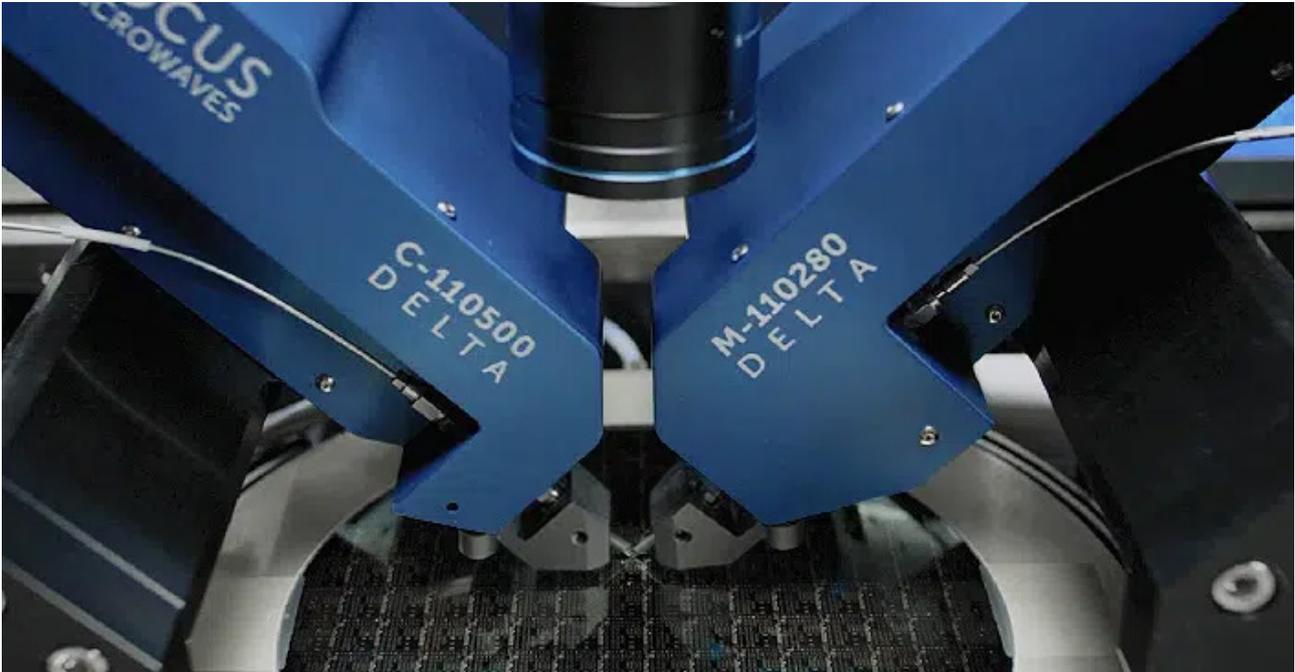


The Low-Loss TITAN™ Probe Family for Load-Pull Applications



THE 110 GHz MODEL T110LL

Understanding the mm-wave load-pull and noise measurement challenges, MPI Corporation has developed the 110 GHz Low-Loss TITAN™ RF Probes, a product specifically optimized for highest possible gamma and minimal possible phase error of the harmonic load-pull wafer-level characterization.

The 110 GHz Low-Loss TITAN™ RF Probes are compatible with the DELTA tuners like C-110500, M-110280 from Focus Microwaves for the direct probe mount on the probe systems equipped with the long working distance scopes like SZ12 or AMZ12-LWD from MPI Corporation.

