

Keysight N2887A and N2888A InfiniiMax Soft Touch Probe Head Data Sheet



N2887A InfiniiMax Soft touch Pro probe head



N2888A InfiniiMax Soft touch half-channel probe head



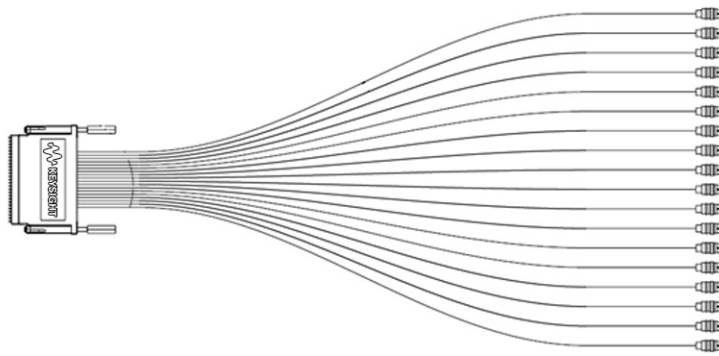
Introduction

Keysight Technologies, Inc. has developed connectorless logic analyzer probes based on Soft touch probing technology. Connectorless logic analyzer probing removes the connector that is traditionally attached to the target board and replaces it with an array of probe pods. This reduces the probe load on the target by eliminating the loading associated with the physical body of the connector.

The N2887A and N2888A InfiniiMax Soft touch probe heads adapt from the Keysight Pro Series (N2887A) or Half-channel (N2888A) Soft Touch Connectorless Logic Analyzer foot print to the GPO input connectors of the Keysight InfiniiMax 1130A-1134A and 1168A-1169A Series probe amplifier, enabling users to perform high bandwidth (up to 4 GHz), high density, multi-channel probing. The InfiniiMax Soft touch probe heads offer significant benefits in reliability, ease-of-use and space savings provided by the Soft touch probing technology and the award-winning InfiniiMax active probes. Each adapter can support both the Soft Touch single-ended and differential footprints and pin-outs. The support of both single-ended and differential signals is achieved by either plugging a single-ended channel (one connector) into the “+” input of the InfiniiMax amplifier or by plugging the differential complements (2 connectors) into the appropriate “+” and “-“ inputs of the InfiniiMax amplifier. There exists a 1:1 mapping of Soft-touch signal and clock lines to InfiniiMax amplifier input GPO connectors—a total of 36 or 18 GPO connectors is necessary to support the possible configurations for N2887A and N2888A respectively.

The probe adapter attaches to the PC board using a retention module which ensures pin-to-pad alignment and holds the probe in place. A kit of five retention modules is shipped with each InfiniiMax Soft touch probe head. Additional kits can be ordered using Keysight part numbers, E5405-68702 for Soft touch Pro probe head and E5396-68702 for Soft touch Half-channel probe head.

Refer to the “Keysight Technologies E5400-Pro Series Soft Touch Connectorless Probes” user’s guide with the Keysight literature number E5404-97006 for details of the Pro Series and Half-channel pin-outs, footprint dimensions, keep-out areas, et cetera.



Characteristics

Bandwidth(-3dB)	4 GHz
Flatness	+/- 5%
Single Ended Equivalent Load Capacitance	<1 pF
Differential Equivalent Load Capacitance	<0.5 pF
Single Ended Input Impedance	25 kΩ
Differential Input Impedance	50 kΩ
Channel to Channel Coupling	<-35 dB to 1.7 GHz, <-20 dB to 4 GHz
Channel to Channel skew*	<15 psec (typical)
Compatible Keysight InfiniiMax probes	1130A, 1131A, 1132A, 1134A, 1168A and 1169A

*Use N2887-60002 deskew and performance verification fixture to eliminate timing skew between channels.

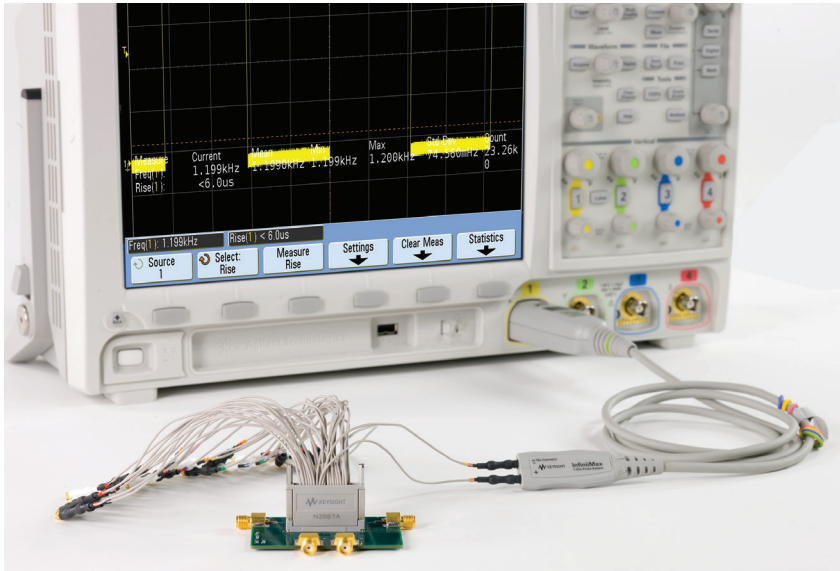


Figure 1 The N2887A InfiniiMax Soft touch Pro probe head (the InfiniiMax probe amplifier is not included)

