

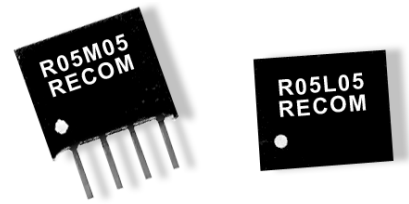
# EUROLINE - DC/DC-Converter

RxxL and RxxM Series, 0.25 Watt, DIP8/SIP4, 1kVDC Isolation (Single Output)

# RECOM

## Features

- High Efficiency for Low Power Applications
- Pin Compatible with Industrie Standard
- Single Output Rail
- UL 94V-0 Package Material
- No Heatsink Required
- Toroidal Magnetics
- Fully Encapsulated
- No External Components Required
- Custom Solutions Available



## Selection Guide 3.3V, 5V and 12V input types

Part Number	Output Voltage (V)	Output Current (mA)	Package Style
RxxL03	3.3	76	DIP8
RxxL05	5	50	
RxxL09	9	28	
RxxL12	12	21	
RxxL15	15	16	
RxxM03	3.3	76	SIP4
RxxM05	5	50	
RxxM09	9	28	
RxxM12	12	21	
RxxM15	15	16	

## Typical Isolation Capacitance (pF)

Part Number	Output Voltage (V)				
	03V	05V	09V	12V	15V
R03L/Mxx	–	25	70	38	38
R05L/Mxx	25	29	37	41	40
R12L/Mxx	–	38	40	43	45

## Absolute Maximum Ratings Over Operating Free Air Temperature Range

Input Voltage $V_{IN}$	3V types	5V
Input Voltage $V_{IN}$	5V types	7V
Input Voltage $V_{IN}$	12V types	15V
Output Power Total	250mW	
Short Circuit Duration	1s	
Isolation Voltage (flash tested for 1 second)	1000VDC	
Operating Free Air Temperature Range (requires a minimum of 10 mm air space around the component)	–40°C to 70°C (see derating Curve)	
Storage Temperature Range	–55°C to 150°C	
Lead Temperature (1.5 mm from case for 10 seconds)	300 °C	

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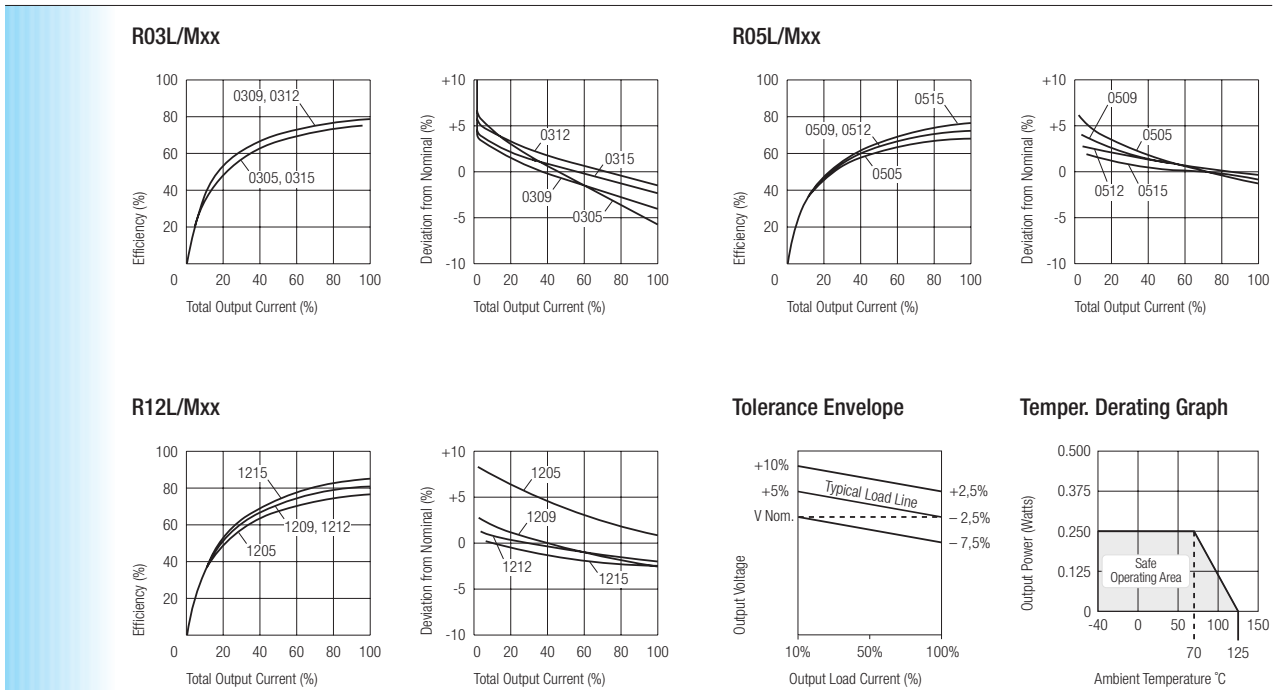
## Electrical Specifications (measured at $T_A = 25^\circ\text{C}$ , at nominal input voltage and rated output current unless otherwise specified)