CHARACTERISTICS

Electrical Characteristics

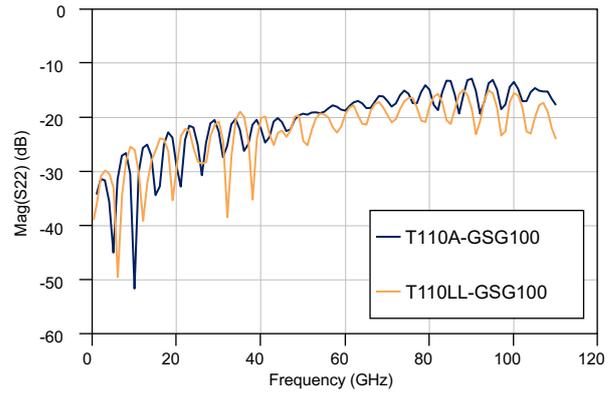
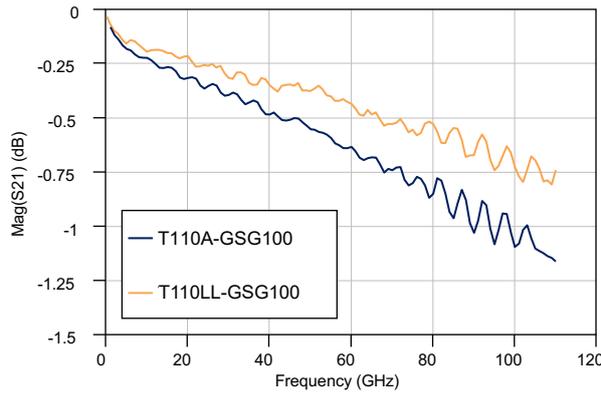
Characteristic Impedance	50 Ω
Frequency range	DC to 110 GHz
Insertion loss (GSG configuration)*	< 0.85 dB
Return loss (GSG configuration)*	> 15 dB
DC current	≤ 1 A
DC voltage	≤ 100 V
RF power, @10 GHz	≤ 5 W

Mechanical Characteristics

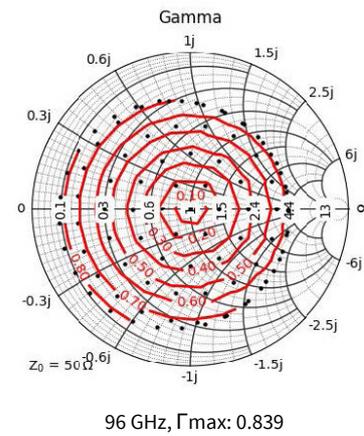
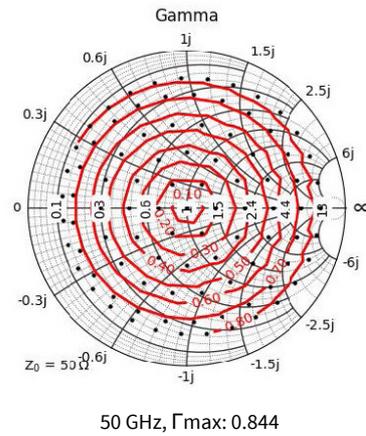
Connector	A (1 mm)
Pitch range	50 μm to 250 μm
Standard pitch step	25 μm
Tip width	20 μm (RC), 30 μm
Tip configurations	GSG
Connector angle	A-Style: 45-degree



TITAN 110 GHz GSG probe 100 μm pitch, Low-Loss vs. standard



Typical tuning range of the DELTA Tuner like C-110500 from Focus Microwaves with the Low-Loss T110LL TITAN™ Probe for 50 GHz and 96 GHz**.



