Voltage Derating Curve

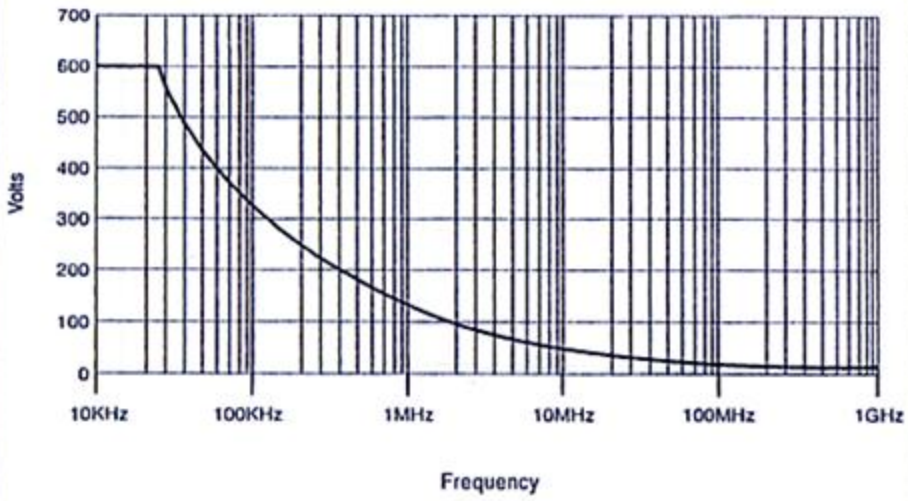

Fig.1

Oscilloscope Probe Kit
Model. HP-9150

CE

Introduction

The HP-9150 is a passive high impedance oscilloscope probe designed and calibrated for use with instruments having an input impedance of 1 MΩ shunted by 20 pF. However, it may be compensated for use with instruments having an input capacitance of 10 to 35 pF.
The probe incorporates a three position slide switch in the head which selects attenuation of x1, x10 or a ground reference position.

Safety Instructions

Review the following safety precautions to avoid injury and prevent damage to this product or any products connected to it.

- To avoid potential hazards, use this product only as specified.
- The common terminal is at ground potential. Do not connect the common terminal to elevated voltages.
- Do not operate in an explosive atmosphere.
- Keep product surfaces clean and dry.
- If your probe requires cleaning, disconnect it from the instrument and clean it with mild detergent and water. Make sure the probe is completely dry before reconnecting it to the instrument.

Compensation Adjustment

The following adjustment is required whenever the probe is transferred from one oscilloscope or input channel to another. Connect the probe to the oscilloscope and select x10 position on the probe switch. Apply a 1KHz square wave to the probe tip, or connect to the cal socket on the oscilloscope to display a few cycles of the waveform and adjust the trimmer located in the BNC plug for a flat topped square wave.

Specifications

Position X10	
Attenuation Ratio	10:1
Bandwidth	DC to 150MHz
Rise Time	2.3nS
Input Resistance	10MΩ when used with oscilloscopes which have 1MΩ input.
Input Capacitance	Approx. 17 pF
Compensation Range	10 to 35 pF
Working Voltage	600V CAT I , 300V CAT II (DC + peak AC) derating with frequency (see Fig.1)
Position REF	
Probe tip grounded via 9MΩ resistor, oscilloscope input grounded.	
Position X1	
Attenuation Ratio	1:1
Bandwidth	DC to 6MHz
Rise Time	58nS
Input Resistance	1MΩ (oscilloscope input resistance)
Input Capacitance	47 pF plus oscilloscope capacitance
Working Voltage	300V CAT I , 150V CAT II (DC + peak AC) derating with frequency
Operating Temperature	-10°C to +55°C
Humidity	85% RH or less (at 35°C)
Safety	Meets EN61010-031 CAT II
Cable Length	1.2 Meter

Accessories

Description	Part No.
Channel Identifier Clip	PA-105
Sprung Hook	PA-106
Ground Lead	PA-107
Insulating Tip	PA-108
IC Tip	PF-902
Adjusting Tool	PF-903
Measuring Tip	PA-102
Sprung Earth Tip	PF-905