



Typical Characteristics on P2T-500M40G-60-T-55-292FF

PL12875/1312

PMI MODEL P2T-500M40G-60-T-55-292FF IS AN ABSORPTIVE, SINGLE POLE, TWO THROW PIN DIODE SWITCH THAT OPERATES OVER THE 0.5 GHz TO 40 GHz FREQUENCY RANGE. THIS MODEL INCORPORATES A TTL COMPATIBLE DRIVER FOR EASY SYSTEM INTEGRATION.



October 27, 2019

Designed By: PMI Engineering

Tested & Reported By:
Hugo Gonzales
Alfredo Lopez
Jason Peacher
Sebastian Palacio

Page 1 of 11



Typical Characteristics on P2T-500M40G-60-T-55-292FF

PL12875/1312

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	9/16/15	

DESCRIPTION

PMI MODEL P2T-500M40G-60-T-55-292FF IS AN ABSORPTIVE, SINGLE POLE, TWO THROW PIN DIODE OPERATES OVER THE 0.5 GHz TO 40 GHz FREQUENCY RANGE. THIS MODEL PROVIDES A TTL COMPATIBLE DRIVER FOR EASY SYSTEM INTEGRATION.

Text DESCRIPTION

SPECIFICATIONS

- FREQUENCY RANGE:0.5 TO 40 GHz
- ISOLATION:-55dB MIN
- INSERTION LOSS:-6.0 dB MAX
- VSWR IN / OUT:2.5:1 TYP
- INPUT POWER:+20 dBm CW MAX
- SURVIVAL POWER:1W PEAK 1 us
- RF SWITCHING SPEED:RISE: 15ns MAX
FALL: 15ns MAX
DELAY ON: 50ns MAX
DELAY OFF: 50ns MAX
- DC VOLTAGE:+5 V @ 200 mA MAX
-5 V @ 100 mA MAX
- CONTROL SIGNAL:TTL LOGIC
SEE LOGIC TABLE
- CONNECTORS IN/OUT:2.92mm FEMALE CONNECTORS
- CONTROL CONNECTORS:SOLDER PINS
- SIZE:(L) 1.0" X (W) 1.0" X (H) 0.5"
- FINISH:PAINTED GRAY

ENVIRONMENTAL RATINGS

- TEMPERATURE:-40°C TO +85°C (OPERATING)
-55°C TO +125°C (STORAGE)

NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

MECHANICAL OUTLINE

LOGIC TABLE

CTL	J1 - J2	J1 - J3
0	ON	OFF
1	OFF	ON

PMI CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.
 7311-F GROVE ROAD
 FREDERICK, MARYLAND 21704 USA
 TEL: 301-662-5019 FAX: 301-662-1731
 WEBSITE: www.pmi-rf.com
 E-MAIL: sales@pmi-rf.com
 ISO 9001:2008 CERTIFIED

APPROVALS		DATE	TITLE		
DRAWN	GAB	9/16/15	OUTLINE DRAWING		
ISSUED			P2T-500M40G-60-T-55-292FF		
			REV. FROM NO.	DWG. NO.	REV.
			A 05X00	27016616	A1
			SCALE N: S	SHEET	1 OF 1

ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
XXX .0010
XXXX .0005



Typical Characteristics on P2T-500M40G-60-T-55-292FF

PL12875/1312

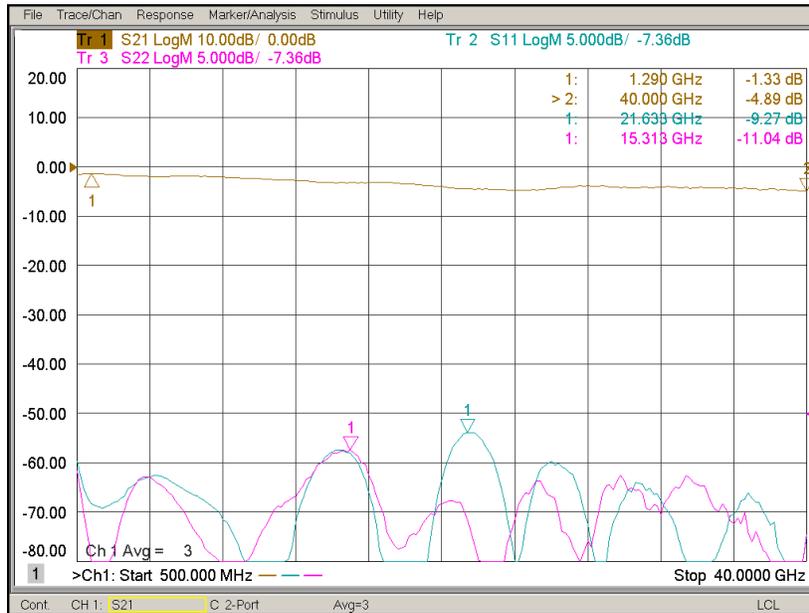
TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	0.5 – 40.0 GHz	0.5 – 40.0 GHz See Plot	
2	Insertion Loss:	6.0 dB Max.	4.89dB See Plot	
3	Isolation:	55 dB Min.	72.80dB See Plot	
4	VSWR : In/Out	2.5:1 Typ.	Input 2.04:1 Output 2.32:1 See Plot	
5	Switching Speed:	Rise/Fall : 15 ns Max. Delay ON/OFF : 50 ns Max.	Rise/Fall : 4 ns Max. Delay ON/OFF : 26.6 ns	
6	Input Power:	+20dBm CW Max.	Pass	
7	Survival Power:	1W Peak 1us	Pass	
8	DC Supply:	+5VDC @ 200 mA Max. -5VDC @ 100 mA Max.	44mA 35mA	
9	Control Signal:	TTL "0" → (J1-J2) TTL "1" → (J1-J3)	Pass	



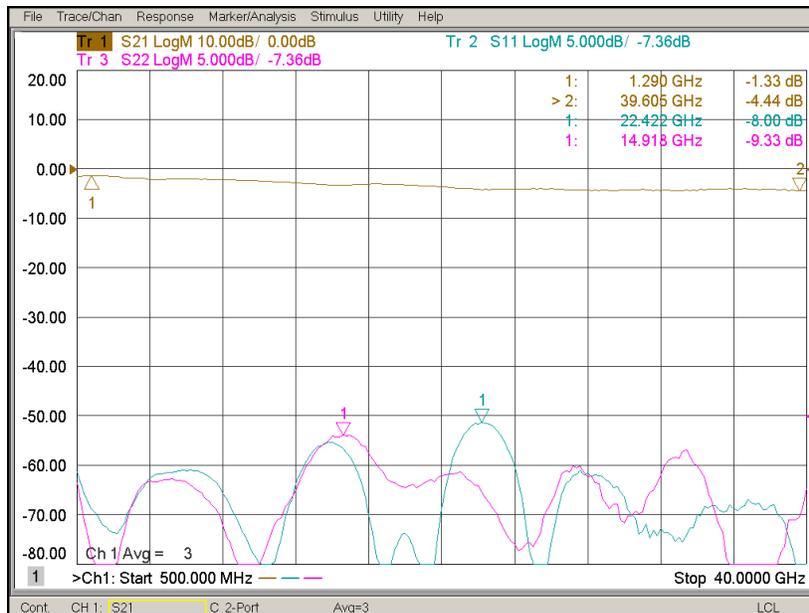
Typical Characteristics on P2T-500M40G-60-T-55-292FF

PL12875/1312

Insertion Loss and Return Loss (J1 – J2)



Insertion Loss and Return Loss (J1 – J3)