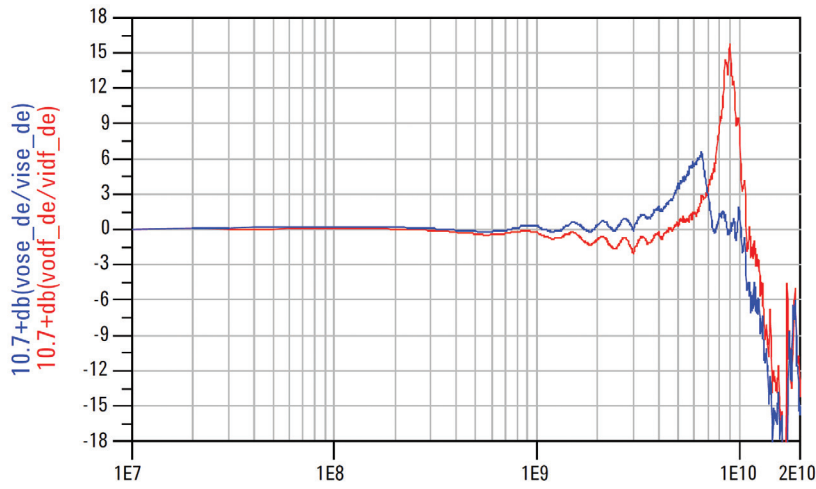


Figure 2 Frequency response of the N2887A, red = Single-ended, blue = Differential

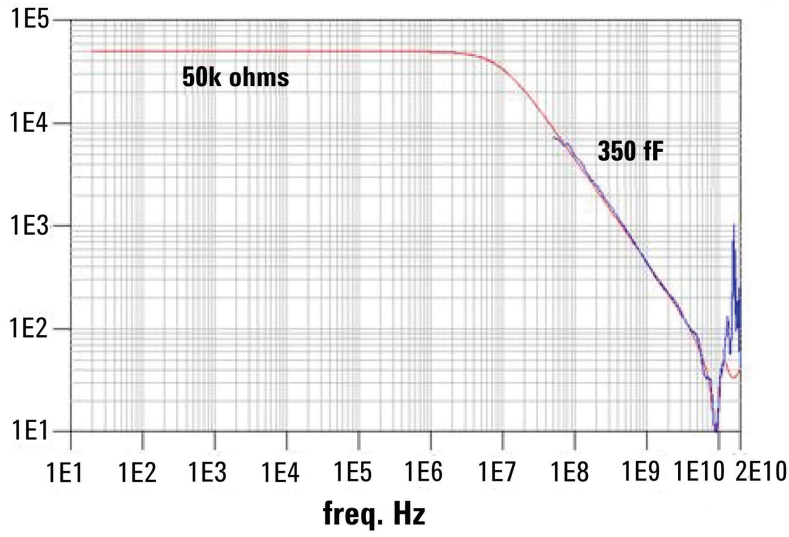


Figure 3 Differential Input Impedance plot, input C = ~0.72 pF



Figure 4 Time domain differential probe response, purple = input of the probe, green = probe output, using Keysight 1169A InfiniiMax probe and DSO81304B 13 GHz oscilloscope



Figure 5 Time domain single-ended probe response, purple = input of the probe, green = probe output, using Keysight 1169A InfiniiMax probe and DSO81304B 13 GHz oscilloscope

