SPECIFICATIONS

Description

The P6122 is a miniature, 10X, passive probe for use with dc to 100 MHz oscilloscopes. It is fully compatible with the Tektronix family of miniature probe accessories. The P6122 is available with 1.5, 2, and 3-meter cables.

Electrical Characteristics

Attenuation: 10X ±3% at dc. (Oscilloscope input must be 1 MΩ ±2%.)

Input Resistance (System): 10 MΩ ±2%. (See Figure 1.)

Input Capacitance (See Figure 1.):

1.5-Meter Probe	10 pF to 12 pF.
2-Meter Probe	10.7 pF to 13.3 pF.
3-Meter Probe	12.7 pF to 15.3 pF.

Compensation Range: 15 pF to 35 pF. (3-m version: 15 pF to 30 pF.)

System Bandwidth: DC to at least 100 MHz. (3-m version: 90 MHz.) on a TEKTRONIX 2235 or equivalent oscilloscope.

Maximum Nondestructive Input Voltage: 500 V (dc + peak ac) to 1.3 MHz. (See Figure 2 for voltage derating curve.)

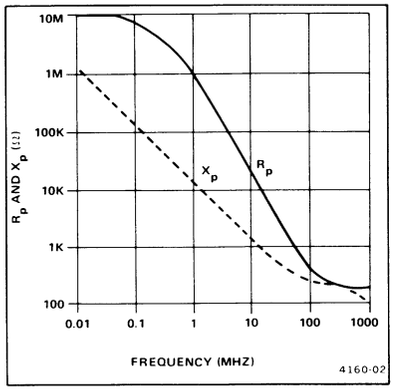

Figure 1. Typical X_p and R_p versus frequency.

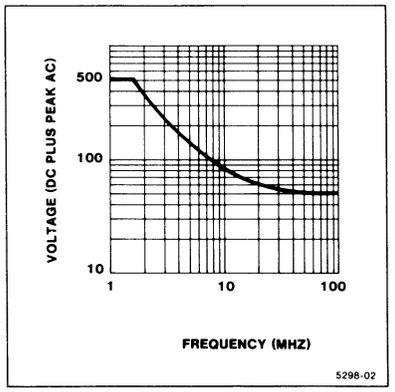

Figure 2. Typical voltage derating versus frequency.

Environmental Characteristics

Temperature Range (Operating): − 15° C to + 75° C (+ 5° F to + 167° F).

Temperature Range (Nonoperating): − 62° C to + 85° C (− 80° F to + 185° F).

Humidity: Five cycles (120 hr) at 95% to 97% relative humidity. Per Tek Standard 062-2847-00, Class 3. Ref to MIL-E-16400F, paragraph 4.5.9 through 4.5.9.5.1, class 4.

Physical Characteristics

Net Weight (Includes Accessories):

1.5-Meter Probe	85 g (3.0 oz).
2-Meter Probe	92 g (3.3 oz).
3-Meter Probe	105 g (3.7 oz).

Probe Cable Length: 1.5 m (4.9 ft), 2.0 m (6.6 ft), 3.0 m (9.8 ft).

Safety

To avoid explosion, do not operate this product in an explosive atmosphere unless it has been specifically certified for such operation.

This product meets the requirements of UL 1244.

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INSTRUCTION
SHEET
NO. 070-5512-00
PRODUCT GROUP 60

TEK PROBE AND ACCESSORIES

P6122

10X PASSIVE PROBE

GENERAL PURPOSE, MINIATURE

Tektronix®
COMMITTED TO EXCELLENCE

OPERATING CONSIDERATIONS

Probe Grounding. Inductance introduced by a long signal lead or ground lead will form a resonant circuit that will ring and distort the true waveform if driven by a signal containing significant frequency components at or above resonance. The ground lead and signal-input connections should be as short as possible to maintain the best waveform fidelity.

Probe Compensation. Due to variations in oscilloscope input characteristics, probe low-frequency compensation should be checked and adjusted after moving the probe from one input to another. To adjust l-f compensation, apply the probe tip to a square-wave signal of 1 kHz (such as an oscilloscope calibrator output). Using a low-reactance alignment tool, adjust the probe compensation capacitor through the hole in the compensation box to obtain the squarest waveform front-corner. High-frequency compensation seldom requires adjustment. However, if the probe has excessive h-f aberrations or insufficient bandwidth, h-f adjustments can be made through holes in the compensation box inner metal shield (the outer plastic shell must first be removed). Use a 50-Ω terminated, 100 kHz square-wave signal.

