



BIAS Power Supply Module BPS 1 Series Data Sheet



Actual Size

The BPS 1 Power Supply Module is an ideal replacement for current standby power applications in appliances and consumer electronics. Also appropriate for low-power industrial and commercial applications. This low-cost supply provides up to one watt of output power at 8 or 14 VDC (V_o) and an optional 5 VDC (V_r) output to power standby functions such as a clock, microprocessor or remote control sensor. Incorporating a custom integrated circuit into a small package (0.5 in^3 [8.0 cm^3]) the BIAS Module provides an immediate “drop-in” solution, requiring no additional external components.

Features

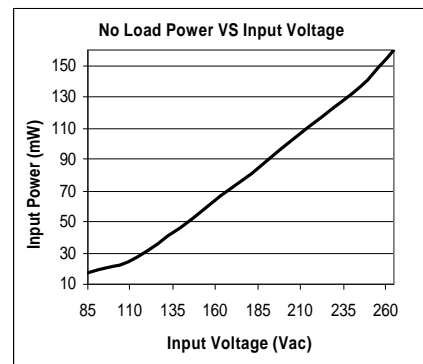
- Universal Input (85-265 VAC, 50/60Hz)
- Small Size— 0.5 in^3 [8.0 cm^3]
- Single Component Solution
- Very low no-load input power $< 30 \text{ mW}$
- 3000 VAC Isolation
- Up to 75% efficiency
- EN 55022, Class B; FCC Part 15, Class B
- Meets UL/CSA and EN Product Safety Requirements (ITE)



Operating Specifications

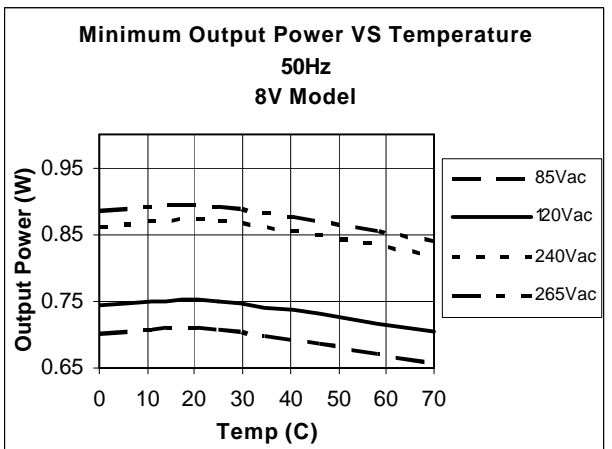
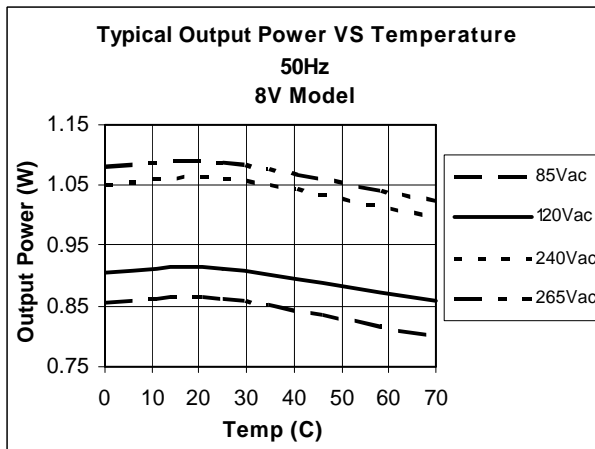
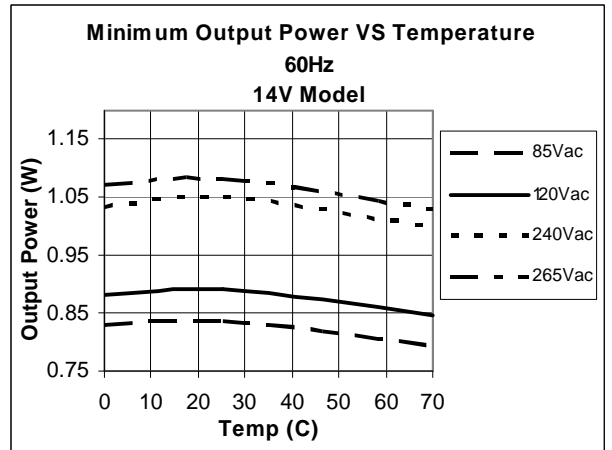
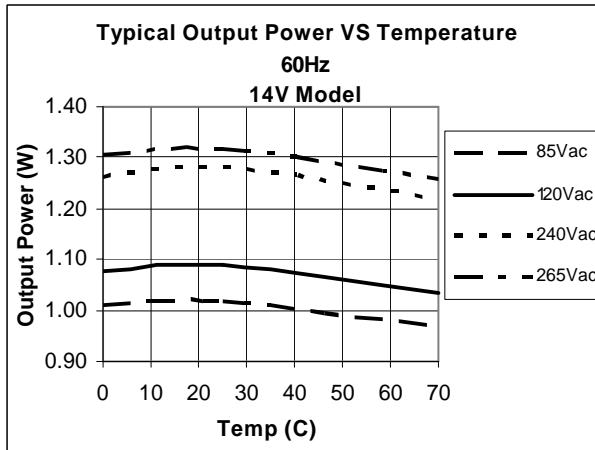
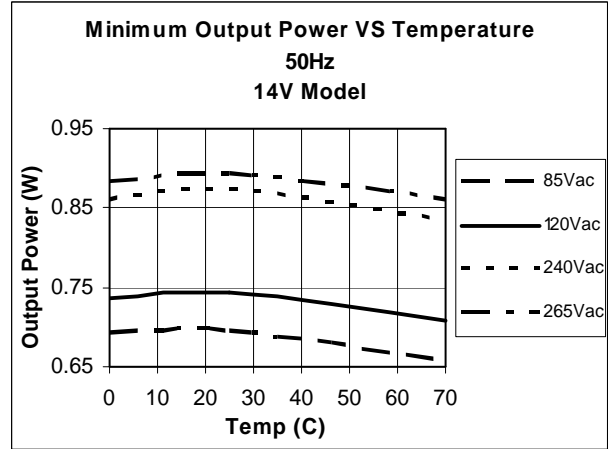
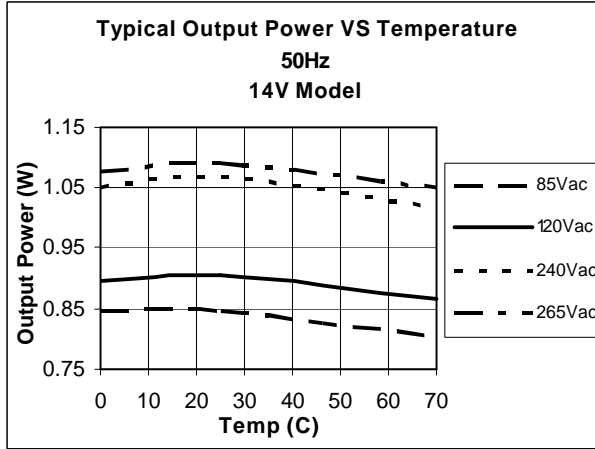
(@120VAC / 60 Hz / 25°C unless otherwise specified)