Input Voltage Range $V_{IN}$ (continuous operation)	3V types	3.3VDC $\pm 10\%$
	5V types	5VDC $\pm 10\%$
	12V types	12VDC $\pm 10\%$
Output Voltage Accuracy (depending on the type)	see Tolerance Envelope Graph	
Load Voltage Regulation (10% load to 100% full load)	3.3V and 5V output types	15% max.
	9V, 12V and 15V output types	10% max.
Line Voltage Regulation (10% load to 100% full load)	1.2% / 1.0% of $V_{IN}$	
Input Reflected Ripple (20MHz band limited)	3V types	50mVp-p max.
	5V and 12V types	40mVp-p max.
Output Ripple (20MHz band limited)	3V types	75mVp-p max.
	5V and 12V types	100mVp-p max.
Isolation Voltage (flash tested for 1 second)	1000VDC	
Insulation Resistance at 500VDC	1000M $\Omega$ min.	
Switching Frequency at Full Load (typical)	100kHz max.	
Package Weight	SIP types	1.4 g
	DIP types	1.5 g
Efficiency (at full load)	3.3V and 5V output types	70% typ. / 60% min.
	9V, 12V and 15V output types	75% typ. / 70% min.
Operating Free Air Temperature Range (requires a minimum of 10 mm air space around the component)	0°C to 70°C (see derating Curve)	
Temperature Drift ( $V_{OUT}$ )	0.03% per °C max.	
Temperature Rise above Ambient (at full load)	10°C max.	
No Load Power Consumption (typical)	3V types	50mW typ.
	5V and 12V types	30mW typ.
MTTF <sup>1)</sup> (depending on the type)	-25°C	273kHrs min. / 3293kHrs max.
	+25°C	237kHrs min. / 2767kHrs max.
	+75°C	208kHrs min. / 2319kHrs max.

<sup>1)</sup> Calculated using MIL-HDBK-217F with nominal input voltage at full load.

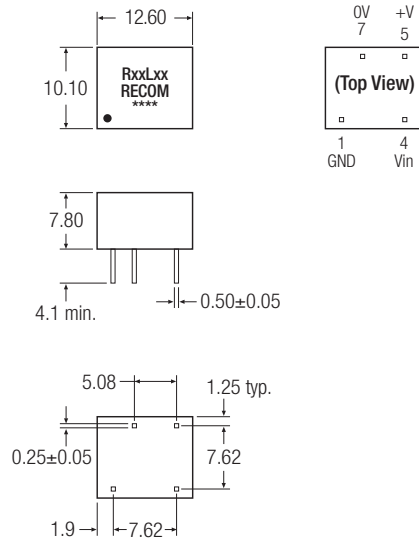
Please contact us, if you need exact parameters for the converter you have selected.

## Typical Characteristics, Tolerance Envelope and Temperature Derating Graph

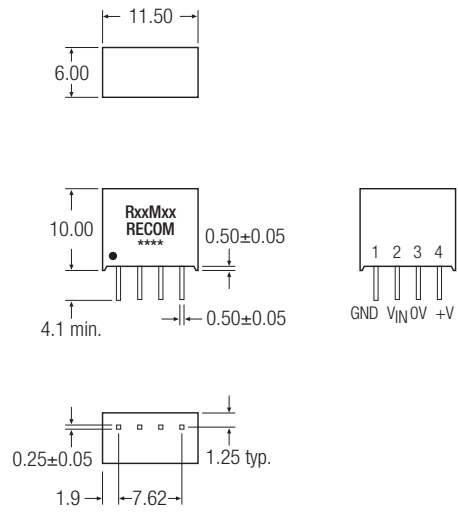


## Package Style and Pinning (mm)

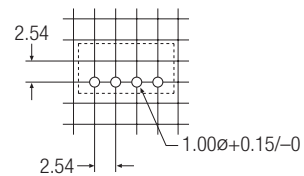
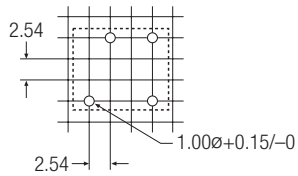
### 8 Pin DIP Package Style



### 4Pin SIP Package Style



### Recommended Footprint Details



XX.X ± 0.5 mm  
XX.XX ± 0.25 mm