WARNING

The following servicing instructions are for use by qualified personnel only. To avoid electrical shock, do not perform any maintenance while the probe is connected to a signal source.

MAINTENANCE

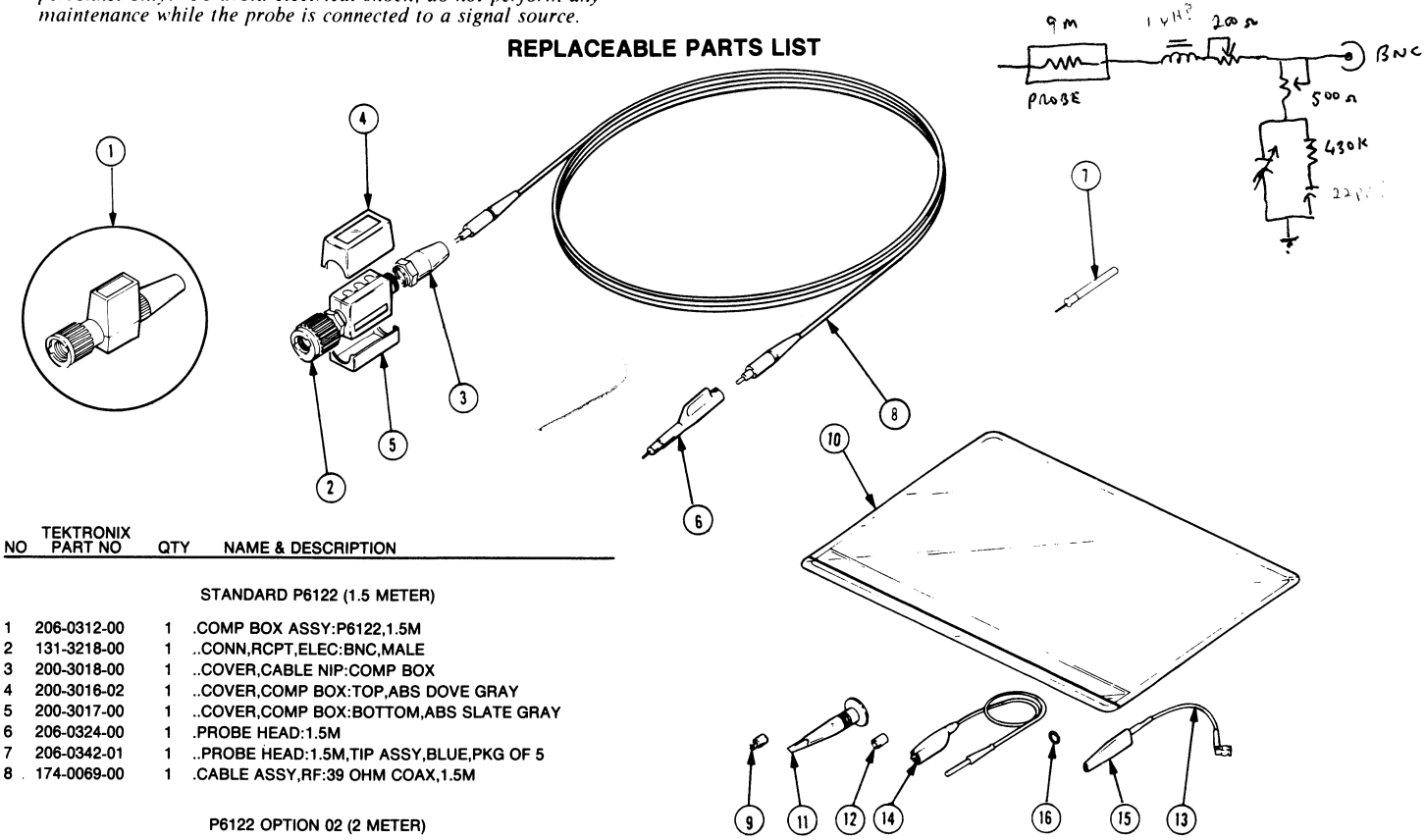
Cleaning. Accumulated dirt can be removed with a soft cloth dampened with a nonresidue type cleaner, preferably isopropyl alcohol. Before using any other type of cleaner, consult your Tektronix Service Center or representative. In particular, avoid benzine, toluene, xylene, acetone, or similar solvents.

