TT-SI 800

800MHz DIFFERENTIAL PROBE

USER'S MANUAL

1. General Safety Summary

To review the following safety precautions to avoid injury and prevent damage to this probe or any products which connected to it.

Observe Maximum Working Voltage

To avoid any injury, do not use the probe above 40V between each input lead and earth or between the two inputs.

Do Not Operate Without Covers

To avoid electric shock or fire hazard, do not operate this probe with covers removed.

Do Not Operate in Wet/Damp Conditions

To avoid electric shock, do not operate this probe in wet of damp conditions.

Do Not Operate in Explosive Atmosphere

To avoid injury or fire hazard, do not operate this probe in an explosive atmosphere.

Avoid Exposed Circuitry

To avoid injury, remove jewelry such as rings, watches, and other metallic objects. Do not touch exposed connections and components when power is present.

Use Proper Power Source

To use the 12VDC/100mA mains adaptor. Do not operate this probe from a power source that applies more than the voltage specified.

Do Not Operated With Suspected Failures

If You Suspect there is damage to this probe, have it inspected by qualified service personnel.
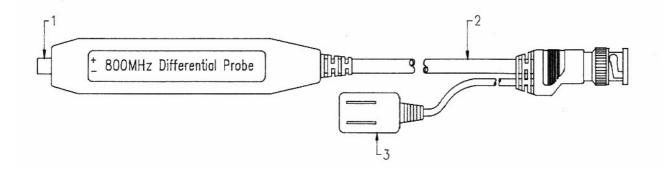
2. Description

With high bandwidth and high CMRR, this differential probe is ideal for timing analysis or troubleshooting ground bounce problem of high speed logic and for design verification of disk drive, as well as for wireless and data communication design.

3. Installaton

a. Simply plug-in the BNC output connector to the vertical input of a general purposed oscilloscope.
b. Connect AC mains adaptor to the correct line voltage, and then connect its output to the power terminal of the differential probe.
c. Adjust the vertical offset (or position) of the oscilloscope.

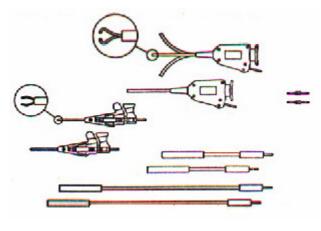# 4. Appearance

The differential probe looks as follows.

(1) Input Pins	The input pins of the differential probe can be connected directly to the circuit under test or connected to optional accessories that comes with the probes.
(2) Output Lead.	The BNC output connector.
(3) Power Plug	The terminal connects to 12VDC/50mA mains adaptor.

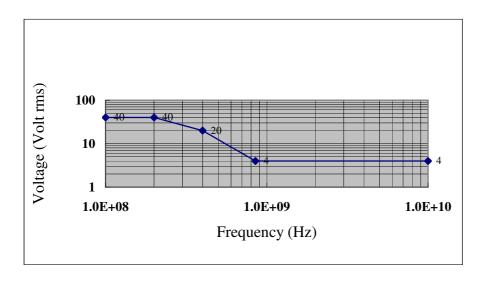# 5. SMD Micro tests accessories

Descriptions	Quantity
MicroFlex Pincer, Black	1
MicroFlex Pincer, Red	1
Micro Test Clip, Black	1
Micro Test Clip, Red	1
MicroLead, 0.8mm J-P, 5cm, Black	1
MicroLead, 0.8mm J-P, 5cm, Red	1
MicroLead, 0.8mm J-P, 10cm Black	1
MicroLead, 0.8mm J-P, 10cm Red 1	1
Twin Pin, 16.8mm	2
Twin Pin, 12.8mm	2
Test Tip, 0.8mm	6

6. Specifications

Bandwidth	DC to 800MHz (-3db)
Accuracy	±2%
Input Impedance	100kΩ//2pF
Attenuation	1/10
Input Voltage	
- Max. Differential	±15V
- Max. Common Mode	±30V
- Absolute Max. Voltage	±40V
Output Voltage	
- Swing (into 50Ω load)	±1.5V
- Offset (typical)	<±5mV
Output Impedance (typical)	50Ω
CMRR (typical)	60dB@60Hz, 15dB@500MHz
Output BNC Cable	1.2M
Power Requirements	12VDC/50mA mains adaptor
Ambient Operating Temperature	-10 to 40℃
Ambient Storage Temperature	-30 to 70℃
Ambient Operating Humidity	25 to 85% RH
Ambient Storage Humidity	25 to 85% RH
Weight	130gms
Dimension (LxWxH)	111mmx22mmx14mm

7. Derating Cureve

The derating curve of the absolute maximum input voltage in common mode is shown as follows;

8. Inspection Procedure

a. Connect the output BNC connector to the vertical input of a general purposed oscilloscope.

b. Connect AC mains adapter.

c. Set the oscilloscope input coupling to DC and the 0.5V/div. Center the trace on the display.

d. Connect the input pins of probe to a function generator and select a square-wave output with 10Vp-p amplitude and 100kHz frequency.

e. Then, a 100kHz square-wave of 1Vp-p amplitude will be displayed on the screen of the oscilloscope and this means the probe is working properly.

9. Cleaning

Use a soft cloth to clean the dirt. Prevent damage to probe.

a. Avoid immersing the probe.

b. Avoid using abrasive cleaners.

c. Avoid using chemicals contain benzene or similar solvents.

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