

Specifications and Application Information

LB957A Temperature Regulated Mounting Bracket



Preliminary

General Specifications:

The LB957A Temperature Regulated Mounting Bracket is used to extend the operating temperature range of LadyBug RF power sensors by adding controlled heat. The LB957A utilizes an integrated proportionally controlled heater for regulation, no external control is required. Heat is added when the sensor falls below 10°C and increases as the temperature drops. No heat is added above 15°C thereby allowing the broadest possible operating range for the sensors. The regulated heating system requires external power as specified in the table below. The heater power cable consists of two loose leads. Figure 1 shows typical expected performance.

LB957A bracket with temperature controller / sensor combination specifications:

Operating ambient temperature	-55 to 55 Degrees C (Bracket and Sensor)
*Storage ambient temperature	-55 to 55 Degrees C (Bracket and Sensor) (added)
*Humidity	15% to 95% Non-Condensing
*Altitude	10,000 Feet above sea level
Heater input voltage	5 Volts DC to 15 Volts DC depending upon required heat load.
Recommended heater voltage	12 Volts DC
Bracket heater automatic control range	Nominal: Maximum power 5°C and below Minimum power 8°C and above
Maximum power supply ripple	150 mv
Operating heater current	Maximum 1.06 A dc at 12 Volts – Varies with heat load
Maximum Heater output (watts)	16 Watts maximum output at 15 Volts approx. 1.06 amps
Minimum Heater output (watts)	0.06 Watts
Power cable specifications	2 Leads, Insulated, Stranded, 20 GA. 24 inches in length, Red for positive and black for negative. Specify other length, colors or jacketing as required. Termination: Unstripped Leads

*Note: May supersede the specifications shown in the sensor datasheet.

Application Information:

Due to the nature and variety of applications, the complete overall system temperature range may vary.

Mounting & cabling will play a significant role in the optimum system design. Mounting the bracket directly to an extremely cold surface such as the outside wall of a metal enclosure will limit the operating temperature range. The sensor should be installed either centered in the bracket or toward the RF Connector end to facilitate the optimum heat transfer. Circulation of extremely cold air will affect the system performance. RF cabling and direct DUT connectivity can draw significant heat from the sensor, an understanding of heat transfer through the RF connection is important to assure a successful implementation.

In cold environments, the sensor and bracket should remain powered.

Please consult LadyBug for assistance.

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Design views of the bracket are shown below.

