

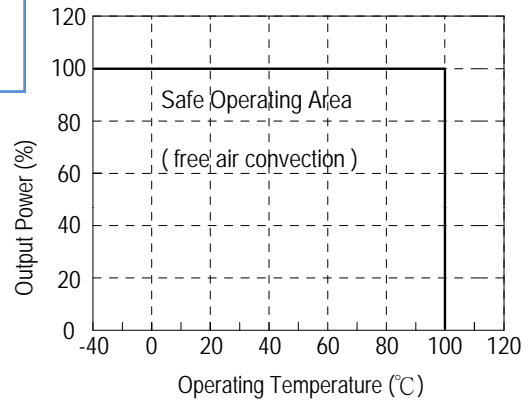
Features

- Micro Size SIP7 Package (17.8*6.6*8.4mm)
- Meet REINFORCED Requirement
- 10KVDC/5.2KVAC Isolation
- Doubled Isolation Construct for Medical Application
- High Efficiency to 85%
- Very Low I/O Capacitance 10PF max
- Suitable for Industrial IGBT Application
- Continuous Short Circuit Protection
- Operating Temperature Range -40°C to +100°C Without Derating.
- Small Footprint.
- No External Capacitor needed.

SIP7, Single & Dual



Derating Graph



Description

The BPR1 series are miniature excellent performance. Micro SIP7 package, high efficiency up to 85%, 1W single and dual outputs, new unique construct for meets REINFORCED creepage distance requirement and 10KVDC/5.2KVAC Hi-POT test. The BPR1 series because it's high efficiency, therefore it can operating at 100°C temperature and 100% load, fulfill most critical environment application.

Selection Guide

Part Number	Input Voltage	Output Voltage	Output Current	Efficiency	Max. Capacitive Load
BPR1-xx3.3S	3.3, 5, 9, 12, 15, 24VDC	3.3VDC	303mA	73-78%	680uF
BPR1-xx05S	3.3, 5, 9, 12, 15, 24VDC	5VDC	200mA	79-82%	470uF
BPR1-xx09S	3.3, 5, 9, 12, 15, 24VDC	9VDC	111mA	80-83%	330uF
BPR1-xx12S	3.3, 5, 9, 12, 15, 24VDC	12VDC	84mA	81-84%	220uF
BPR1-xx15S	3.3, 5, 9, 12, 15, 24VDC	15VDC	66mA	81-85%	150uF
BPR1-xx24S	3.3, 5, 9, 12, 15, 24VDC	24VDC	42mA	81-85%	68uF
BPR1-xx3.3D	3.3, 5, 9, 12, 15, 24VDC	±3.3VDC	±152mA	74-78%	±330uF
BPR1-xx05D	3.3, 5, 9, 12, 15, 24VDC	±5VDC	±100mA	79-83%	±220uF
BPR1-xx09D	3.3, 5, 9, 12, 15, 24VDC	±9VDC	±56mA	80-83%	±150uF
BPR1-xx12D	3.3, 5, 9, 12, 15, 24VDC	±12VDC	±42mA	81-85%	±100uF
BPR1-xx15D	3.3, 5, 9, 12, 15, 24VDC	±15VDC	±33mA	81-85%	±68uF
BPR1-xx24D	3.3, 5, 9, 12, 15, 24VDC	±24VDC	±21mA	81-85%	±33uF

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

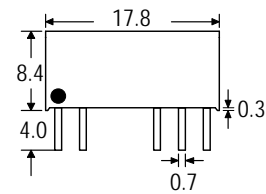
Specifications

(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)	100mVp-p max.	
Temperature coefficient (Full load)	0.03%/°C max.	
Operating Frequency	60kHz min. / 85kHz typ. / 120kHz max.	
Efficiency at Full Load	73% min. / 85% max.	
Isolation Voltage	(tested for 1 second)	10000VDC
	(rated for 1 minute)	5200VAC / 60Hz
Isolation Capacitance (tested at 100kHz)	6pF min. / 10pF max.	
Isolation Resistance	15G Ω min.	
Short Circuit Protection	Continuous	
Operating Temperature Range (free air convection)	-40°C to +100°C (see Graph)	
Storage Temperature Range	-55°C to +125°C	
MTBF (using MIL-HDBK 217F)	+25°C	4621x10 ³ hours
	+85°C	2446x10 ³ hours
Relative Humidity	95% RH	
Case Material	UL94-V0	Non-conductive black plastic
Potting Material	UL94-V0	Epoxy
Package Weight	2.0g	
Packing Quantity	28pcs per Tube	
Load Temperature	300°C max. 1.5mm from case for 10 sec.	

Package Style and Pinning (mm)

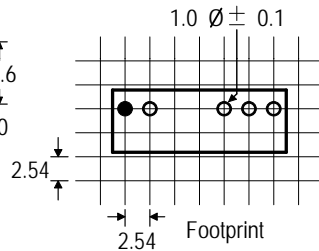
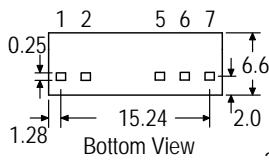
Micro Size 7 Pin SIP Package



Pin Connections

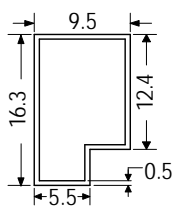
pin#	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
5	-Vout	-Vout
6	NP	COM
7	+Vout	+Vout

NP=No Pin



XX.X ± 0.25 mm
XX.XX ± 0.15 mm

Tube Outline Dimensions (mm)



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

