

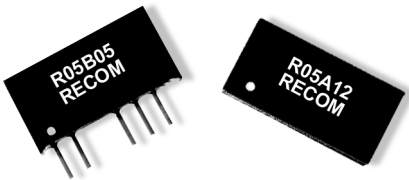
EUROLINE - DC/DC-Converter

RxxA and RxxB Series, 1 Watt, DIP14/SIP7, 1kVDC Isolation (Dual Output)

RECOM

Features

- Wide Temperature Performance at full 1 Watt Load, -40°C to +85°C
- Industry Standard Pinout
- 1kVDC Isolation
- Efficiency to 78%
- UL 94V-0 Package Material
- Internal SMD Construction
- MTTF up to 2.1 Million Hours



Selection Guide 5V and 12V, input types

Part Number Voltage	Nom. Input Voltage (VDC)	Rated Output Voltage (VDC)	Rated Output Current (mA)	Input Current at Rated Load (mA)	Efficiency (%)	Isolation Capacitance (pF)	Package Style
R05A05	5	±5	±100	289	69	28	DIP14
R05A09	5	±9	±55	270	75	32	
R05A12	5	±12	±42	266	77	34	
R05A15	5	±15	±33	263	78	36	
R05B05	5	±5	±100	289	69	28	SIP7
R05B09	5	±9	±55	270	75	32	
R05B12	5	±12	±42	266	77	34	
R05B15	5	±15	±33	263	78	36	
R12A05	12	±5	±100	120	69	33	DIP14
R12A09	12	±9	±55	113	74	46	
R12A12	12	±12	±42	111	75	55	
R12A15	12	±15	±33	110	76	54	
R12B05	12	±5	±100	120	69	33	SIP7
R12B09	12	±9	±55	113	74	46	
R12B12	12	±12	±42	111	75	55	
R12B15	12	±15	±33	110	76	54	

Absolute Maximum Ratings

Input Voltage V_{IN} 5V types	7V
Input Voltage V_{IN} 12V types	15V
Short Circuit Duration ¹⁾	1s
Internal Power Dissipation	450mW
Lead Temperature (1.5 mm from case for 10 seconds)	300 °C

¹⁾ Supply voltage must be discontinued at the end of the short circuit duration.

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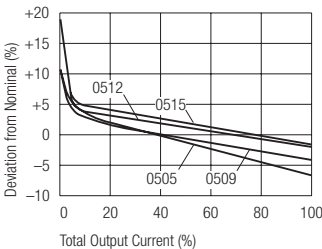
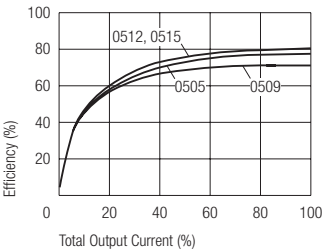
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Electrical Specifications (measured at $T_A = 25^{\circ}\text{C}$, at nominal input voltage and rated output current unless otherwise specified)		
Input Voltage Range V_{IN} (continuous operation)	5V input types 12V input types	4.5VDC min. / 5.5VDC max. 10.8VDC min. / 13.2VDC max.
Reflected Ripple Current (depending on the type)		20 mA p-p min. to 33 mA p-p max.
Voltage Set Point Accuracy (depending on the type)		See Tolerance Envelope
Line Regulation		1.0% / 1.2% of V_{IN}
Load Voltage Regulation (10% load to 100% full load)	5V output types 9V output types 12V output types 15V output types	10% min. / 12.5% max. 9% min. / 10% max. 6.5% min. / 7.5% max. 6% min. / 7.5% max.
Ripple & Noise (20MHz band limited) (depending on the type)		20mVp-p min. / 75mVp-p max.
Isolation Voltage (flash tested for 1 second)		1000VDC min.
Test Voltage (50Hz, 10 seconds)		1000 Vpk min.
Resistance (Viso = 500V)		10 G Ω typ.
Switching Frequency	V_{IN} 5V types V_{IN} 12V types	110kHz typ. 140kHz typ.
Package Weight	SIP types DIP types	2.1 g 2.4 g
Operating Temperature Range (all output types)		-40 $^{\circ}\text{C}$ min. to +85 $^{\circ}\text{C}$ max. (see graph)
Storage Temperature Range		-50 $^{\circ}\text{C}$ min. +130 $^{\circ}\text{C}$ max.
Case Temperature Above Ambient	5V output types all other output types	+33 $^{\circ}\text{C}$ max. +28 $^{\circ}\text{C}$ max.
MTTF ¹⁾ (depending on the type)	-40 $^{\circ}\text{C}$ +25 $^{\circ}\text{C}$ +85 $^{\circ}\text{C}$	184kHrs min. / 2068kHrs max. 154kHrs min. / 1697kHrs max. 129kHrs min. / 1368kHrs max.

