Features

Unregulated Converters

- Micro Size SIP 6 Package
- Industry Standard Pinout
- 3kVDC Isolation
- Optional Continuous Short Circuit Protected
- Efficiency to 85%

Selection Guide

Part Number SIP 6 Micro Size Package	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)
RBM-xx1.8S	1.8, 3.3, 5, 9, 12, 15, 24	1.8	555	70
RBM-xx3.3S	1.8, 3.3, 5, 9, 12, 15, 24	3.3	303	75
RBM-xx05S	1.8, 3.3, 5, 9, 12, 15, 24	5	200	70-78
RBM-xx09S	1.8, 3.3, 5, 9, 12, 15, 24	9	111	76-79
RBM-xx12S	1.8, 3.3, 5, 9, 12, 15, 24	12	83	78-80
RBM-xx15S	1.8, 3.3, 5, 9, 12, 15, 24	15	66	80-84
RBM-xx24S	1.8, 3.3, 5, 9, 12, 15, 24	24	42	74-85
RBM-xx1.8D	1.8, 3.3, 5, 9, 12, 15, 24	±1.8	±278	70
RBM-xx3.3D	1.8, 3.3, 5, 9, 12, 15, 24	±3.3	±152	70
RBM-xx05D	1.8, 3.3, 5, 9, 12, 15, 24	±5	±100	74-78
RBM-xx09D	1.8, 3.3, 5, 9, 12, 15, 24	±9	±56	76-79
RBM-xx12D	1.8, 3.3, 5, 9, 12, 15, 24	±12	±41	80-82
RBM-xx15D	1.8, 3.3, 5, 9, 12, 15, 24	±15	±33	80-84
RBM-xx24D	1.8, 3.3, 5, 9, 12, 15, 24	±24	±21	80-84

xx = Input Voltage

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

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°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.

Specifications (Core Operating Area)

Input Voltage Range		±10%
Output Voltage Accuracy		±5%
Line Voltage Regulation		1.2%/1% of Vin typ.
Load Voltage Regulation (10% to 100% full load)	1.8V, 3.3V output types	20% max.
	5V output type	15% max.
	9V, 12V, 15V, 24V 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.
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)

continued on next page

ECONOLINE

DC/DC-Converter

RBM Series

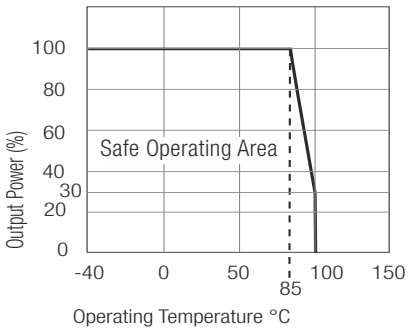
1 Watt SIP 6 Micro Size, Single & Dual Output

EN-60950-1 Certified
EN-60601-1 Certified

RECOM

Derating-Graph

(Ambient Temperature)

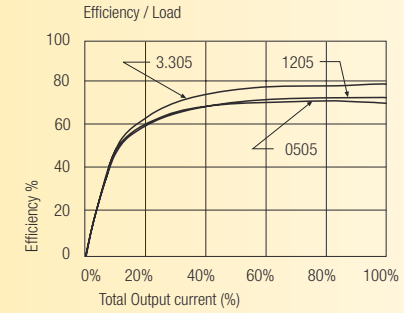


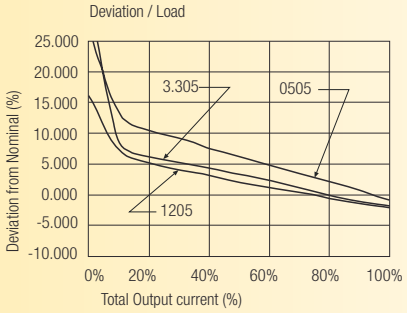
Specifications (Core Operating Area)

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 10^3 hours
(+85°C)		using MIL-HDBK 217F	195 x 10^3 hours

