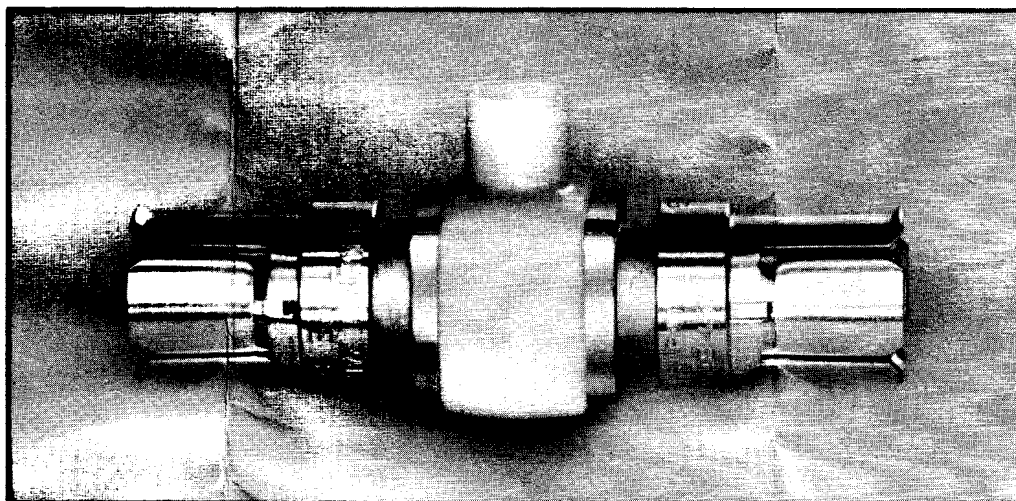


# INSTRUCTION SHEET



## VP-2 VOLTAGE PICKOFF

50 OHM

The Tektronix VP-2 is a special 50  $\Omega$  'T' type pickoff for use with the Tektronix P6038 Direct Sampling Probe. The in-line portion of the 'T' is fitted with GR Type 874 connectors and the pickoff point is a receptacle for the probe tip.

When used with the P6038 Probe, the VP-2 allows signal pickoff from a 50  $\Omega$  system with minimum disturbance of the system characteristics. This provides a convenient means of obtaining a signal for the vertical sampling unit from a closed 50  $\Omega$  system. The insertion voltage loss due to the VP-2 and P6038 will be about 0.05%. Distortion of the vertical signal or the signal in the 50  $\Omega$  system will be negligible if the probe is properly compensated and the system is properly terminated. Since the VP-2 offers a low input impedance to the probe, it can be used to calibrate the P6038 Probe.

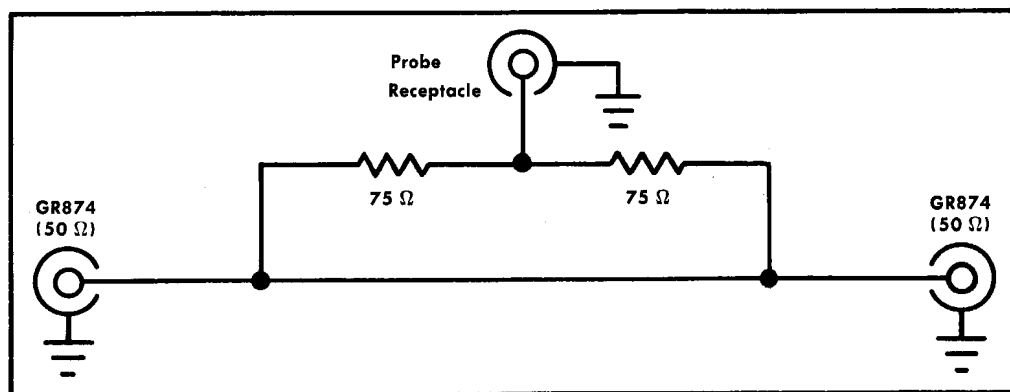
Reflection coefficient of the VP-2 alone is about 4% inductive. With the P6038 Probe inserted into the VP-2, the reflection coefficient is about 6% capacitive (measured

with test system having  $T_r$  (risetime) of 150 psec). VSWR of the VP-2 only at 1 Gc is typically 1.1; with the P6038 Probe inserted, typically 1.14.

The source impedance at the probe receptacle is about 62.5 ohms. This is comprised of the 37.5  $\Omega$  resistance of the VP-2 (see schematic) in series with the 25  $\Omega$  terminated impedance of the VP-2 input and output

