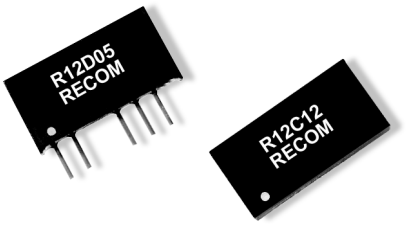
Features

- Wide Temperature performance at full 2 Watt load, –40°C to +85°C
- Industry Standard Pinout
- 1kVDC Isolation
- Efficiency to 86%
- UL 94V-0 Package Material
- Internal SMD Construction
- MTTF up to 2.0 Million Hours



Selection Guide 5V, 12V, 24V and 48V Input Types

Part Number	Nom. Input Voltage (VDC)	Rated Output Voltage (VDC)	Rated Output Current (mA)	Input Current at Rated Load (mA)	Efficiency (%)	Isolation Capacitance (pF)	Package Style
R05C05	5	±5	±200	500	80	24	
R05C09	5	±9	±111	494	81	28	DIP14
R05C12	5	±12	±83	488	82	30	
R05C15	5	±15	±67	476	84	33	
R05D05	5	±5	±200	500	80	24	
R05D09	5	±9	±111	494	81	28	SIP7
R05D12	5	±12	±83	488	82	30	
R05D15	5	±15	±67	476	84	33	
R12C05	12	±5	±200	208	80	35	
R12C09	12	±9	±111	201	83	55	DIP14
R12C12	12	±12	±83	198	84	63	
R12C15	12	±15	±67	198	84	66	
R12D05	12	±5	±200	208	80	35	
R12D09	12	±9	±111	201	83	55	SIP7
R12D12	12	±12	±83	198	84	63	
R12D15	12	±15	±67	198	84	66	
R24C05	24	±5	±200	103	81	41	
R24C09	24	±9	±111	98	85	75	DIP14
R24C12	24	±12	±83	97	86	95	
R24C15	24	±15	±67	97	86	104	
R24D05	24	±5	±200	103	81	41	
R24D09	24	±9	±111	98	85	75	SIP7
R24D12	24	±12	±83	97	86	95	
R24D15	24	±15	±67	97	86	104	
R48C05	48	±5	±200	51	82	45	
R48C09	48	±9	±111	51	82	74	DIP14
R48C12	48	±12	±83	49	85	90	
R48C15	48	±15	±67	49	85	112	
R48D05	48	±5	±200	51	82	45	
R48D09	48	±9	±111	51	82	74	SIP7
R48D12	48	±12	±83	49	85	90	
R48D15	48	±15	±67	49	85	112	

Absolute Maximum Ratings

Input Voltage V_{IN}	05V types	7VDC
	12V types	15VDC
	24V types	28VDC
	48V types	54VDC
Short Circuit Duration [1]		1 s
Internal Power Dissipation		300mW
Lead Temperature (1.5mm 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)

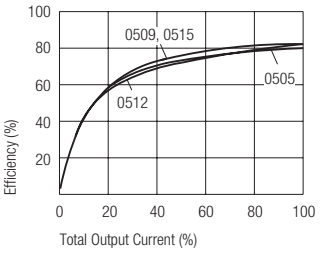
Input Voltage Range V_{IN} (continuous operation)	5V types	4.5VDC min. / 5.5VDC max.
	12V types	10.8VDC min. / 13.2VDC max.
	24V types	21.6VDC min. / 26.4VDC max.
	48V types	43.2VDC min. / 52.8VDC max.
Reflected Ripple Current (depending on the type)		50 mA p-p min. to 200 mA p-p max.
Output Voltage Accuracy (depending on the type)		–5% min. / 7.5% max.
Line Regulation (highV_{IN} to low V_{IN})		1.0% min. / 1.2% max. of V_{IN}
Load Regulation (10% load to rated load) (depending on the type)		3% typ. / 10% max.
Ripple and Noise (BW=DC to 20MHz) (depending on the type)		70mVp-p min. / 200mVp-p max.
Isolation Voltage (flash tested for 1 second)		1000VDC min.
Test Voltage (50Hz, 10 seconds)		1000 Vpk min.
Resistance (Viso = 500V)		1GΩ min. / 10 GΩ typ.
Switching Frequency at Full Load (depending on the type)		80kHz min. / 95kHz max.
Package Weight	SIP types	2.76 g
	DIP types	2.85 g
Efficiency (100% load)		70% min.
Power Consumption (0% load)		300mW typ.
Operating Temperature Range (all output types)		–40°C min. to +85°C max. (see graph)
Storage Temperature Range		–50°C to +130°C
Case Temperature Above Ambient (depending on the type)		+25°C min. / +30°C max.
MTTF [2] (depending on the type))	–40°C	134kHrs min. / 2004kHrs max.
	+25°C	112kHrs min. / 1574kHrs max.
	+85°C	93kHrs min. / 1101kHrs max.

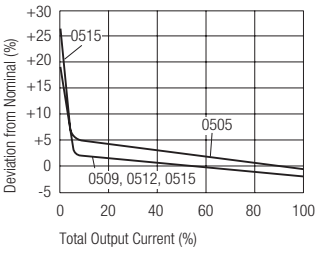
[2]. Calculated using MIL-HDBK-217F with nominal input voltage at full load.

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

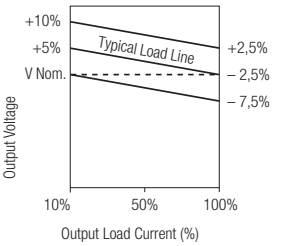
Typical Characteristics, Tolerance Envelope and Derating Graph

R05C/Dxx

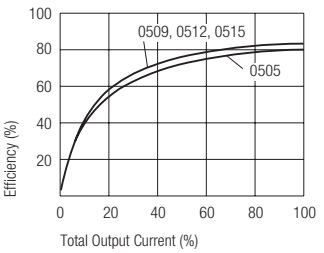


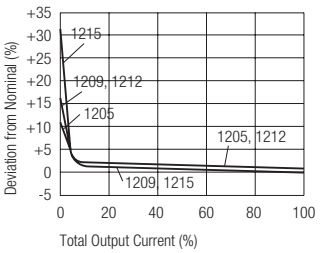


Tolerance Envelope

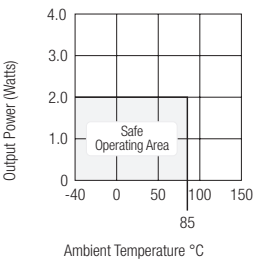


R12C/Dxx

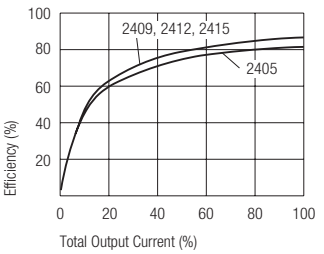


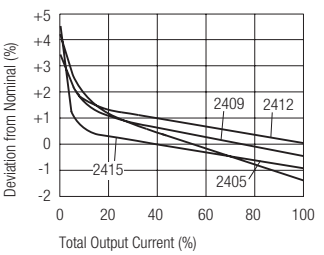


Temperature Derating Graph



R24C/Dxx





R48C/Dxx