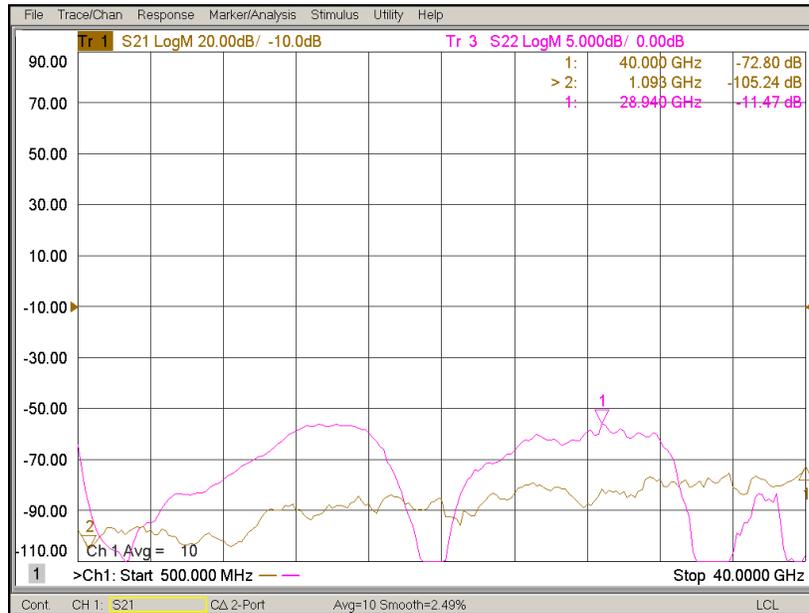




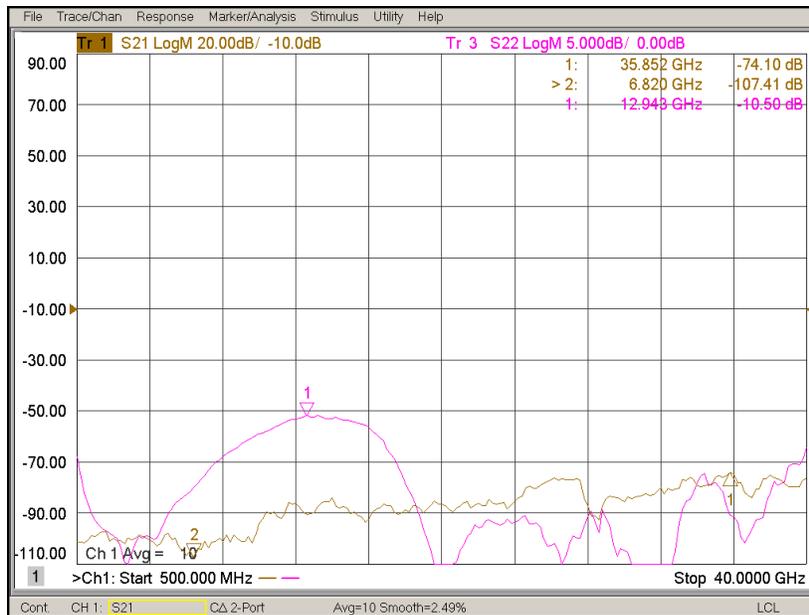
Typical Characteristics on P2T-500M40G-60-T-55-292FF

PL12875/1312

Isolation & Termination (J2) VSWR



Isolation & Termination (J3) VSWR





Typical Characteristics on P2T-500M40G-60-T-55-292FF

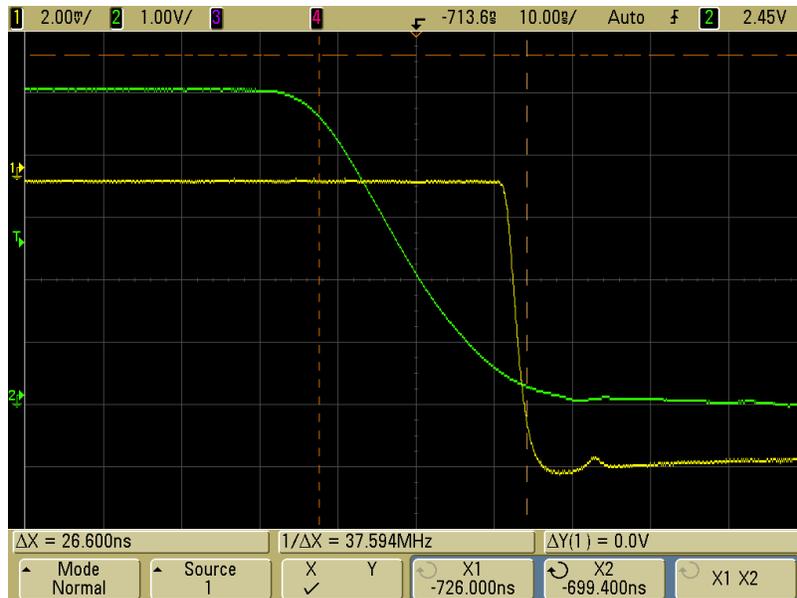
PL12875/1312

Switching Speed TYP.

