

Features

Unregulated Converters

Rev.0

- Micro Size SIP 6 Package
- Industry Standard Pinout
- Power Sharing on Dual Output Version
- 3kVDC Isolation
- Optional Continuous Short Circuit Protected
- Efficiency to 85 %

Description

The RBM Micro Size DC/DC-Converter complements Recom's industrial range of converters. This range is widely used for pcb distributed power systems and combines small package size, high efficiency, 3kVDC isolation and low output ripple.

The extended operating temperature range covering -40°C to $+85^{\circ}\text{C}$ is a standard feature. The full rated power can be taken from a single pin of this dual output converter, provided this does not exceed 1 Watt.

Selection Guide

Part Number	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)
RBM-xx05S	5, 12	5	200	70-78
RBM-xx12S	5, 12	12	83	78-80
RBM-xx15S	5, 12	15	66	80-84
RBM-xx05D	5, 12	± 5	± 100	74-78
RBM-xx12D	5, 12	± 12	± 41	80-82
RBM-xx15D	5, 12	± 15	± 33	80-84

xx = Input Voltage. Other input and output voltage combinations available on request.

* add Suffix "P" for Continuous Short Circuit Protection, e.g. RBM-0505S/P, RBM-0505D/P

Specifications (measured at $T_A = 25^{\circ}\text{C}$, nominal input voltage, full load and after warm-up)

Input Voltage Range				$\pm 10\%$
Output Voltage Accuracy				$\pm 5\%$
Line Voltage Regulation				1.2%/1% of V_{in} typ.
Load Voltage Regulation (10% to 100% full load)	5V output type			15% max
	12, 15V output types			10% max
Output Ripple and Noise (20MHz limited)				100mVp-p max.
Operating Frequency				50kHz min. / 100kHz typ. / 105kHz max.
Efficiency at Full Load				70% min. / 80% typ.
No Load Power Consumption	Single	101mW min. / 126mW typ. / 220mW max.		
	Dual	87mW min. / 130mW typ. / 230mW max.		
Maximum Capacitive Load				33 μF / $\pm 10\mu\text{F}$
Isolation Voltage	(tested for 1 second)		3000VDC min.	
Rated Working Voltage	(long term isolation)		see Application Notes	
Isolation Capacitance				20pF min. / 65pF max.
Isolation Resistance				15 G Ω min.
Short Circuit Protection				1 Second
P-Suffix				Continuous
Operating Temperature Range (free air convection)				-40°C to $+85^{\circ}\text{C}$ (see Graph)
Storage Temperature Range				-55°C to $+125^{\circ}\text{C}$
Relative Humidity				95% RH
Package Weight				1.3g
MTBF ($+25^{\circ}\text{C}$)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F	1005 x 10^3 hours	
($+85^{\circ}\text{C}$)		using MIL-HDBK 217F	195 x 10^3 hours	

ECONOLINE

DC/DC-Converter

RBM Series

1 Watt SIP 6 Micro Size, Single & Dual Output

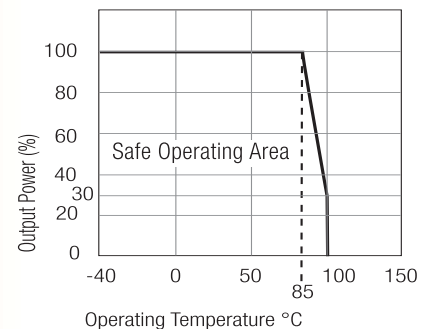


EN-60950-1 Certified

EN-60601-1 Certified

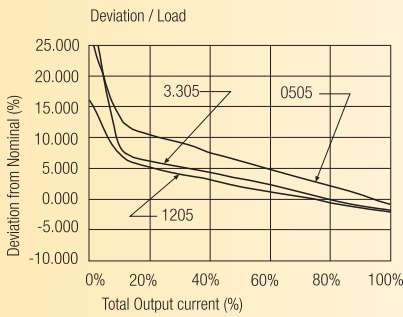
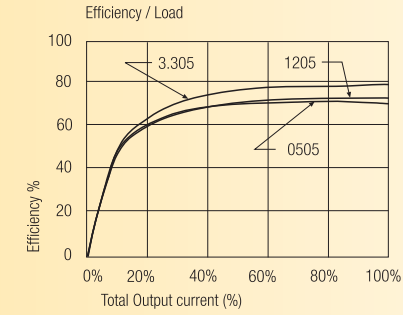
RECOM

Derating-Graph (Ambient Temperature)

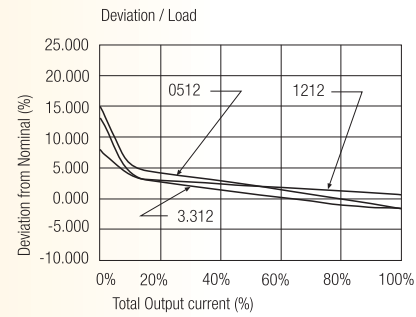
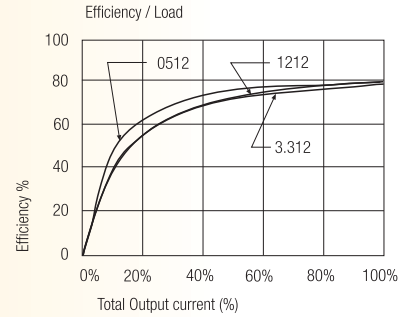


