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

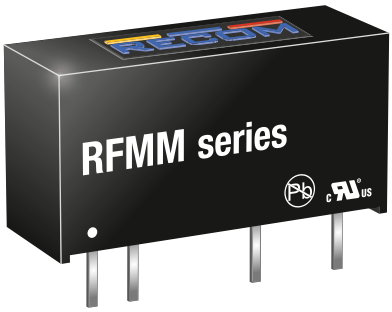
Unregulated Converters

- Low cost 1W converter
- Industry standard pinout
- SIP7 package
- 4kVDC isolation
- Efficiency up to 80%
- Wide operating temperature range -40°C to +85°C
- UL60950-1, CAN/CSA C22.2 No. 60950-1 certified

RECOM
DC/DC Converter

RFMM

1 Watt SIP7 Single Output



UL60950-1 certified
CAN/CSA-C22.2 No 60950-1 certified
EN55032 compliant

Description

The RFMM DC/DC converter is typically used in cost sensitive general purpose power isolation and voltage matching applications. Despite its low cost, it is a fully specified converter 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 (1) max. [%]	Max. Capacitive Load (2) [µF]
RFMM-0505S	5	5	200	80	1000

Notes:

Note1: Efficiency is tested at nominal input and full load at +25°C ambient
Note2: Max. Cap Load is tested at nominal input and full resistive load

Model Numbering

RFMM-0505S

- Input Voltage
- Output Voltage
- **S**ingle

Specifications (measured @ Ta= 25°C, nominal input voltage, full load and after warm-up)

BASIC CHARACTERISTICS				
Parameter	**Condition**	**Min.**	**Typ.**	**Max.**
Internal Input Filter				capacitor
Input Voltage Range			±10%	
Input Surge Voltage	100µs			10VDC
Input Current	max. load		250mA	
Quiescient Current	nom. Vin = 5VDC		25mA	30mA
Minimum Load (3)		0%		
Internal Operating Frequency		50kHz	80kHz	100kHz
Output Ripple and Noise (4)	20MHz BW		40mVp-p	100mVp-p
Reflected Back Ripple Current	20MHz BW, no external choke		20mAp-p	

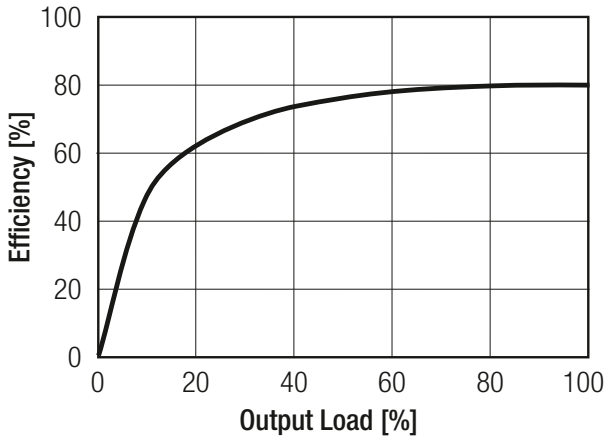
Notes:

Note3: Operation below 10% load won't harm the converter, but specifications may not be met
Note4: Measurements are made with a 100nF MLCC across output (low ESR)

continued on next page

Specifications (measured @ Ta= 25°C, nominal input voltage, full load and after warm-up)

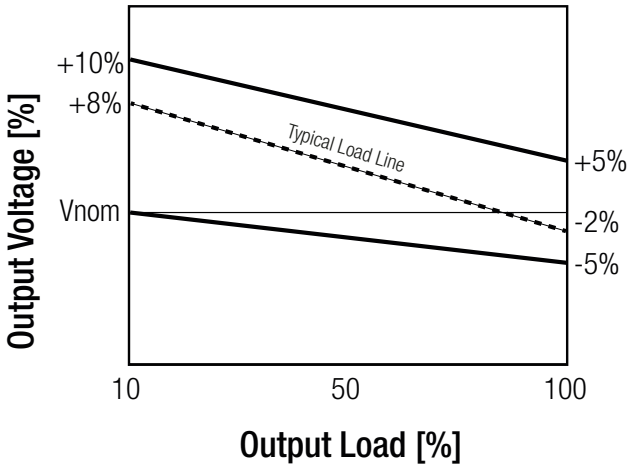
Efficiency vs. Load
(nominal Vin= 5VDC)



REGULATIONS

Parameter	Condition	Values
Output Accuracy		±5.0% max.
Line Regulation	low line to high line, full load	±1.2% typ. / ±1.0% max.
Load Regulation	10% to 100%	±10% typ. / ±15% max.