N2887A Soft Touch Pro-to-InfiniiMax Adapter Pin-Out

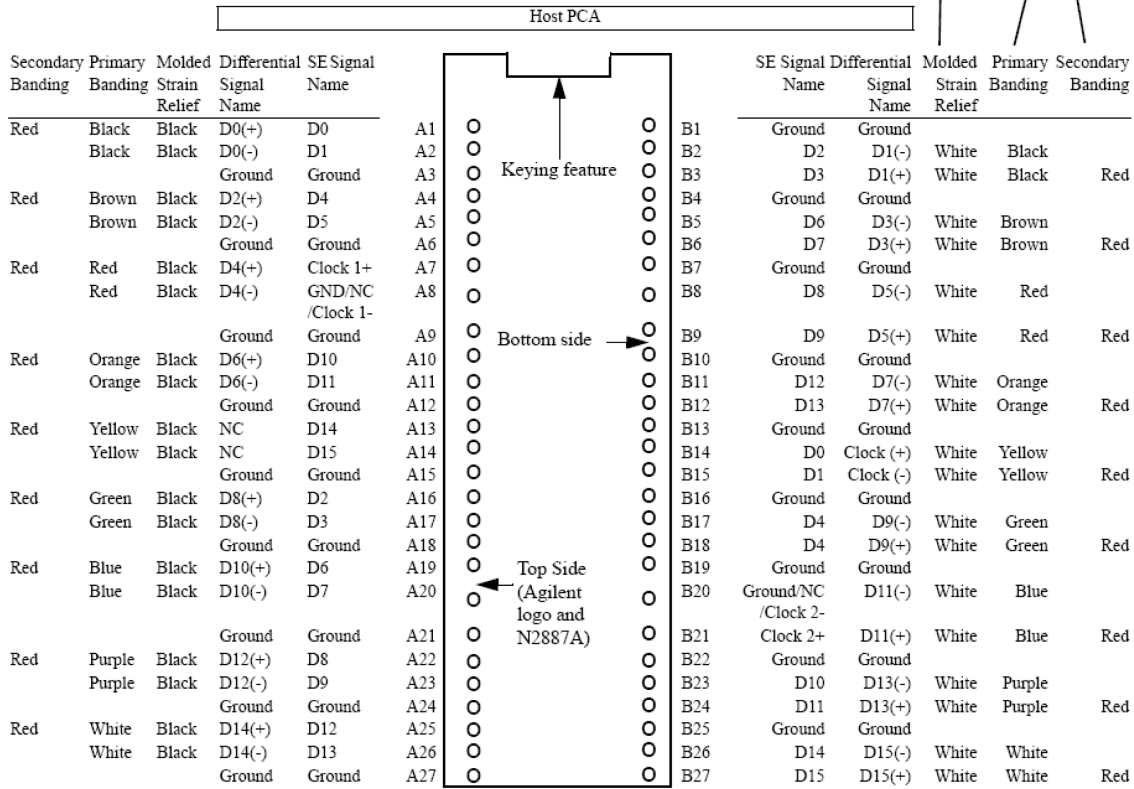


Figure 6 Pin assignment map of the N2887A InfiniiMax Soft touch Pro adapter

N2888A Soft Touch Half Channel-to-InfiniiMax Adapter Pin-Out

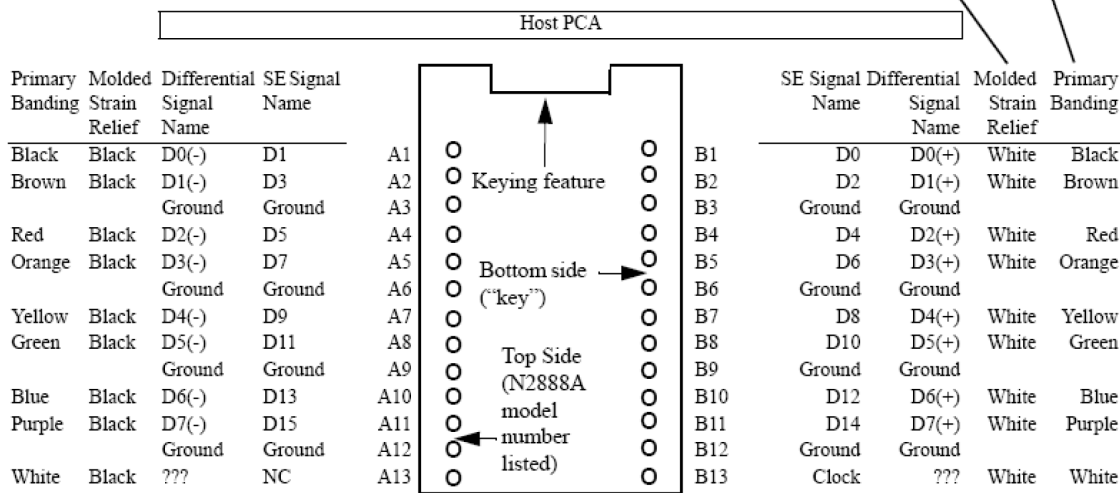


Figure 7 Pin assignment map of the N2888A InfiniiMax Soft touch half-channel adapter

Ordering Information

Product number	Description	Notes
N2887A	InfiniiMax Soft touch Pro Probe Head	
N2888A	InfiniiMax Soft touch Half-channel Probe Head	
E5405-68702	Soft Touch Pro Retention Module Kit	
E5396-68702	Soft Touch Half-channel Retention Module Kit	
N2887-60002	Deskew and Performance Verification Fixture	



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