“OFF”



“ON”





**Typical Characteristics
on
P2T-500M40G-60-T-55-292FF**

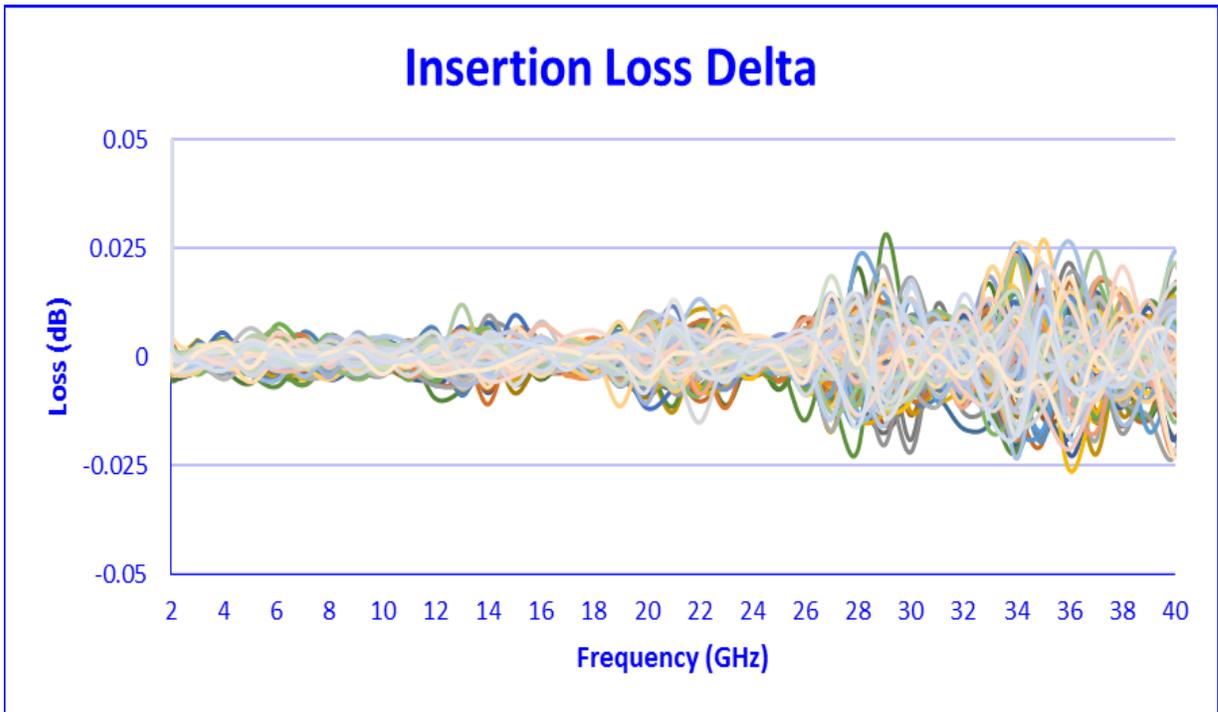
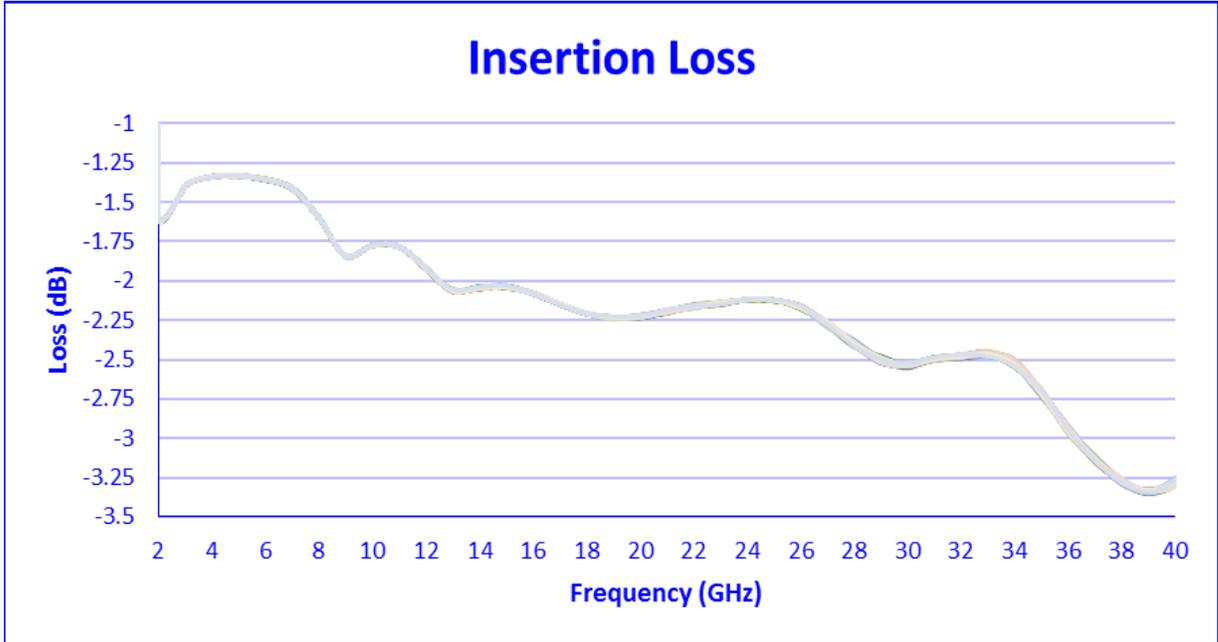
PL12875/1312

