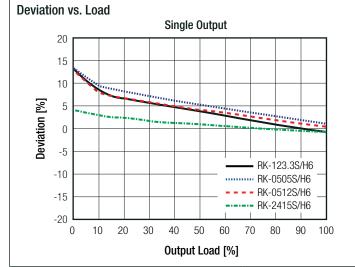
Efficiency vs. Load

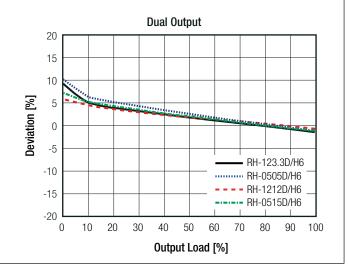




REGULATIONS							
Parameter	Condition	Values					
Output Accuracy		±5.0% max.					
Line Regulation	low line to high line, max. load	±1.2% of 1.0% Vin typ.					
Load Regulation (3)	10% to 100% load	10% max.					

Notes: Note3: Operation below 10% load will not harm the converter, but specifications may not be met







Series

Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated)

PROTECTIONS			
Parameter	Co	ondition	Value
Short Circuit Protection (SCP)			continuous
In all the second (d)	I/P to O/P	tested for 1 second	6.4kVDC
Isolation Voltage (4)	1/F 10 0/F	rated for 1 minute	5.2kVDC
Isolation Resistance			10G Ω min.
Isolation Capacitance			75pF max.
Insulation Grade			functional
	•		

Notes:

Note4: For repeat Hi-Pot testing, reduce the time and/or the test voltage

Note5: Refer to local safety regulations if input over-current protection is also required. Recommended fuse: slow blow type

ENVIRONMENTAL																							
Parameter		Condition							Valu			ue											
Operating Temperature Range			W	ithou	ıt de	ratino	g @ fi	ee ai	ir co	nve	ction	(se	e gr	aph)						-40°C t	to +90	°C
Operating Altitude																						5000)m
Operating Humidity							non	-cond	dens	ing										5%	- 95%	RH m	ax.
MTBF			8	acco	rding	to M	1IL-H[DBK-:	217F	=; G	В.		+2								919 x 1 468 x 1		
Derating Graph		100																					
		100 90																					
		80																					
	_	70																					
	Output Load [%]	60																					
	t Loa	50																					
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Certificate Type	Report / File Number	Standard
Information Technology Equipment - General Requirements for Safety	E224726 A25 III	UL60950-1, 2nd Edition, 2014 CAN/CSA-C22.2 No. 60950-1-07, 2nd Edition, 2014
Audio/Video, information and communication technology equipment - Part1: Safety requirements	E224736-A25-UL E224736-A26-CB-1	UL62368-1, 2nd Edition, 2014 CAN/CSA-C22.2 No. 62368-1-14, 2nd Edition, 2014
Information Technology Equipment, General Requirements for Safety (CB)	E224726 A26 CD 1	IEC60950-1:2005, 2nd Edition + A2:2013
Information Technology Equipment, General Requirements for Safety	EZZ4/30-AZ0-UD-1	EN60950-1:2006 + A2:2013
Audio/video, information and communication technology equipment Part 1: safety requirements (CB)	0FF-4787079973-A-2	IEC62368-1:2014, 2nd Edition
Audio/video, information and communication technology equipment Part 1: safety requirements	UFF-4/0/U/99/3-A-2	EN62368-1:2014



Series

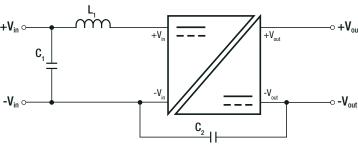
Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated)

Certificate Type	Report / File Number	Standard
EAC	RU-AT.49.09571	TP TC 004/2011
RoHS 2+		RoHS-2011/65/EU + AM-2015/863

EMI Compliance	Condition	Standard / Criterion
Electromagnetic compatibility of multimedia equipment -	with external filter	EN55032, Class B
Emission requirements	(see filter suggestion below)	EN55032, Class A

