

PART NUMBER  
SPEC-262

SPECIFICATIONS  
MODEL 262 LOW THERMAL VOLTAGE DIVIDER

Divider Ratio	Accuracy* 1 yr. 22°-24°C	Temperature Coefficient 18°C - 28°C	Output Noise (0.1Hz Bw)	Thermal Drift**
10 <sup>2</sup> :1	+35ppm	2ppm/°C	10nVpp	10nV
10 <sup>3</sup> :1	+35ppm	2ppm/°C	10nVpp	10nV
10 <sup>4</sup> :1	+100ppm	10ppm/°C	1nVpp	3nV
10 <sup>5</sup> :1	+100ppm	10ppm/°C	1nVpp	3nV

\* Referenced to output terminals.  
 \*\*For ambient temperature changes of  $\leq 1^\circ\text{C}/\text{Hr}$ . Includes effects of supplied cable.

INPUT RESISTANCE: 20k $\Omega$  for divider ratios of 10<sup>2</sup>:1 and 10<sup>4</sup>:1  
 200k $\Omega$  for divider ratios of 10<sup>3</sup>:1 and 10<sup>5</sup>:1

OUTPUT RESISTANCE: 2 $\Omega$  for divider ratios of 10<sup>4</sup>:1 and 10<sup>5</sup>:1  
 200 $\Omega$  for divider ratios fo 10<sup>2</sup>:1 and 10<sup>3</sup>:1

OVERLOAD PROTECTION: Maximum operating input voltage is 20V. Input is protected against 1000V overloads from calibrators with current limits up to 150mA.

CONTROLS: Polarity, divider ratio

CONNECTORS: Input: Five way binding posts for input, sense, and case ground.  
 Output: Special low thermal female connector. Mates with Models 1506, 1507, 1481 and 1482.

ENVIRONMENTAL LIMITS: Operating: 18°C to 28°C, up to 60% RH  
 Storage: -25°C to 65°C

DIMENSIONS, WEIGHT: 114 mm high x 165mm wide x 184mm deep (4-1/2 in. x 6-1/2 in. x 7-1/4 in). Net weight 2kg (4-1/2 lbs.).

ACCESSORIES SUPPLIED: Low thermal male to male cable (3 ft.) for connecting to Models 148 and 181.

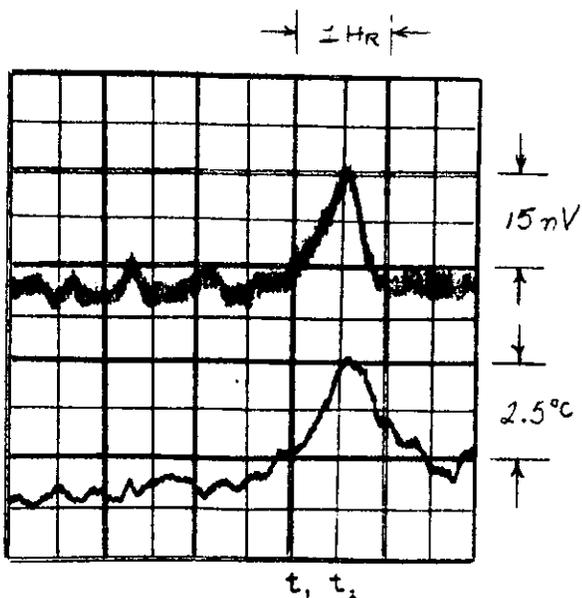
ACCESSORIES AVAILABLE: Model 1481 Low Thermal Twin Lead Shielded Input Cable (4 ft. with clips).  
 Model 1482 Low Thermal Twin Lead Shielded Input Cable (10 ft. with bare copper leads).  
 Model 1483 Low Thermal Connection Kit  
 Model 1484 Refill Kit for 1483 Kit  
 Model 1485 Female Low Thermal Input Connector  
 Model 1486 Male Low Thermal Input Connector  
 Model 1503 Low Thermal Solder and Flux  
 Model 1506 Low Thermal Triax Input Cable (4 ft. with clips).  
 Model 1507 Low Thermal Triax Input Cable (4 ft. with lugs).

LTR	REVISIONS	APP.	DATE	DRN. WZ	DATE 6-16-82	<b>KEITHLEY</b> Keithley Instruments Inc. Cleveland, Ohio 44139
A	2476 RELEASED	B	6-17-82	CKD. R.B.	DATE 6-17-82	
				APP. JS	DATE	
SPECIFICATIONS						PART NUMBER SPEC-262

Addenda

**Output Noise:** Source noise is measured over a 30 second interval. Use supplied cable when making measurements. When measuring noise of the 262 using the Model 148 (which has 1nV p-p noise spec), the total noise will not exceed 1.4nV p-p for 98.76% of the time.

**Thermal Drift:** Thermal drift is measured with the 262's polarity switch set to zero. Specifications apply to the Model 262 and supplied cable only. Thermal drift is a function of the rate of change of ambient temperature. Using a two channel chart recorder, monitor the rate of change of ambient temperature versus drift due to thermal EMFs. See example below:



$$\Delta t = t_2 - t_1 = 0.5 \text{ hr.}$$

$$\Delta V \Big|_{t_1}^{t_2} = 15 \text{ nV}$$

$$\Delta T \Big|_{t_1}^{t_2} = 2.5^\circ \text{C}$$

$$\Delta V / \Delta T / \Delta t = 15 \text{ nV} / 2.5^\circ \text{C} / 0.5 \text{ hr}$$

$$\Delta V / \Delta T / \Delta t = 3 \text{ nV} / ^\circ \text{C} / \text{hr}$$

LTR	REVISIONS	APP.	DATE	DRN. WZ	DATE
Δ	8476 RELEASED	B	6-17-82	CKD. R.B	DATE 6-17-82
				APP. JS	DATE

**KEITHLEY** Keithley Instruments Inc.  
Cleveland, Ohio 44139

SPECIFICATIONS

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SPEC-262

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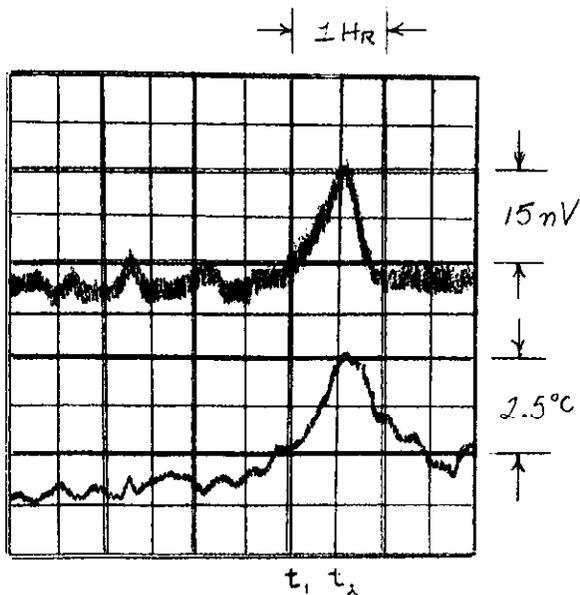
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Model 1486	Male Low Thermal Input Connector
Model 1503	Low Thermal Solder and Flux
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