

Miniature Skin Current Probe

<u>Datasheet</u>



Introduction

The F-97 skin current probe permits quantitative measurements of currents flowing on flat or curved surfaces, wires, and printed circuit board traces. Surface currents can be mapped quickly and easily because the probe is sensitive to the direction of skin current flow. The maximum sensitivity is in the direction perpendicular to the current flow. RF currents flowing on printed wiring boards can be easily mapped for the sources of emissions, their magnitudes, and currents in traces. The probe can be calibrated for the current under the footprint of an enclosure or surface. A surface is mapped by orienting the probe for its maximum sensitivity and then repeating the measurement after moving the probe to the next location. The dielectric base minimizes the probes disturbance to normal current flow to 10% or less.

F-97 Miniature Skin Current Probe

The transfer impedance has a 3 dB bandwidth of 40 MHz to 1,500 MHz with a magnitude of 0.45Ω when used as a surface probe. It is usable to lower frequencies with reduced sensitivity. A typical transfer impedance curve is shown. CW current amplitudes up to 10 amperes and pulse currents up to 100 amperes will not alter the transfer impedance characteristics. The probe connector is SMA. The probe dimensions are 7.62 mm wide, 10.16 mm long and 12.7 mm high.





F-96 Miniature Skin Current Probe

The transfer impedance has a 3 dB bandwidth of 8 MHz to 450 MHz with a magnitude of 1.26 Ω when used as a surface probe. It is usable to lower frequencies with reduced sensitivity. Typical transfer impedance curves are shown at the right for both a surface and a wire. CW current amplitudes up to 10 amperes and pulse currents up to 100 amperes will not alter the transfer impedance characteristics. The probe connector is SMA. The probe dimensions are 10.2 mm wide, 20.3 mm long, and 25.4 mm high.