EMC Filter Suggestion according to EN55032

Single Output



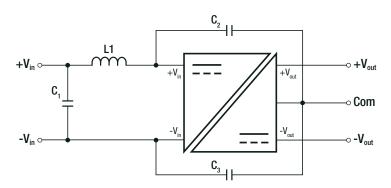
Component List Class A

MODEL	C1	L1	C2 (safety)		
RK-0505S/H6	40.5	501111	N/A		
RK-0515S/H6	10µF 100V MLCC	5.6µH choke RLS-567	IWA		
RK-2405S/H6	TOOV WILCO	nlo-307	100pF		

Component List Class B

MODEL	C1	L1	C2 (safety)
RK-0505S/H6	40.5	00 11 1 1	
RK-0515S/H6	10µF 100V MLCC	22µH choke RLS-226	1nF
RK-2405S/H6	100V WILCO	NL3-220	

Dual Output



Component List Class A

MODEL	C1	L1	C2 (safety)	C3 (safety)
RH-0505D/H6				
RH-1205D/H6	10μF	12µH choke	1.5	NI/A
RH-1212D/H6	100V MLCC	RLS-126	1nF	N/A
RH-2405D/H6				

Component List Class B

MODEL	C1	L1	C2 (safety)	C3 (safety)
RH-0505D/H6	22µF, MLCC			
RH-1205D/H6	10.5	22µH choke	1.5	1,5,5
RH-1212D/H6	10µF 100V MLCC	μF RLS-226 1nF	IIIF	1nF
RH-2405D/H6	TOOV WILCO			

Notes:

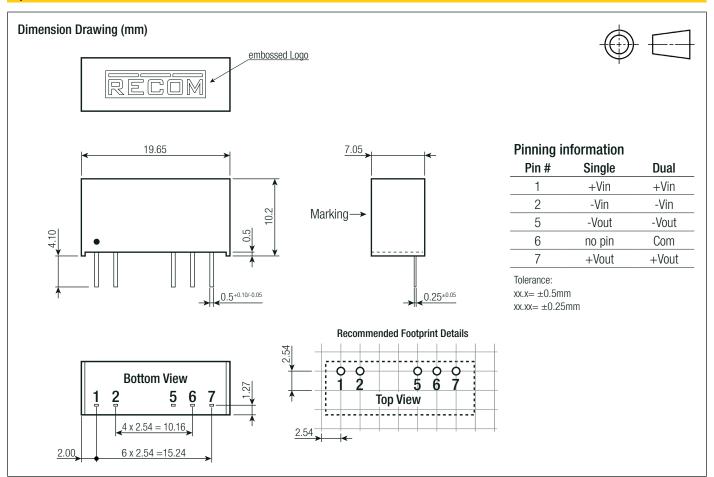
Note6: Filter suggestions are valid for indicated part numbers only. For other part numbers, please contact RECOM tech support for advice

DIMENSION and PHYSICAL CHARACTERISTICS		
Parameter	Туре	Value
Material	case potting	non-conductive black plastic, (UL94 V-0) epoxy, (UL94 V-0)
Dimension (LxWxH)		19.65 x 7.05 x 10.2mm
Weight		2.7g typ.



Series

Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated)



PACKAGING INFORMATION		
Parameter	Туре	Value
Packaging Dimension (LxWxH)	tube	520.0 x 16.5 x 9.0mm
Packaging Quantity	tube	25pcs
Storage Temperature Range		-55°C to +125°C
Storage Humidity	non-condensing	95% RH max.

The product information and specifications may be subject to changes even without prior written notice. The product has been designed for various applications; its suitability lies in the responsibility of each customer. The products are not authorized for use in safety-critical applications without RECOM's explicit written consent. A safety-critical application is an application where a failure may reasonably be expected to endanger or cause loss of life, inflict bodily harm or damage property. The applicant 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.