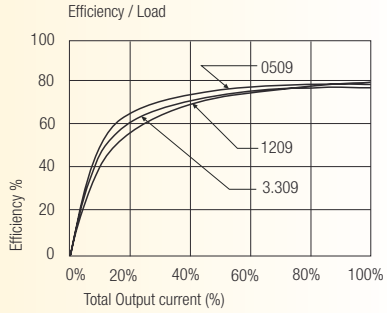
Typical Characteristics

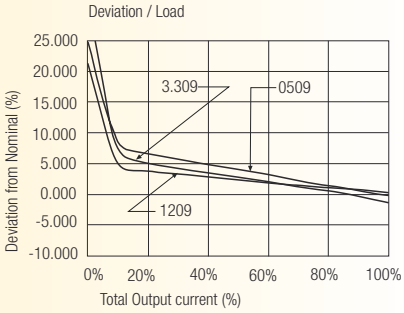
RBM-xx05S



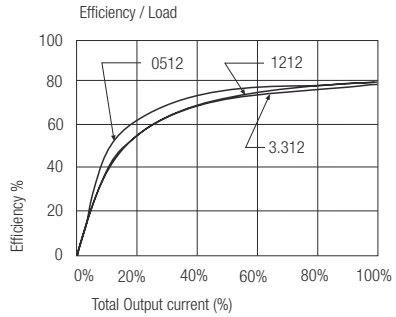


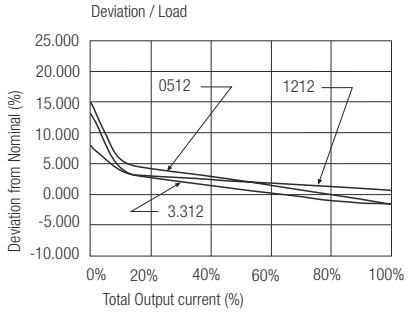
RBM-xx09S



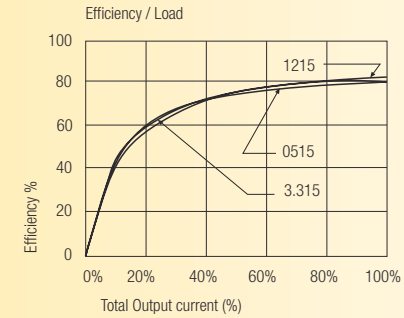


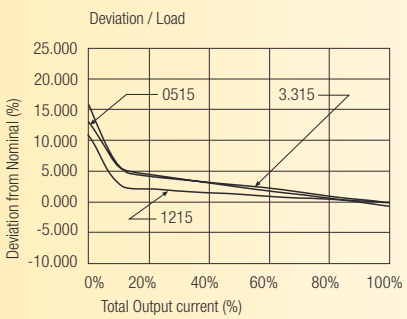
RBM-xx12S



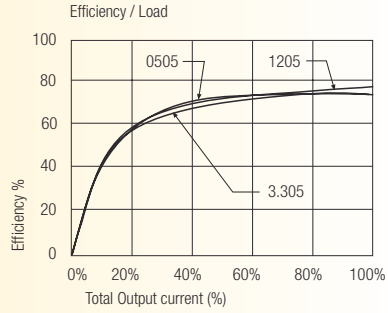


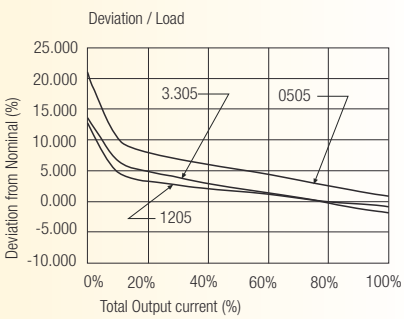
RBM-xx15S



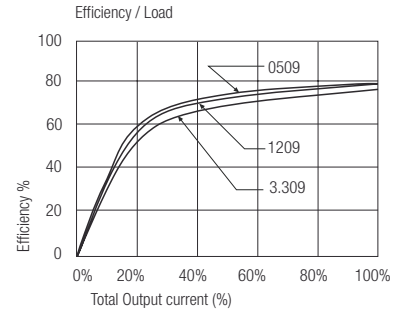


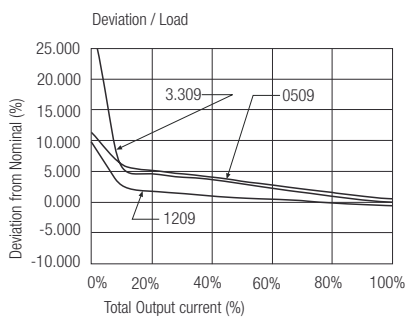
RBM-xx05D





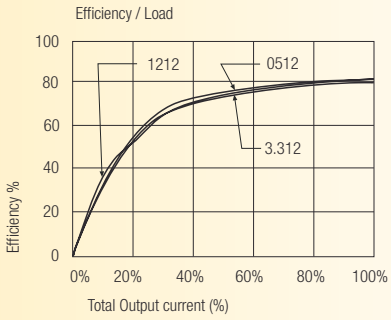
RBM-xx09D

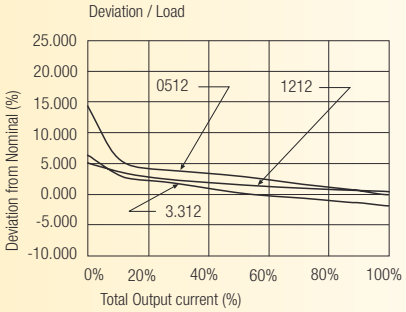




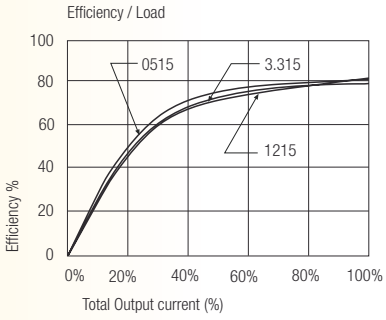
Typical Characteristics

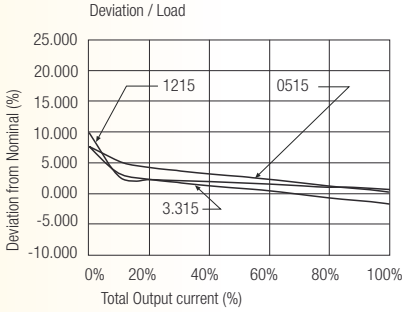
RBM-xx12D





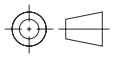
RBM-xx15D



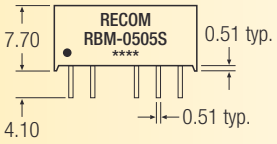


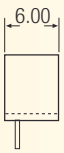
Package Style and Pinning (mm)

3rd angle projection

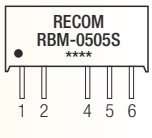


6 PIN SIP Micro Size Package

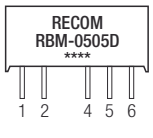




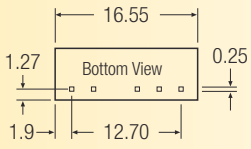
Single Output

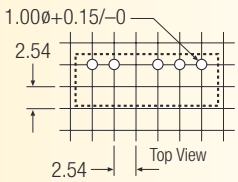


Dual Output



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