| Electrical | |
|--|--|
| Input Voltage Range | 85 - 265 VAC (50/60Hz) |
| Input Surge Withstand | 308V, < 30 sec |
| Output Power (Pmax) | 1 W min. (60Hz) 0.83 W min. (50Hz) |
| Efficiency | 75% nom. |
| Output V_o (Peak) | 8 or 14 VDC nom. +/- 5% |
| Line / Load Regulation V_o (Peak) | +/- 1% $P_o < P_{max}$ |
| Temperature Regulation V_o (Peak) | +/- 2% $P_o < P_{max}$ |
| Ripple V_o (@ 120 Hz) (@ 100 kHz) | 1.75 V p:p 0.25 V p:p |
| Output V_r | 5 VDC +/- 5%, $I_r \text{ out } 100 \text{ mA max}$ $I_{out} + I_r \text{ out} \leq 125 \text{ mA}$ |
| No-load Consumption | 30 mW typical @ $V_{in} = 120 \text{ VAC}$ |
| Isolation | 3000 VAC (meets UL / CSA & EN Product Safety) |
| Earth Leakage @ 120 VAC | < 10 μA |
| Short Circuit Protection | Continuous, $P_{in} = 0.7 \text{ w}$ @ $V_{in} = 120 \text{ VAC}$ |
| Reliability @ 25° C | > 200 Khr MTBF |
| Thermal | |
| Operating Temperature | 0 to 70° C |
| Operating Relative Humidity | 0 – 95%, non-condensing |
| Storage Temperature | -40 to 105° C |
| Mechanical | |
| Package Size (L x W x H) | 1.03 x 0.89 x 0.53 inches [26.2 x 22.6 x 13.5 mm] |
| Safety | |
| Safety Compliance ² | UL / EN 60950 (CB Report Available) |
| EMI Emissions | EN 55022, Class B, FCC Part 15, Class B |