Tolerance Envelope



PROTECTIONS

Parameter	Condition		Value
Short Circuit Protection (SCP)	below 100mΩ		short term protection mode
Isolation Voltage [5]	I/P to O/P	tested for 1 second	4kVDC
Isolation Resistance			1GΩ min.
Isolation Capacitance			75pF max.
Leakage Current	500VAC, 50Hz		1µA max.
Insulation Grade			Functional

Notes:

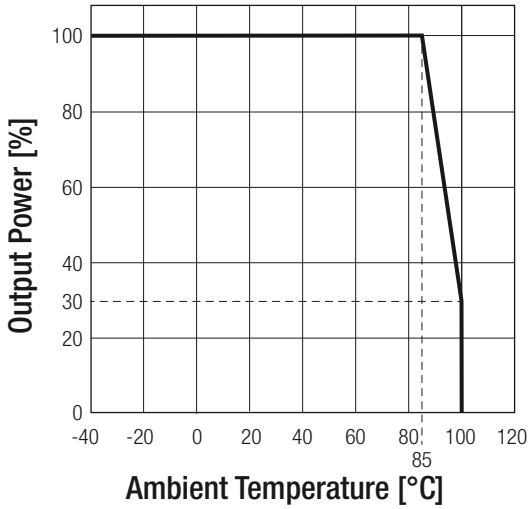
Note5: For repeat Hi-Pot testing, reduce the time and/or the test voltage

Specifications (measured @ Ta= 25°C, nominal input voltage, full load and after warm-up)

ENVIRONMENTAL

Parameter	Condition		Value
Operating Temperature Range	(@ natural convection 0.1m/s) (see graph)	without derating	-40°C to +85°C
Maximum Case Temperature			+105°C
Temperature Coefficient			±0.05%/°C
Thermal Impedance	0.1m/s, horizontal direction		40°C/W
Operating Altitude			2000m
Operating Humidity	non-condensing		95% RH max.
Pollution Degree			PD2
Vibration			MIL-STD-202G
MTBF	according to MIL-HDBK-217F, G.B.	+25°C +85°C	13200 x 10^3 hours 5200 x 10^3 hours

Derating Graph
(@ Chamber and natural convection 0.1m/s)

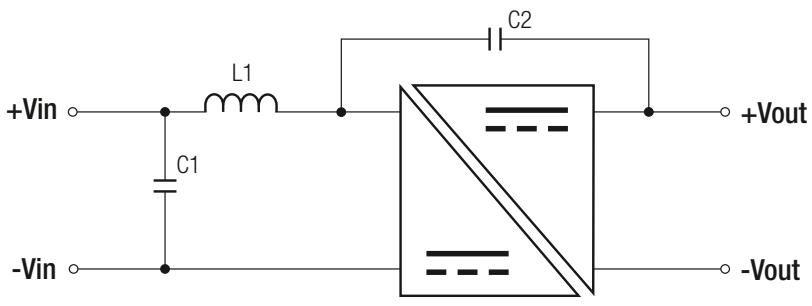


SAFETY AND CERTIFICATIONS (designed to meet)

Certificate Type (Safety)	Report/File Number	Standard
Information Technology Equipment, General Requirements for Safety	E358085-A4	UL60950-1, 2nd Edition, 2007
		CSA C22.2 No. 60950-1-07, 2nd Edition, 2007
RoHs 2+		RoHS 10/10, 2015

EMC Compliance	Condition	Standard / Criterion
Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement	with external filter (see below filter suggestion)	EN55032, Class B

