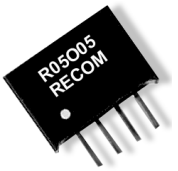
Features

- Wide Temperature Performance at full 1 Watt Load, –40°C to +85°C
- 1kVDC Isolation
- Industry Standard Pinout
- Efficiency to 80%
- UL 94V-0 Package Material
- Internal SMD Construction
- Toroidal Magnetics
- MTTF up to 2.9 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
R05N05	5	5	200	289	69	30	
R05N09	5	9	111	260	77	37	DIP8
R05N12	5	12	83	256	78	33	
R05N15	5	15	66	250	80	40	
R05O05	5	5	200	289	69	30	
R05O09	5	9	111	260	77	37	SIP4
R05O12	5	12	83	256	78	33	
R05O15	5	15	66	250	80	40	
R12N05	12	5	200	120	69	33	
R12N09	12	9	111	113	74	48	DIP8
R12N12	12	12	83	110	76	55	
R12N15	12	15	66	111	75	52	
R12O05	12	5	200	120	69	33	
R12O09	12	9	111	113	74	48	SIP4
R12O12	12	12	83	110	76	55	
R12O15	12	15	66	111	75	52	

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.

Electrical Specifications (measured at T_A = 25°C, at nominal input voltage and rated output current unless otherwise specified)

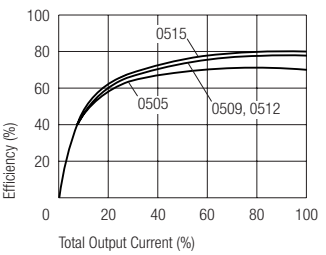
Input Voltage Range V_{IN} (continuous operation)	5V input types 12V input types	4.5VDC min./ 5.5VDC max. 10.8VDC min./ 13.2VDC max.
Reflected Ripple Current (depending on the type)		26 mA p-p min. to 48 mA p-p max.
Voltage Set Point Accuracy		See Tolerance Envelope
Line Regulation		1.0% / 1.2% of V_{IN}
Load Voltage Regulation (10% load to 100% full load)	5V output types 9V output types 12V output types 15V output types	14% min. / 15% max. 9% min. / 10% max. 7.5% min. / 9.5% max. 7% min. / 8.5% max.
Ripple & Noise (20MHz band limited), (depending on the type)		40mVp-p min. / 110mVp-p max.
Isolation Voltage (flash tested for 1 second)		1000VDC min.
Test Voltage (50Hz, 10 seconds)		1000 Vpk min.
Resistance (Viso = 500V)		10 GΩ typ.
Switching Frequency at Full Load	V_{IN} 5V input types V_{IN} 12V input types	110kHz typ. 145kHz typ.
Package Weight	SIP types DIP types	1.30 g 1.48 g
Operating Temperature Range (all output types)		–40°C min. to +85°C max. (see graph)
Storage Temperature Range		–50°C min. +130°C max.
Case Temperature Above Ambient (depending on the type)	5V output types all other output types	+41°C max. +32°C max.
MTTF [1] (depending on the type)	–40°C +25°C +85°C	302kHrs min. / 2938kHrs max. 252kHrs min. / 2414kHrs max. 212kHrs min. / 1961kHrs max.

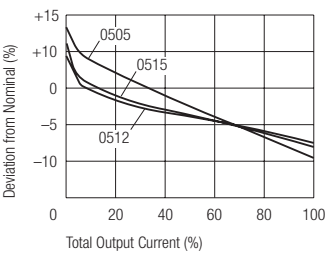
[1]. Calculated using MIL-HDBK-217F with nominal input voltage at full load.

Please contact us, if you need exact parameters for the converter you have selected.

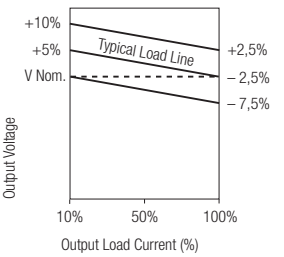
Typical Characteristics, Tolerance Envelope and Temperature Derating Graph

R05N/Oxx

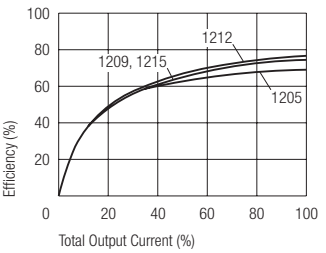


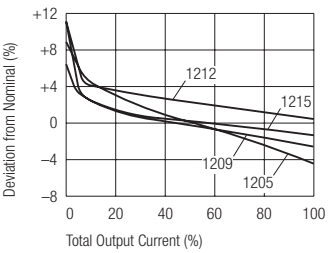


Tolerance Envelope

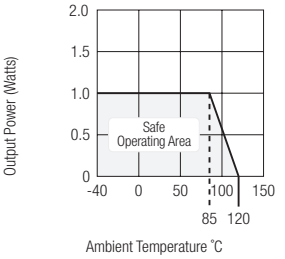


R12N/Oxx



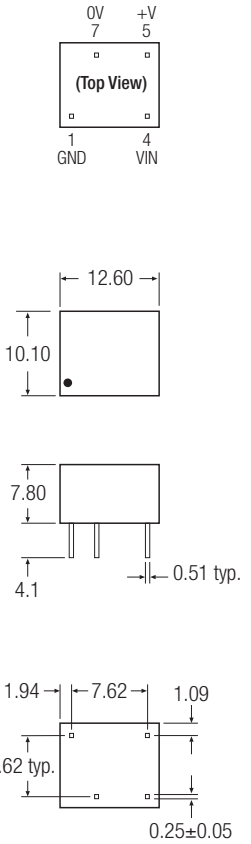


Temperature Derating Graph

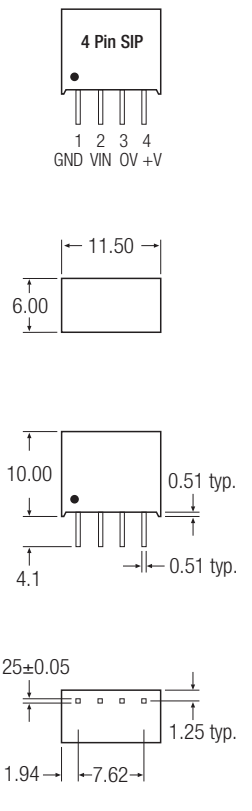


Package Style and Pinning (mm)

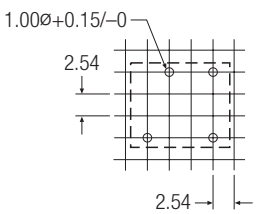
8 Pin DIP Package Style

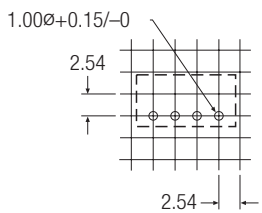


4 Pin SIP Package Style



Recommended Footprint Details





XX.X ± 0.5 mm
XX.XX ± 0.25 mm