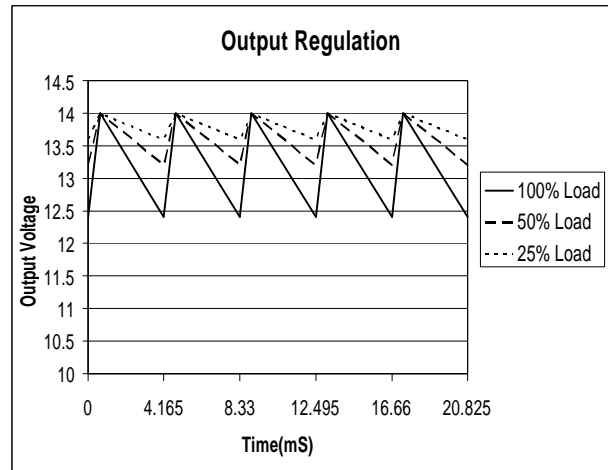
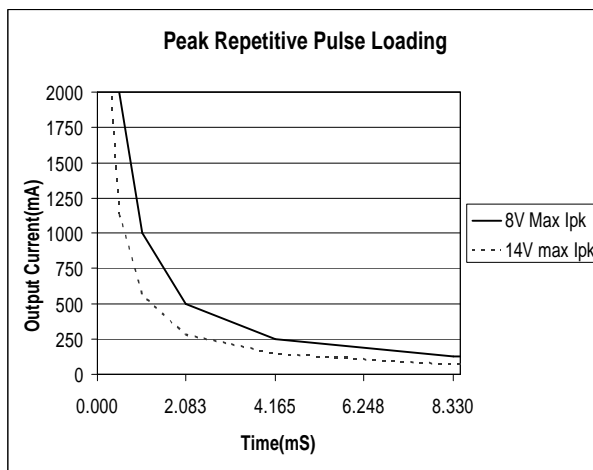
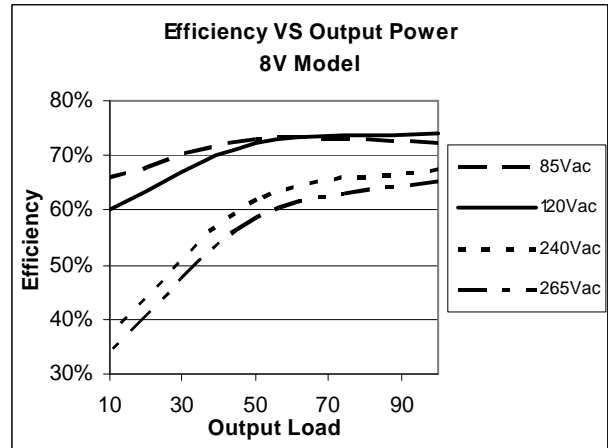
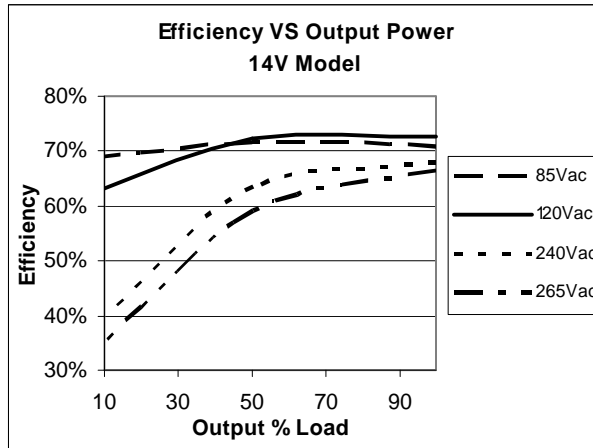
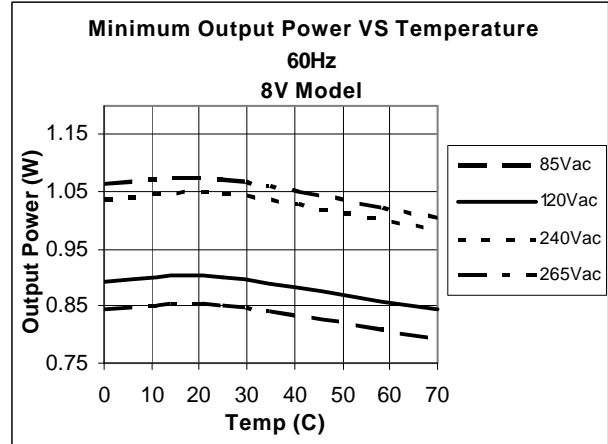
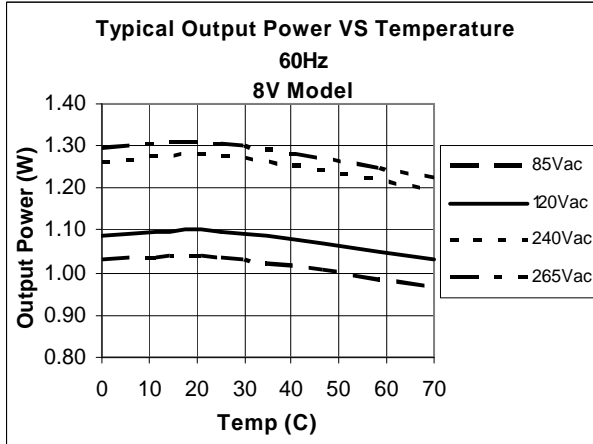
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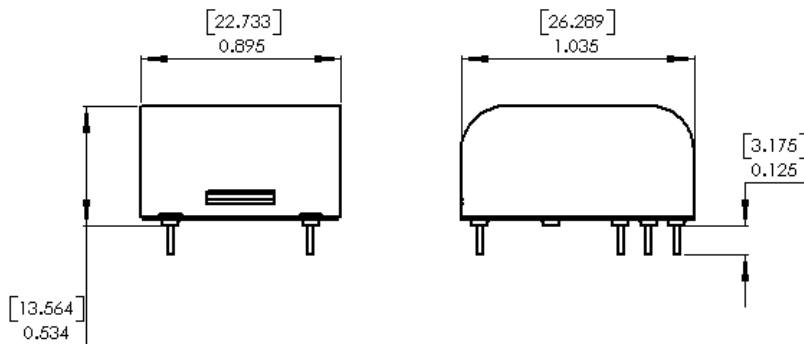