EMC Filtering - Suggestions for Class B



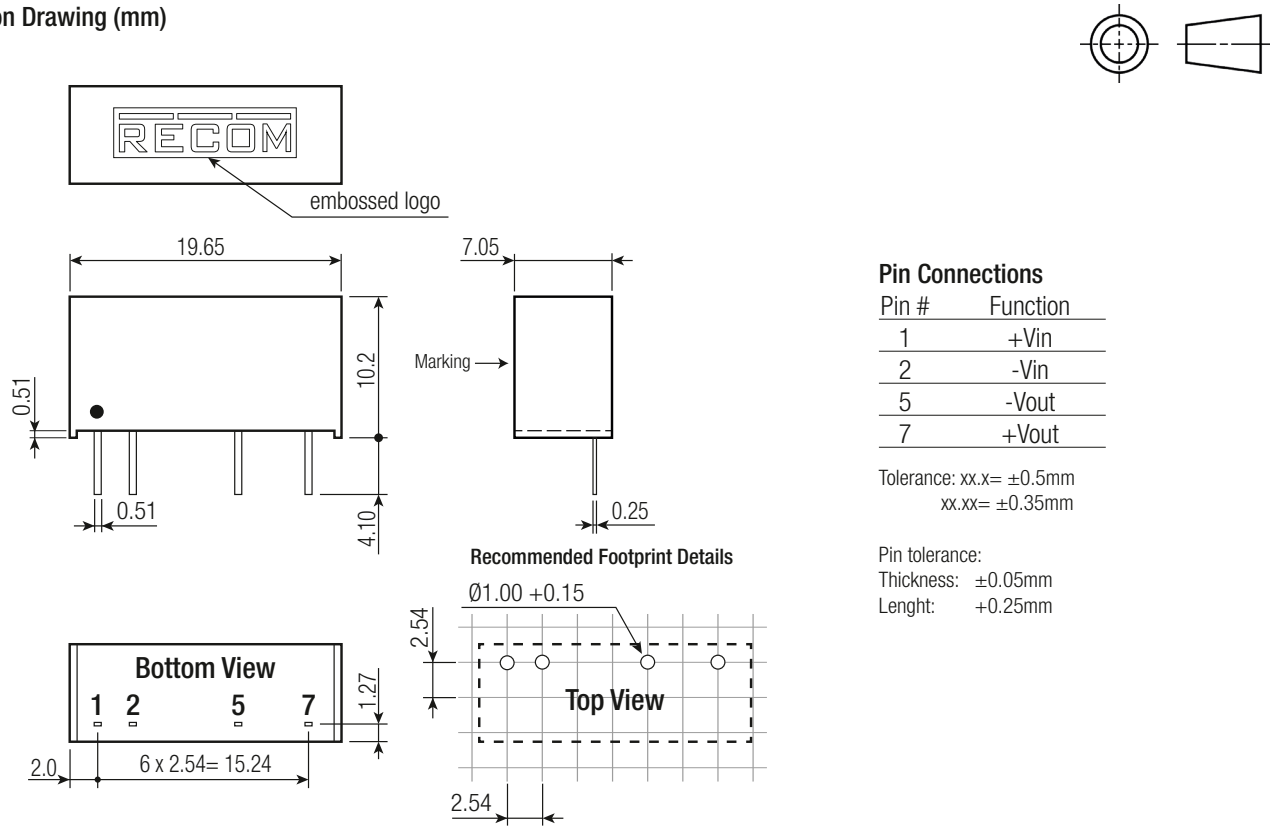
Component List Class B		
C1	L1	C2
10µF	4.7µH choke	470pF/5kVDC

Specifications (measured @ Ta= 25°C, nominal input voltage, full load and after warm-up)

DIMENSION AND PHYSICAL CHARACTERISTICS

Parameter	Type	Value
Material	case potting	non-conductive black plastic (UL94 V-0) epoxy (UL94 V-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 tolerance:
Thickness: ±0.05mm
Lenght: +0.25mm

PACKAGING INFORMATION

Parameter	Type	Value
Packaging Dimension (LxWxH)	tube	520.0 x 16.5 x 9.3mm
Packaging Quantity		25pcs
Storage Temperature Range		-55°C to +125°C
Storage Humidity		5% - 95%, RH