

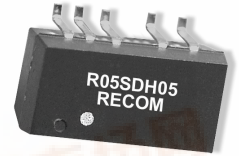
EUROLINE - DC/DC-Converter

RxxSDHxx Series, 1 Watt, SMD, 3kVDC Isolation (Dual Output)

RECOM

Features

- Wide Temperature Performance at full 1 Watt Load, -40°C to $+85^{\circ}\text{C}$
- 3kVDC Isolation
- Efficiency to 82%
- UL 94V-0 Package Material
- Internal SMD Construction
- MTTF up to 2.1 Million Hours
- Multi Layer Ceramic Capacitors



Selection Guide 5V and 12V 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
R05SDH05	5	± 5	± 100	282	71	33	SMD 22Pin
R05SDH09	5	± 9	± 55	260	77	38	
R05SDH12	5	± 12	± 42	253	79	44	
R05SDH15	5	± 15	± 33	250	80	43	
R12SDH05	12	± 5	± 100	114	73	50	
R12SDH09	12	± 9	± 55	105	79	72	
R12SDH12	12	± 12	± 42	104	80	89	
R12SDH15	12	± 15	± 33	101	82	100	

Absolute Maximum Ratings

Input Voltage V_{IN}	5V types	7V
	12V types	15V
Short Circuit Duration ¹⁾		1s
Internal Power Dissipation		550mW
Lead Temperature (1.5 mm from case for 10 seconds)		300 $^{\circ}\text{C}$

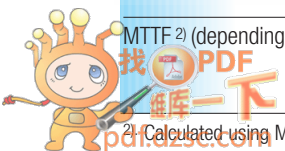
¹⁾ Supply voltage must be discontinued at the end of the short circuit duration.

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	4.5VDC min. / 5.5VDC max.
	12V input types	10.8VDC min. / 13.2VDC max.
Reflected Ripple Current (depending on the type)		41 mA p-p min. to 47 mA p-p max.
Voltage Set Point Accuracy (depending on the type)		See Tolerance Envelope
Line Regulation (depending on the type)		1.0% / 1.2% of V_{IN}
Load Voltage Regulation (10% load to rated load)	5V output types	10% min. / 12% max.
(12V input types have typically 3% less load regulation change)	9V output types	6.5% min. / 8.0% max.
	12V output types	6.0% min. / 8.5% max.
	15V output types	6.0% min. / 7.0% max.
Ripple & Noise (20MHz band limited), (depending on the type)		40mVp-p min. / 75mVp-p max.
Isolation Voltage (for 1 minute)		3000VDC min.
Test Voltage (50Hz, 10 seconds)		3000 Vpk min.
Resistance (Viso = 1000V)		10 $\text{G}\Omega$ min.
Switching Frequency at Full Load (depending on the type)	V_{IN} all types	115kHz nom.
Package Weight		1.53 g
Operating Temperature Range (all output types)		-40°C min. to $+85^{\circ}\text{C}$ max. (see graph)
Storage Temperature Range		-55°C min. $+125^{\circ}\text{C}$ max.
Case Temperature above Ambient	5V output types	$+46^{\circ}\text{C}$ nom.
	all other types	$+35^{\circ}\text{C}$ nom.
MTTF ²⁾ (depending on the type)	-40°C	184kHrs min. / 2068kHrs max.
	$+25^{\circ}\text{C}$	154kHrs min. / 1697kHrs max.
	$+85^{\circ}\text{C}$	129kHrs min. / 1368kHrs 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..



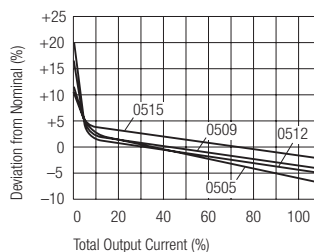
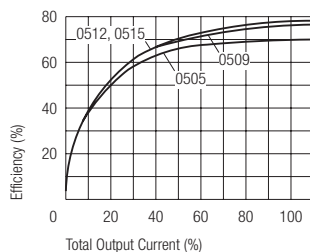
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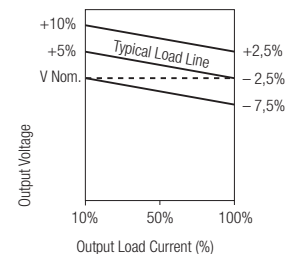
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Typical Characteristics, Tolerance Envelope and Temperature Derating Graph

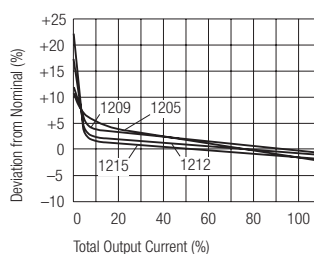
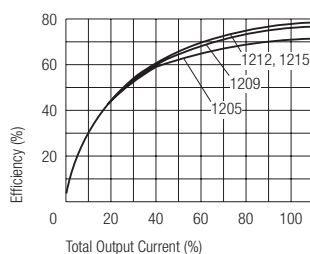
R05SDHxx



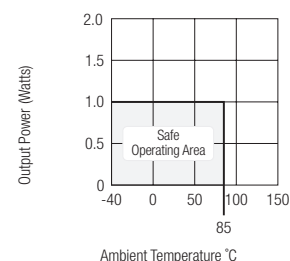
Tolerance Envelope



R12SDHxx

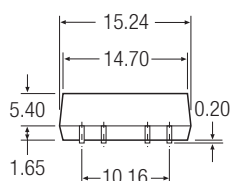
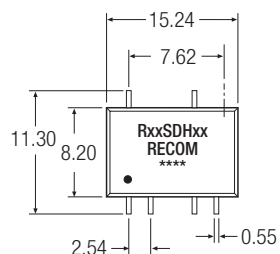
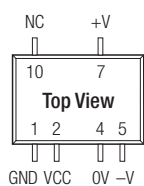


Temperature Derating Graph

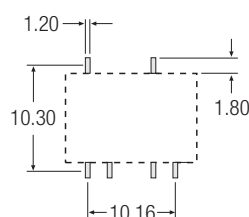


Package Style and Pinning (mm)

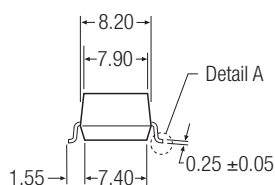
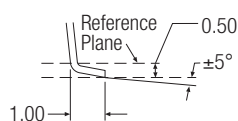
10 Pin SMD Package Style



Recommended Footprint Details



Detail A



XX.X ± 0.5 mm
XX.XX ± 0.25 mm