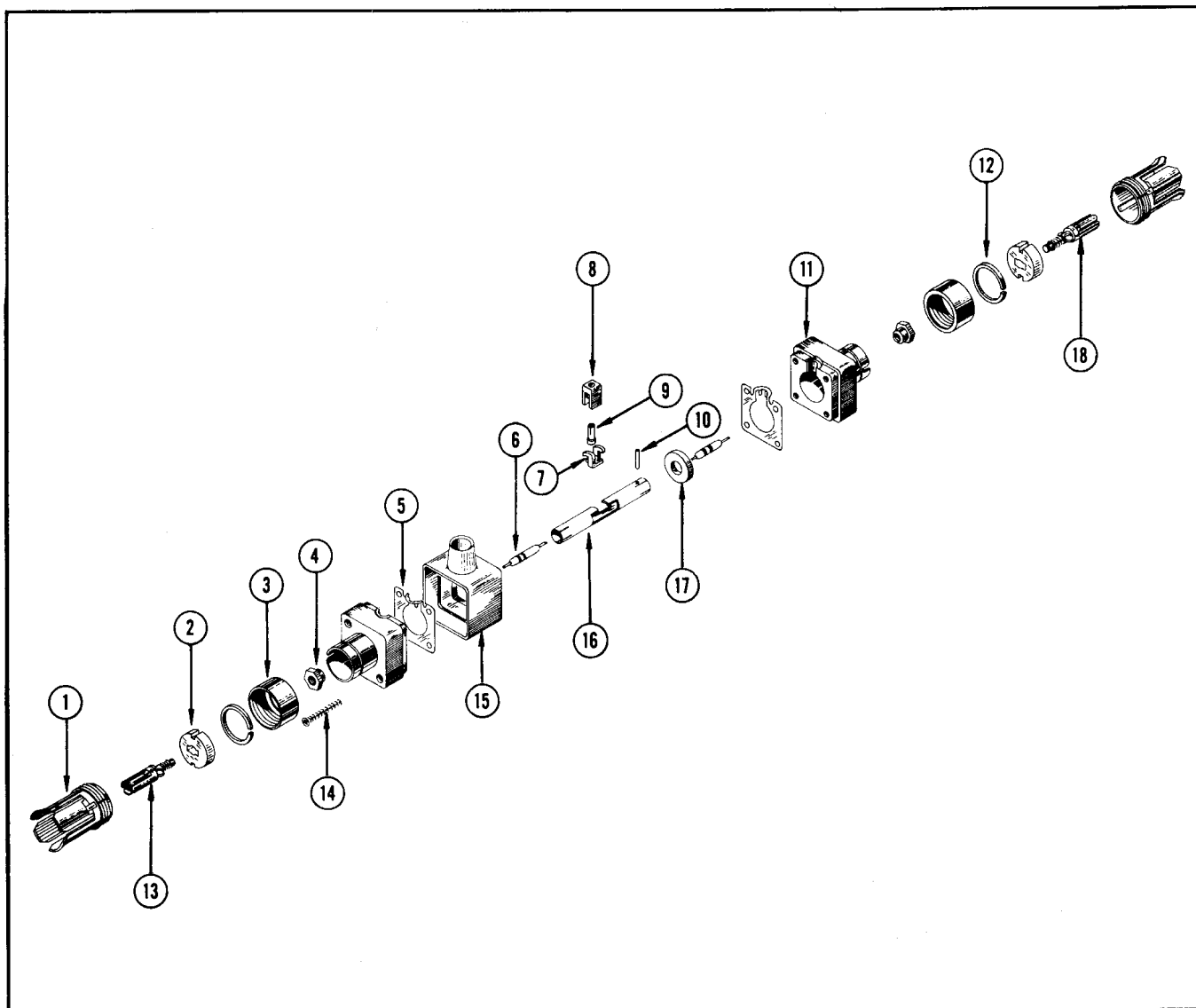
The VP-2 compensates for the small shunt capacitance (2 pf) added by the P6038 Probe so that minimum discontinuity is introduced into the 50  $\Omega$  system. If the probe is removed from the VP-2, the VP-2 will appear as a small inductor connected in series with the 50  $\Omega$  system. For this reason, remove the VP-2 from the system when not in use.

All of the plug-on accessory heads supplied with the P6038 Probe can be used with the VP-2 Voltage Pickoff. See the P6038 Instruction Manual for input characteristics of these accessories.



Schematic of VP-2 Voltage Pickoff.

VP-2 50 OHM VOLTAGE PICKOFF (Part No. 017-077)



REF. NO.	PART NO.	SERIAL/MODEL NO.		QTY.	DESCRIPTION
		DISC.	EFF.		
1	132-002			2	SLEEVE, conductor, outer
2	132-028			2	INSULATOR
3	132-001			2	NUT, coupling
4	220-418			2	NUT, connector, with 8-32 threads
5	344-096			2	CLIP, grounding
6	321-085			2	RESISTOR, 75 $\Omega$ , 1/8 W, prec., 1%
7	432-051			1	BASE, insulator
8	351-076			1	GUIDE, connector
9	166-364			1	SLEEVE, contact
	214-430			1	CONTACT, base
10	214-110			1	PIN, roll
11	204-170			2	BODY, signal pickoff
12	132-007			2	SNAP RING
13	132-029			1	INNER CONDUCTOR
14	211-076			4	SCREW, 2-56 x 5/8 inch, OHS
15	354-229			1	RING, probe support
16	166-365			1	SLEEVE, connector
17	210-977			1	WASHER, guide
18	132-123			1	INNER CONDUCTOR (with hole)