

## Features

- Micro Size SIP7 Package (17.8\*6.0\*7.8mm)
- 1KVDC & 3KVDC Isolation
- High Efficiency to 89%
- Optional Short Circuit Protection (suffix "/P")
- Operating Temperature Range -40°C to +100°C Without Derating
- Small Footprint
- No external capacitor needed

## SIP7, Single & Dual Outputs

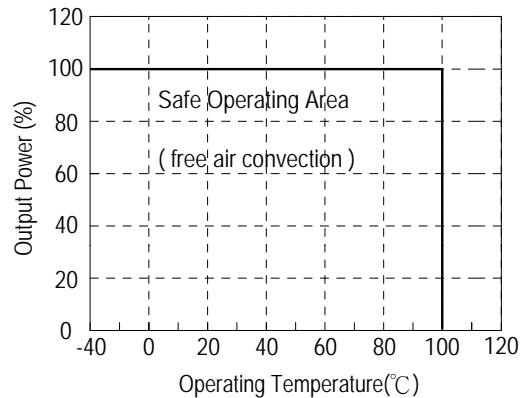


RoHS

## Description

The BPM1 series are miniature excellent performance. Micro SIP7 package, high efficiency up to 89%, 1W single and dual outputs. The BPM1 series because it's high efficiency, therefore it can operating at 100°C temperature and 100% load, fulfil most critical environment application.

## Derating Graph



## Selection Guide

Part Number	Input Voltage	Output Voltage	Output Current	Efficiency	Max. Capacitive Load
BPM1-xx3.3Sy	3.3, 5, 9, 12, 15, 24VDC	3.3VDC	303mA	75-84%	680uF
BPM1-xx05Sy	3.3, 5, 9, 12, 15, 24VDC	5VDC	200mA	78-85%	470uF
BPM1-xx09Sy	3.3, 5, 9, 12, 15, 24VDC	9VDC	111mA	82-87%	330uF
BPM1-xx12Sy	3.3, 5, 9, 12, 15, 24VDC	12VDC	84mA	82-89%	220uF
BPM1-xx15Sy	3.3, 5, 9, 12, 15, 24VDC	15VDC	66mA	82-88%	150uF
BPM1-xx24Sy	3.3, 5, 9, 12, 15, 24VDC	24VDC	42mA	82-86%	68uF
BPM1-xx3.3Dy	3.3, 5, 9, 12, 15, 24VDC	±3.3VDC	±152mA	76-85%	±330uF
BPM1-xx05Dy	3.3, 5, 9, 12, 15, 24VDC	±5VDC	±100mA	78-85%	±220uF
BPM1-xx09Dy	3.3, 5, 9, 12, 15, 24VDC	±9VDC	±56mA	80-86%	±150uF
BPM1-xx12Dy	3.3, 5, 9, 12, 15, 24VDC	±12VDC	±42mA	80-88%	±100uF
BPM1-xx15Dy	3.3, 5, 9, 12, 15, 24VDC	±15VDC	±33mA	81-87%	±68uF
BPM1-xx24Dy	3.3, 5, 9, 12, 15, 24VDC	±24VDC	±21mA	81-86%	±33uF

xx=Input Voltage(possible for other input and output voltage combinations on request)

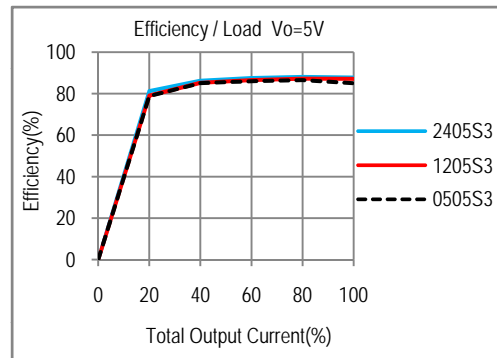
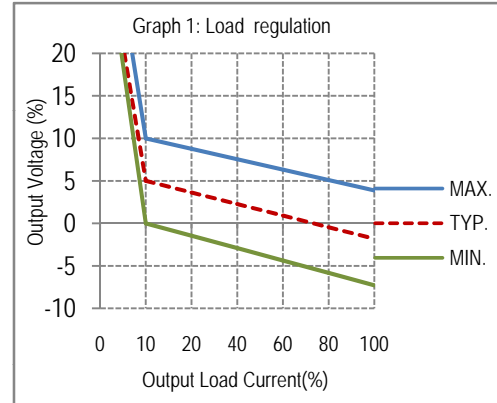
y=1=1KVDC,y=3=3KVDC, e.g. BPM1-0505S1,BPM1-0505D1,BPM1-0505S3,BPM1-0505D3

short circuit protection suffix "/P" option,e.g. BPM1-0505S1/P,BPM1-0505D1/P,BPM1-0505S3/P,BPM1-0505D3/P

**Specifications**

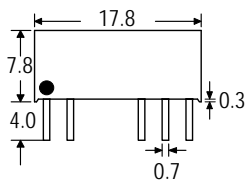
(measured at  $T_A=25^{\circ}\text{C}$  ,nominal input voltage, full load and after warm-up)

Input Voltage Range	±10%	
Output Voltage Accuracy	±5%	
Line Voltage Regulation	1.2%/ 1% of $V_{in}$ typ.	
Load Voltage Regulation ( 10% to 100% full load )	All	10% max
Output Ripple and Noise (20MHz Limited)	50mVp-p typ., 100mVp-p max.	
Temperature coefficient ( Full load )	0.03 %/°C max	
Operating Frequency	60kHz min. / 85kHz typ. / 110kHz max.	
Efficiency at Full Load	75% min. / 89% max.	
Isolation Voltage	Y=1 (tested for 1 second)	1KVDC
	Y=3 (tested for 1 second)	3KVDC
Isolation Capacitance (tested at 100kHz)	20pF min. / 75pF max.	
Isolation Resistance	15GΩ min.	
Short Circuit Protection	Without suffix "p"	1 Second
	Add suffix "p"	Continuous
Operating Temperature Range (free air convection)	-40°C to +100°C (see Graph)	
Storage Temperature Range	-55°C to +125°C	
Relative Humidity	95% RH	
Case Material	UL94-V0	Non-conductive black plastic
Polting Material	UL94-V0	Epoxy
Package Weight	1.4g	
Packing Quantity	28pcs per Tube	
Lead Temperature	300°C max, 1.5mm from case for 10 sec	
MTBF ( using MIL-HDBK 217F )	+25°C	5135x10 <sup>3</sup> hours
	+85°C	2371x10 <sup>3</sup> hours



**Package Style and Pinning (mm)**

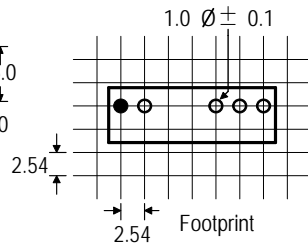
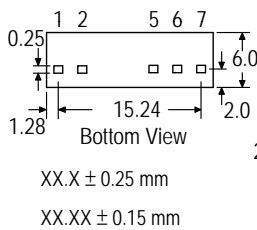
Micro Size 7 Pin SIP Package



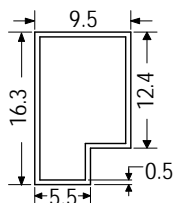
**Pin Connections**

pin#	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
5	-Vout	-Vout
6	NP	COM
7	+Vout	+Vout

NP=No Pin



**Tube Outline Dimensions (mm)**



Tolerance:  
XX.X ± 0.5 mm  
Note:  
L=520 ± 2 mm  
Devices per tube quantity: 28 PCS