Typical Characteristics

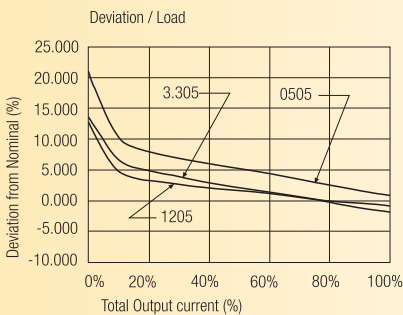
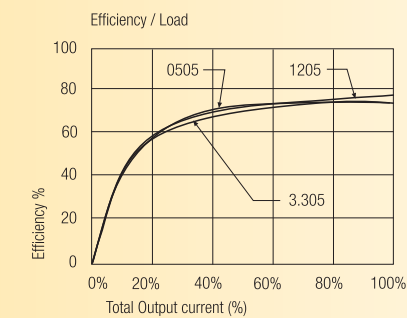
RBM-xx05S



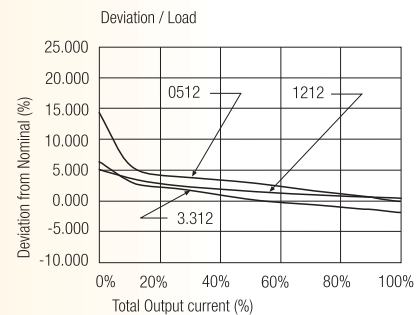
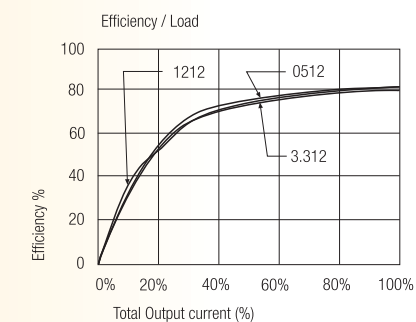
RBM-xx12S



RBM-xx05D

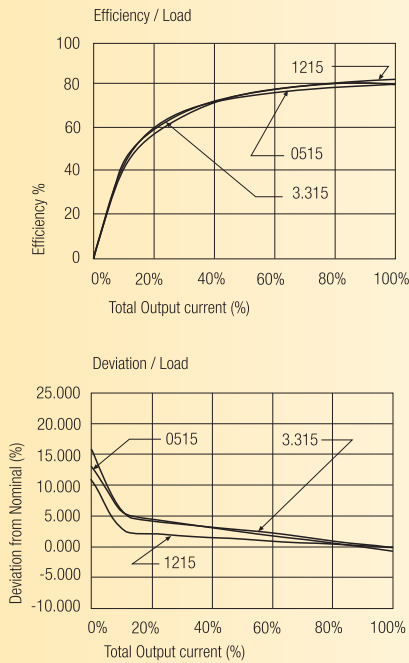


RBM-xx12D

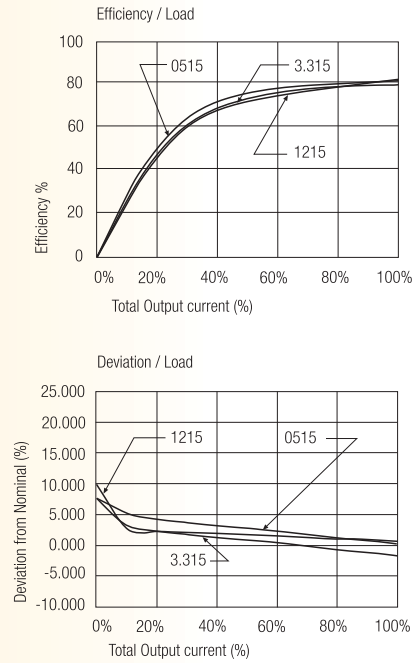


Typical Characteristics

RBM-xx15S

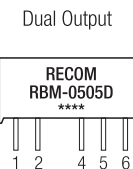
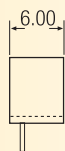
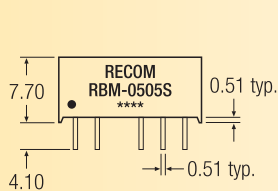


RBM-xx15D

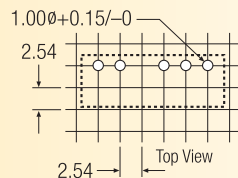
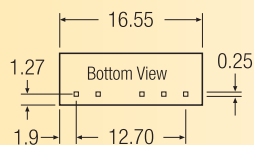


Package Style and Pinning (mm)

6 PIN SIP Micro Size Package



Recommended Footprint Details



Pin Connections

Pin #	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
4	NC	-Vout
5	-Vout	Com
6	+Vout	+Vout

NC = No Connection
XX.X ± 0.5 mm
XX.XX ± 0.25 mm