100 CYCLES STABILITY TEST



Typical Characteristics on P2T-500M40G-60-T-55-292FF

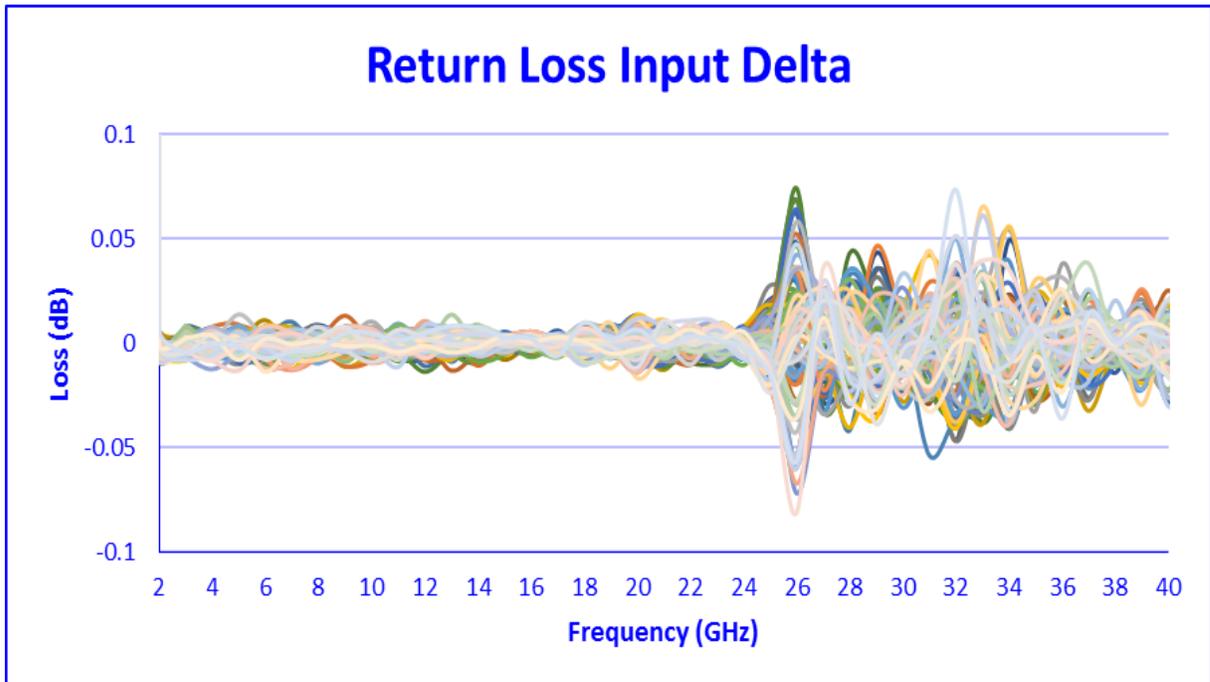
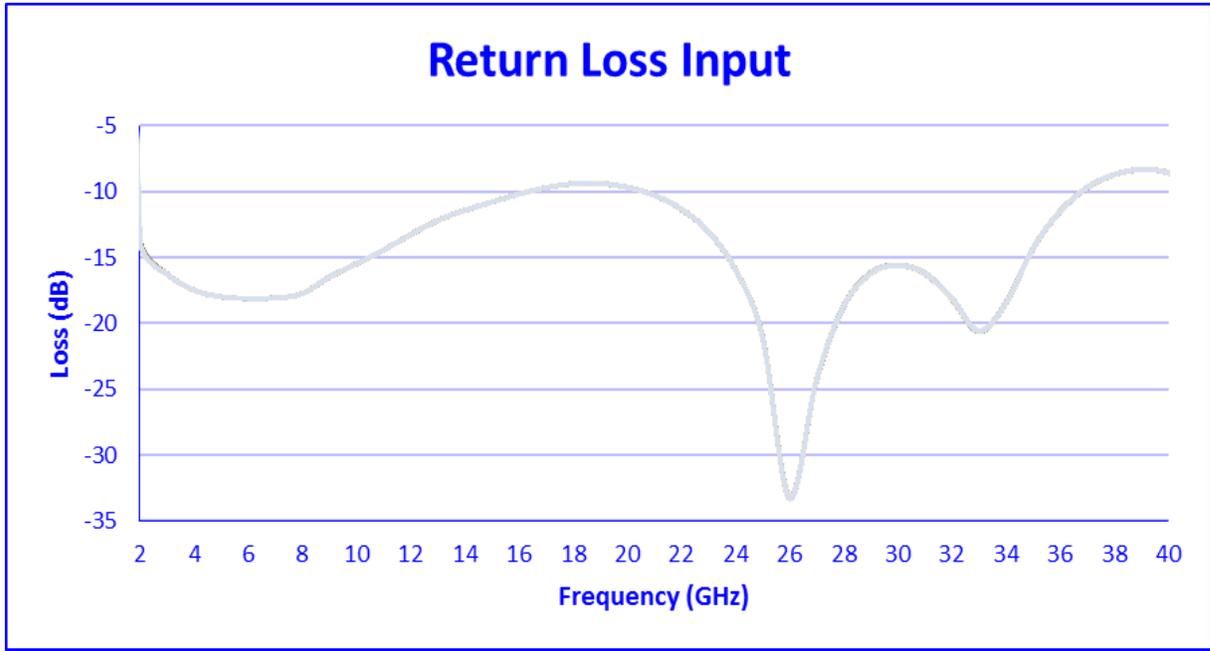
PL12875/1312





