Quick selection guide

For logic analyzer pod connection	Connection to system under test	Single-ended* or differential	Number of channels	Agilent model number or part number	Page
40-pin	Flying leads	Single-ended	17	E5383A	12
40-pin	Pro Series soft touch	Single-ended	34	E5404A	21
40-pin	Half-size soft touch	Single-ended	17	E5396A	23
40-pin	Soft touch connectorless	Single-ended	34	E5394A	20
40-pin	Samtec connector	Single-ended	34	E5385A	28
40-pin	Mictor connector	Single-ended	34	E5346A	28
40-pin	Mictor connector	Single-ended, low voltage	34	E5339A	28
40-pin	Mictor connector	Single-ended, no isolation networks	34	E5351A	32
90-pin	Flying leads	Single-ended	17	E5382A	61
90-pin	Flying leads	Differential	17	E5381A	64
90-pin	Pro Series soft touch	Differential	17	E5405A	42
90-pin	Pro Series soft touch	Single-ended	34	E5406A	42
90-pin	Half-size soft touch	Single-ended	17	E5398A	52
90-pin	Soft touch connectorless	Single-ended	34	E5390A	43
90-pin	Soft touch connectorless	Differential	17	E5387A	41
90-pin	Samtec connector	Single-ended	34	E5378A	57
90-pin	Samtec connector	Differential	17	E5379A	57
90-pin	Mictor connector	Single-ended	34	E5380A	59

* Isolation networks are included unless designated otherwise.

E5383A 17-Channel Single-Ended Flying Lead Probe

Ideal when only a few lines may need to be probed or probe points are distributed across a target. The E5383A includes a set of 20 IC test clips and five ground leads.

Logic Analysis General-Purpose Probes

General-purpose probing requires connecting probe leads to individual signal lines. This method is most convenient for a small to moderate number of signals, very flexible, and can be used in conjunction with other probing methods.

Note: Any probed signal line must be able to supply a minimum of 600 mV to the probe with the specified loading.

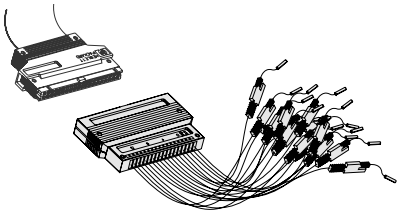

Figure 4.2. E5383A 17-channel probe lead set

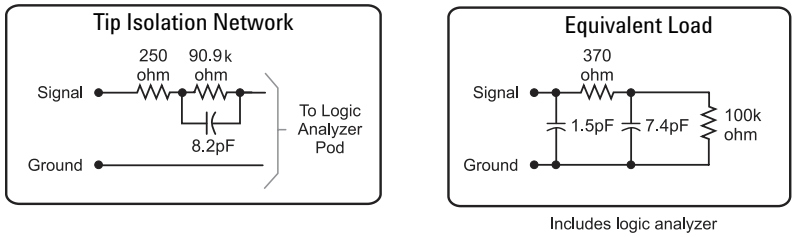

Figure 4.1. Probe tip Isolation network and equivalent load

The Standard Probing System

The standard probing system consists of IC clips, probe leads, probe housing and probe cable. Because it is passive, the standard probing system is smaller, lighter, and much easier to use than active probing systems. This passive probing system is similar to a probing system used on a high frequency oscilloscope. It consists of an isolation network (as shown in Figure 4.1) at the probe tip and a shielded resistive transmission line. The advantages of this system are:

- High input impedance. See Figure 4.1.
- Signal ground at the probe tip for high-speed signals.
- Inexpensive, removable probe tip assemblies.

Probe Leads and Lead Sets

Probe leads are configured into lead sets, which can probe 16 data channels with ground, one clock channel, and a common ground. A 17-channel probe lead set (E5383A) is shown in Figure 4.2, along with the replacement part numbers for individual components in Figure 4.3.

Each probe lead is a 12-inch, twisted-pair cable connected to the probe cable at the probe housing (see Figure 4.3). The probe tip includes a signal lead, a connector for a ground lead, and the isolation network.

The signal and ground leads can be connected directly to the target system. This requires installing 0.63 mm (0.025 in) square pins, or round pins with a diameter of between 0.66 mm (0.026 in) and 0.84 mm (0.033 in) directly on the board. An IC test clip can also be used. The same specifications apply for the pin dimensions of the test clip. (See Figure 4.6 for IC test clips available from Agilent.)

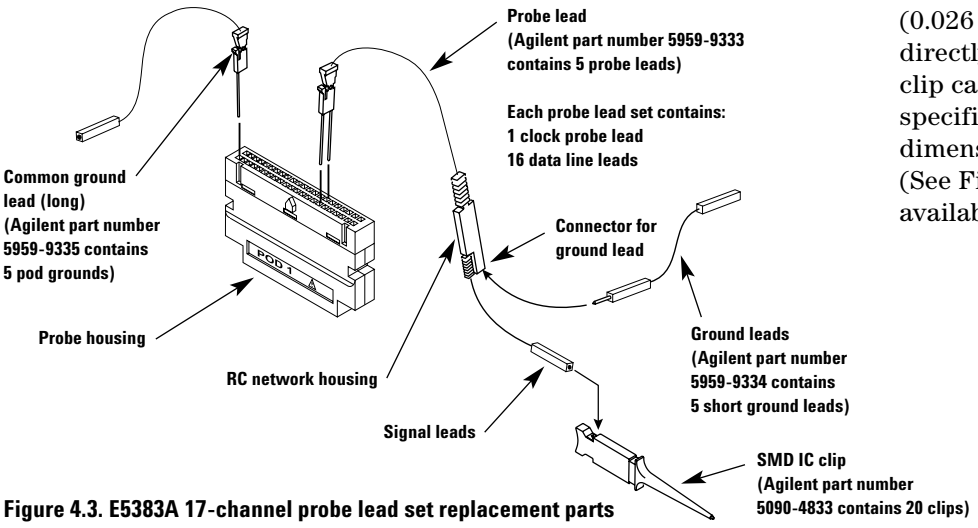

Figure 4.3. E5383A 17-channel probe lead set replacement parts