THE 40, 50 AND 67 GHz MODELS

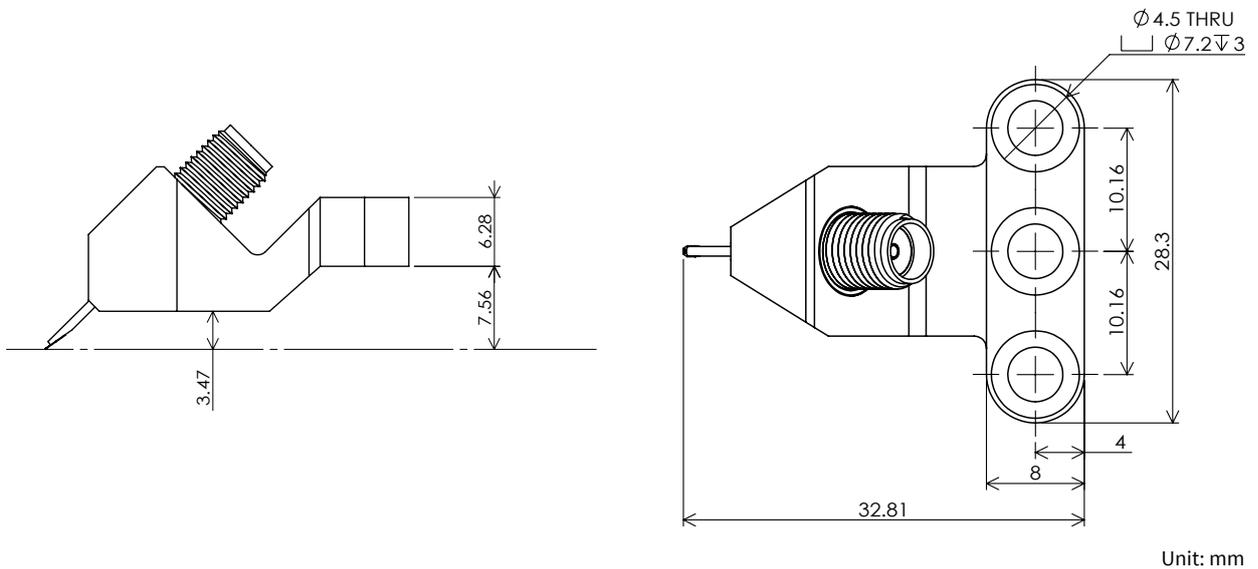
Low-Loss TITAN™ Probes are also available as 40, 50 and 67 GHz models. They are compatible with all electro-mechanical impedance tuners and system configurations, including the direct probe mount on the impedance tuner, like NT-18G-50G-1C Nano5G from Maury Microwave.



Selected Key Characteristics of the T40LL, T50LL, and T67LL models:

Parameters/Model	T40LL	T50LL	T67LL
Characteristic Impedance	50 Ω	50 Ω	50 Ω
Frequency range	DC to 40 GHz	DC to 50 GHz	DC to 67 GHz
Typical Insertion loss (GSG configuration)***	< 0.4 dB	< 0.45 dB	< 0.6 dB
Typical Return loss (GSG configuration)***	>18 dB	> 18 dB	> 16 dB
Tip width	30, 20 μm (RC)	30, 20 μm (RC)	30, 20 μm (RC)
Pitch range for 30 μm tips	50 to 450 μm, step 25, 90, 500, 550 μm	50 to 450 μm, step 25, 90 μm	50 to 300 μm, step 25, 90 μm
Pitch range for RC (20 μm) tips	50 to 300 μm, step 25; 315 μm	50 to 300 μm, step 25; 315 μm	50 to 300 μm, step 25; 315 μm

BODY DIMENSIONS



*Parameter may vary depending upon tip configuration and pitch.

**This specific tuner is a broadband tuner which provide good tuning range from 24-110GHz, The tuner performance can be optimized for given frequencies.

***Parameter may vary depending upon the probe pitch.

Credits: Photo is courtesy of Focus Microwaves

Disclaimer: TITAN Probe, QAlibria are trademarks of MPI Corporation, Taiwan. StatistiCal is a trademark of National Institute of Standards and Technology (NIST), USA. All other trademarks are the property of their respective owners. Data subject to change without notice.

Direct contact:
 Asia region: ast-asia@mpi-corporation.com
 EMEA region: ast-europe@mpi-corporation.com
 America region: ast-americas@mpi-corporation.com

MPI global presence: for your local support, please find the right contact here:
www.mpi-corporation.com/ast/support/local-support-worldwide

© 2022 Copyright MPI Corporation. All rights reserved.

MPI Global Presence