Typical Characteristics on P2T-500M40G-60-T-55-292FF

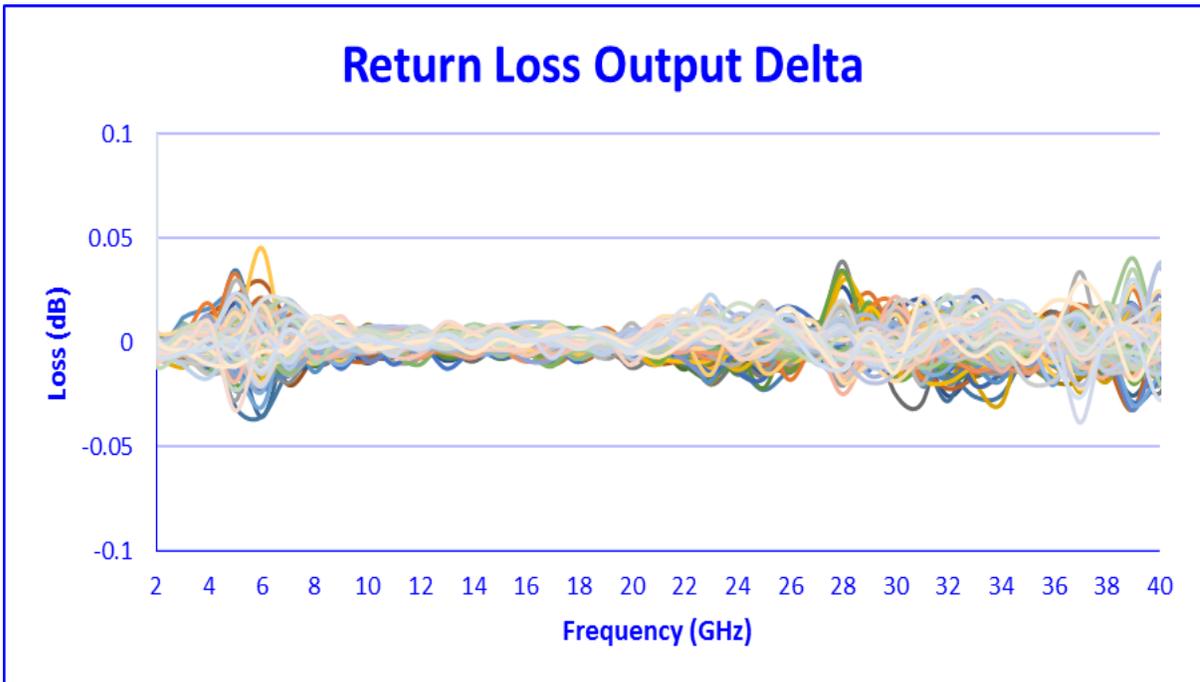
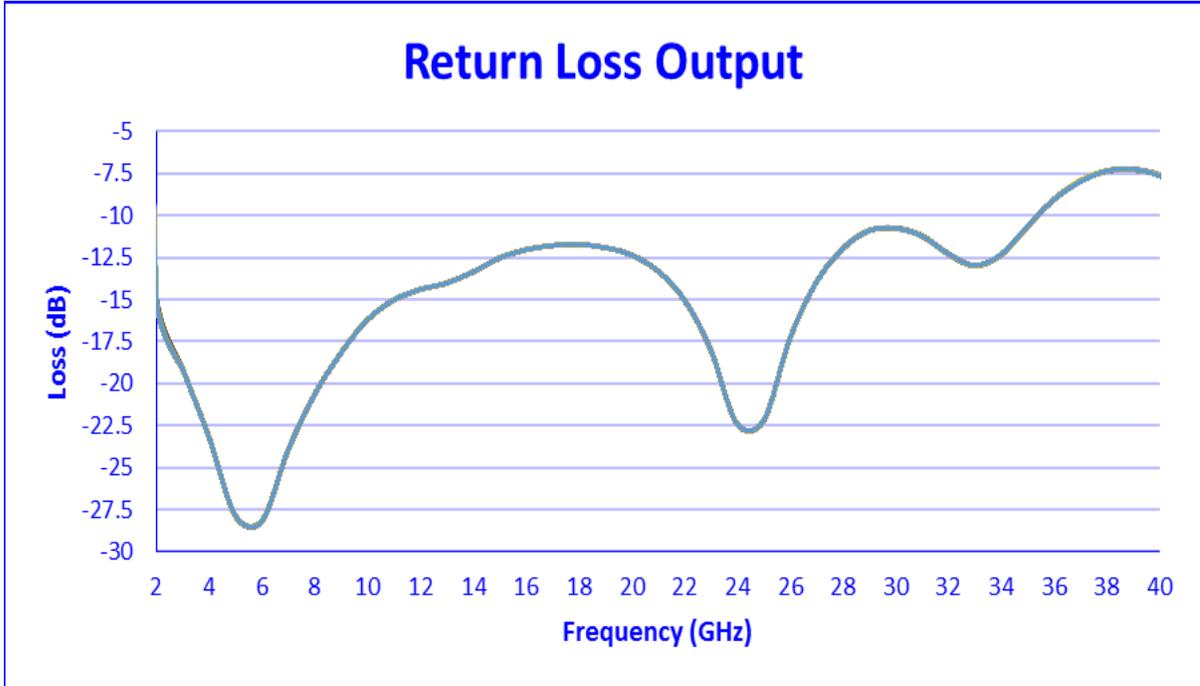
PL12875/1312





Typical Characteristics on P2T-500M40G-60-T-55-292FF

PL12875/1312





Typical Characteristics on P2T-500M40G-60-T-55-292FF

PL12875/1312