Probe Module Replacement. Modular construction has been used to simplify repair. The probe head, tip assembly, compensation box, and cable are available as separate units through your local Tektronix Field Office or representative. Individual components within the compensation box are not replaceable. The probe head simply pulls away from the cable. To remove the compensation box, unscrew the retainer then pull on the cable until it separates from the box. The procedure for replacing the tip assembly is included in the package of replacement tips.

ADDITIONAL INFORMATION

Detailed performance checks, adjustment and maintenance procedures, and descriptions of the probe accessories are available in the optional P6122 Instruction Manual (part number: 070-4431-01).

REPLACEABLE PARTS LIST



NO	TEKTRONIX PART NO	QTY	NAME & DESCRIPTION
			STANDARD P6122 (1.5 METER)
1	206-0312-00	1	.COMP BOX ASSY:P6122,1.5M
2	131-3218-00	1	..CONN,RCPT,ELEC:BNC,MALE
3	200-3018-00	1	..COVER,CABLE NIP:COMP BOX
4	200-3016-02	1	..COVER,COMP BOX:TOP,ABS DOVE GRAY
5	200-3017-00	1	..COVER,COMP BOX:BOTTOM,ABS SLATE GRAY
6	206-0324-00	1	.PROBE HEAD:1.5M
7	206-0342-01	1	..PROBE HEAD:1.5M,TIP ASSY,BLUE,PKG OF 5
8	174-0069-00	1	.CABLE ASSY,RF:39 OHM COAX,1.5M
			P6122 OPTION 02 (2 METER)
1	206-0318-00	1	.COMP BOX ASSY:P6122,2M
2	131-3218-00	1	..CONN,RCPT,ELEC:BNC,MALE
3	200-3018-00	1	..COVER,CABLE NIP:COMP BOX
4	200-3016-03	1	..COVER,COMP BOX:TOP,ABS DOVE GRAY
5	200-3017-00	1	..COVER,COMP BOX:BOTTOM,ABS SLATE GRAY
6	206-0325-00	1	.PROBE HEAD:2M
7	206-0343-01	1	..PROBE HEAD:2M,TIP ASSY,YELLOW,PKG OF 5
8	174-0070-00	1	.CABLE ASSY,RF:39 OHM COAX,2M
			P6122 OPTION 3 (3 METER)
1	206-0318-01	1	.COMP BOX ASSY:P6122,3M
2	131-3218-00	1	..CONN,RCPT,ELEC:BNC,MALE
3	200-3018-00	1	..COVER,CABLE NIP:COMP BOX
4	200-3016-04	1	..COVER,COMP BOX:TOP,ABS DOVE GRAY
5	200-3017-00	1	..COVER,COMP BOX:BOTTOM,ABS SLATE GRAY
6	206-0326-00	1	.PROBE HEAD:3M
7	206-0344-01	1	..PROBE HEAD:3M,TIP ASSY,RED,PKG OF 5
8	174-0071-00	1	.CABLE ASSY,RF:39 OHM COAX,3M

NO	TEKTRONIX PART NO	QTY	NAME & DESCRIPTION
			P6122 ACCESSORIES
9	015-0201-07	-	TIP,PROBE:IC TEST(PACK OF 10)
	015-0201-08	-	TIP,PROBE:IC TEST(PACK OF 100)
10	016-0708-00	1	POUCH,ACCESSORY:
11	013-0107-05	1	TIP,PROBE:RETRACTABLE HOOK
12	166-0404-01	1	COVER,GROUND
13	195-6176-00	1	LEAD,ELECTRICAL:PROBE GND,3.5 INCHES
14	195-1870-00	1	LEAD,ELECTRICAL:PROBE GND,8.8 INCHES
15	344-0046-00	1	CLIP,ELECTRICAL:ALLIGATOR
16	334-2794-02	2	BAND,MARKER:SILVER GRAY
	070-5512-00	1	INSTRUCTION SHEET

Part Numbers and descriptions are for the probe shipped with this Instruction Sheet. For a Parts List which includes a history of part changes and original manufacturer part numbers, refer to the optional Instruction Manual (070-4431-01).