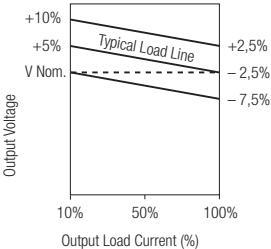
¹⁾ Calculated using MIL-HDBK-217F with nominal input voltage at full load.
Please contact us, if you need exact parameters for the converter you have selected.

Typical Characteristics, Tolerance Envelope and Temperature Derating Graph

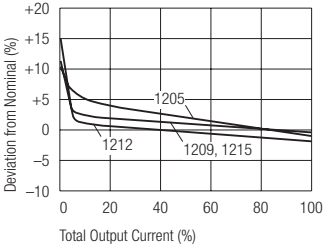
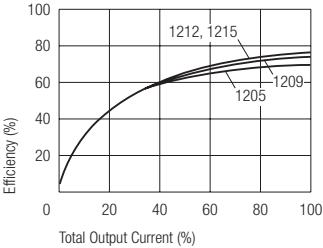
R05A/Bxx



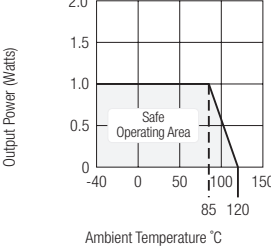
Tolerance Envelope



R12A/Bxx

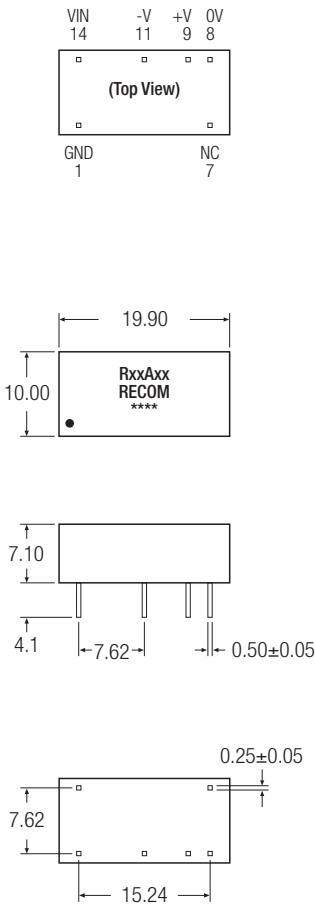


Temperature Derating Graph

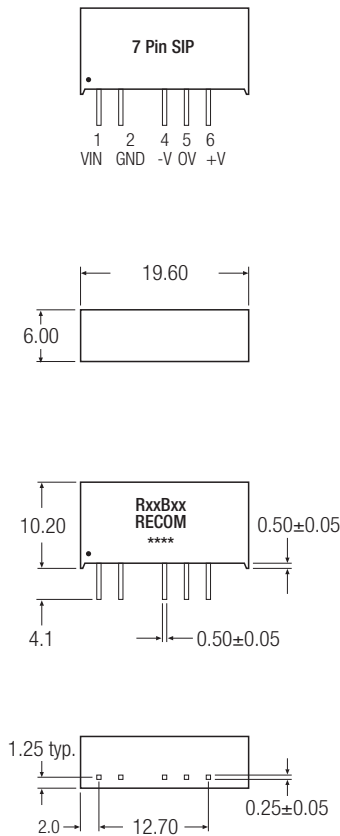


Package Style and Pinning (mm)

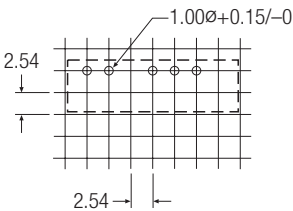
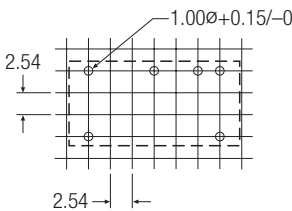
14 Pin DIP Package Style



7 Pin SIP Package Style



Recommended Footprint Details



XX.X ± 0.5 mm
XX.XX ± 0.25 mm