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Part Number Designation

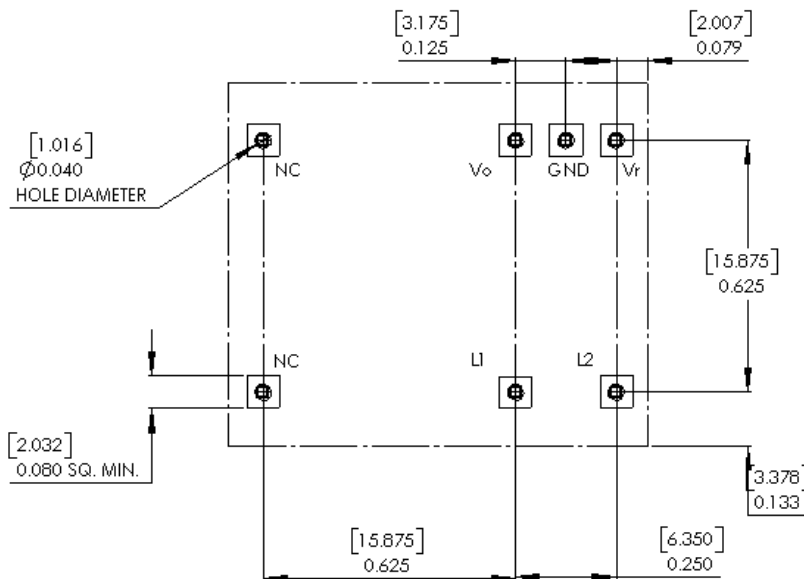
| Part Number | Output Configuration | Vo | Vr |
|-------------|----------------------|--------|-------|
| BPS 1-08-00 | Single output | 8 VDC | N/A |
| BPS 1-14-00 | Single output | 14 VDC | N/A |
| BPS 1-08-50 | Dual Output | 8 VDC | 5 VDC |

For custom configurations, contact BIAS Power.

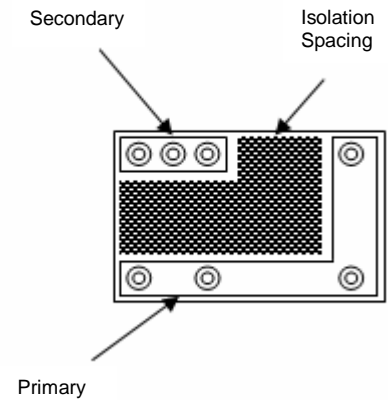


| PIN DESIGNATOR | DESCRIPTION |
|----------------|---------------|
| L1 | Input High |
| L2 | Input Low |
| N/C | No Connection |
| Vo | Output |
| GND | Ground |
| Vr | Vr Output |
| N/C | No Connection |

Recommended Land Pattern, top view



Isolation, Bottom View



- NOTES**
1. Pins 0.025" [0.63 mm] square
 2. Pins extend 0.125" [3.17 mm] below stand-offs