



Ballantine Laboratories, Inc.

1394A

Products Available

Voltage and Frequency Ranges

Model	Usable Voltage Range	Frequency Range
1394A-0.25	0.1 to 0.25V	5 Hz to 30 MHz
1394A-0.5	.16 to .67 V	dc, 10Hz to 100 MHz
1394A-1	.32 to 1.33 V	dc, 10Hz to 100 MHz
1394A-2	.63 to 2.66 V	dc, 10Hz to 100 MHz
1394A-3	.95 to 3.99 V	dc, 10Hz to 100 MHz
1394A-5	1.58 to 6.65 V	dc, 10Hz to 100 MHz
1394A-10	3.16 to 13.3 V	dc, 10Hz to 100 MHz
1394A-20	6.32 to 26.6 V	dc, 10Hz to 100 MHz
1394A-50	16 to 66.5 V	dc, 10Hz to 30 MHz

Replacement Thermal Elements

Thermal Elements for Ballantine TVC's

BLI P/N	Application
27-07946-1	5 mA .04% Reversal Error, used in 1394 and 1395, and 1396
27-10000-1	Option -10 for 1394, 1395 and 1396 TVC's 5 mA .005% Reversal Error

Thermal Elements for Micro Pot's

BLI P/N	Application
27-02951-0	5 mA, 0.2% R/E, used in 1351-05 housing
27-02952-0	10 mA, 0.2% R/E, used in 1351-10 housing
27-02953-0	15 mA, 0.2% R/E, used in 1351-15 housing
27-02954-0	25 mA, 0.2% R/E, used in 1351-25 housing
27-02955-0	50 mA, 0.2% R/E, used in 1351-50 housing
27-02975-0	100 mA, 0.2% R/E, used in 1351-100 housing

Input Impedance

200 W \pm 10% per nominal Volt.

Input Capacitance

5 pF nominal.



Calibration Uncertainty

Frequency response is calibrated with a standard converter traceable to NIST. Voltages are measured at a point equivalent to the center of a Type 874 Tee connected to the converter.

Frequency	Uncertainty of Correction Factor	Ref. Standard Uncertainty*
10 Hz to 20 Hz	\pm 0.0160%	\pm 0.013%
20 Hz to 20 kHz	\pm 0.0025%	\pm 0.0017%
20 kHz to 50 kHz	\pm 0.0040%	\pm 0.003%
50 kHz to 100 kHz	\pm 0.0065%	\pm 0.005%
100 kHz to 1 MHz	\pm 0.0095%	\pm 0.008%
1 MHz to 10 MHz	\pm 0.1%	\pm 0.1%
10 MHz to 30 MHz	\pm 0.2%	\pm 0.2%
30 MHz to 100 MHz	\pm 1.0%	\pm 1%

*Refers to combined uncertainties of NIST and Ballantine standards. Measurements Reference 23 °C \pm 1 °C.

Thermoelement

Nominal Heater Current: 5 mA rms,

Max. Heater Current: 7.5 mA rms

Couple Output: 7 mV \pm 12% at nominal heater current.

Couple Resistance: 8 W \pm 20%.

Maximum DC Reversal Error: \pm 0.04%

Couple Output Voltage to Heater (ground): \pm 50 V (dc + ac pk-pk) max.

Connectors

Signal Input: Type GR874PB

Couple Output: 3-pin male MS3102A-10SL-3P

Environmental

Operating Temperature: 4 °C to 40 °C, Operating Humidity:

0 to 90% RH, Operating Altitude: Sea level to 10,000 ft

Size & Weight

Dimensions: 5.08 cm (2") diam. x 11.8 cm (4-5/8") long, exclusive of connectors. Weight: 1.4 kg (3 lbs 1 oz)

Options

-10: \pm 0.005% DC Reversal Error Thermal Element

-11: 2 Pin Output Connector