

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 SIP 6 Micro Size Package	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)

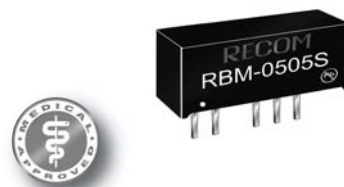
Input Voltage Range			±10%
Output Voltage Accuracy			±5%
Line Voltage Regulation			1.2%/1% of Vin typ.
Load Voltage Regulation	5V output type	15% max	
(10% to 100% full load)	12, 15V output types	10% max	
Output Ripple and Noise (20MHz limited)			100mVp-p max.
Operating Frequency			50kHz min. / 100kHz 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			33µF / ±10µF
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 GΩ min.
Short Circuit Protection			1 Second
P-Suffix			Continuous
Operating Temperature Range (free air convection)			-40°C to +85°C (see Graph)
Storage Temperature Range			-55°C to +125°C
Relative Humidity			95% RH
Package Weight			1.3g
MTBF (+25°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F	1005 x 10³ hours
(+85°C)		using MIL-HDBK 217F	195 x 10³ hours

ECONOLINE

DC/DC-Converter

RBM Series

1 Watt SIP 6 Micro Size, Single & Dual Output

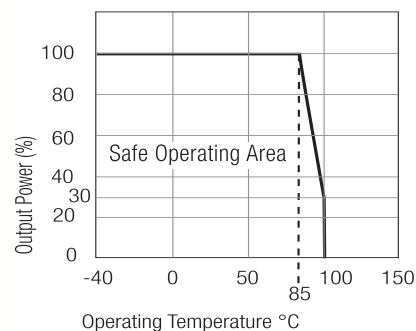


EN-60950-1 Certified

EN-60601-1 Certified

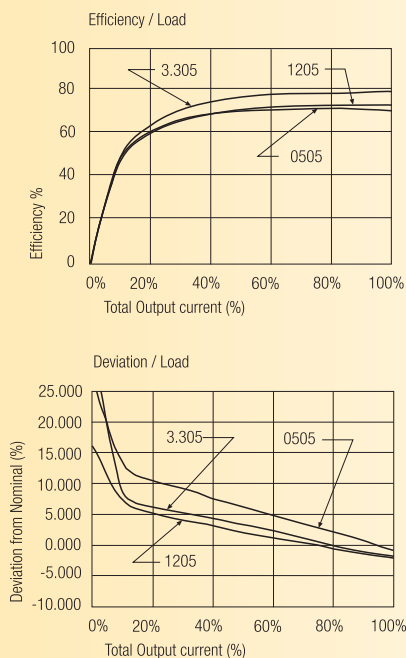
RECOM

Derating-Graph (Ambient Temperature)

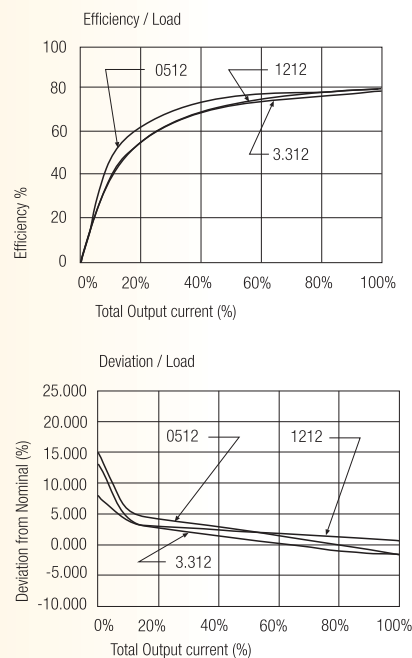


Typical Characteristics

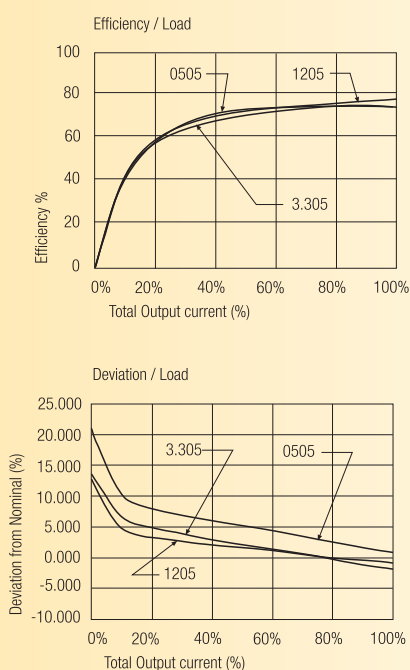
RBM-xx05S



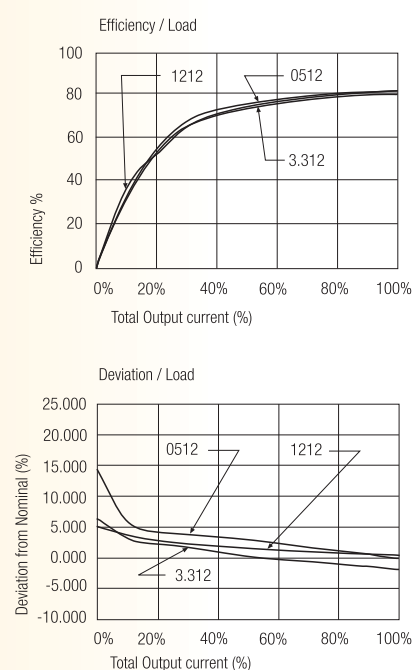
RBM-xx12S



RBM-xx05D

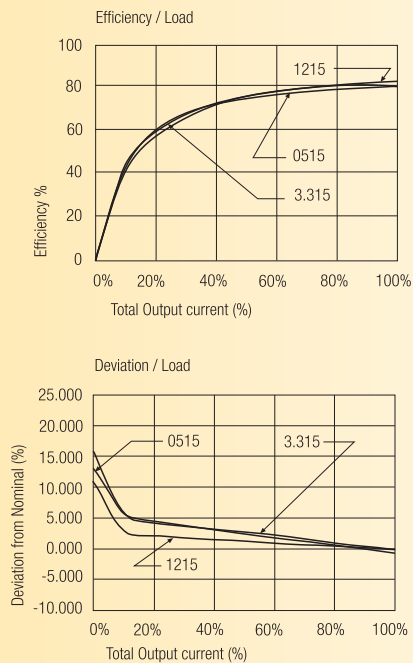


RBM-xx12D

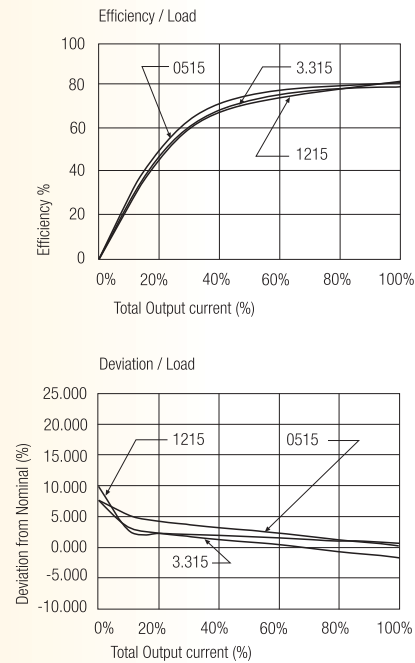


Typical Characteristics

RBM-xx15S



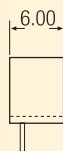
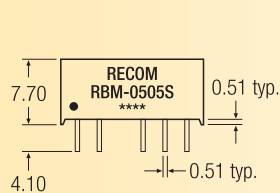
RBM-xx15D



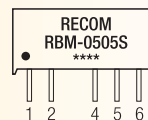
Package Style and Pinning (mm)

6 PIN SIP Micro Size Package

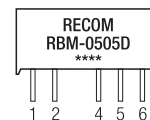
3rd angle projection



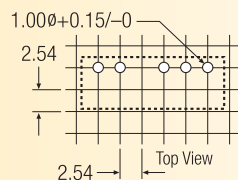
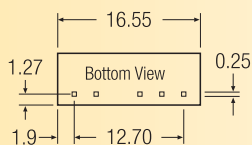
Single Output



Dual Output



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