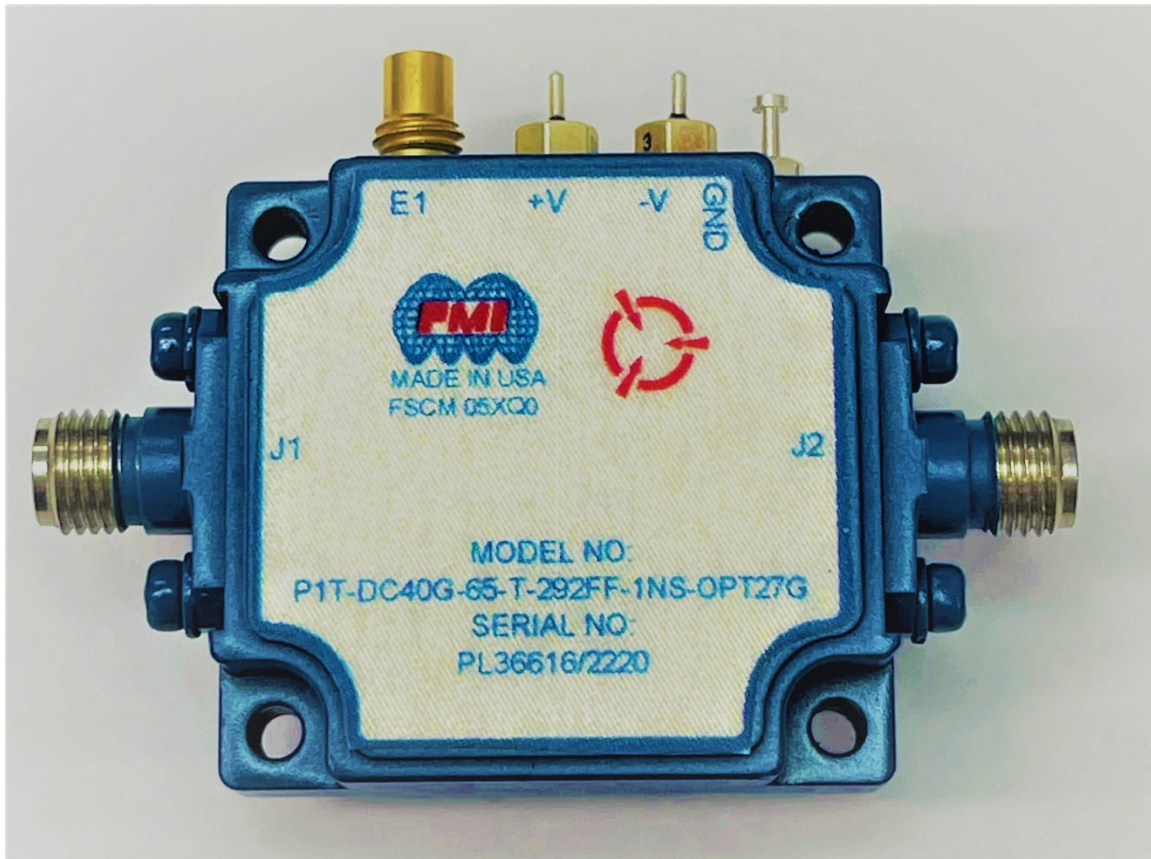




**TYPICAL CHARACTERISTICS
ON
P1T-DC40G-65-T-292FF-1NS-OPT27G**

**PMI MODEL P1T-DC40G-65-T-292FF-1NS-OPT27G IS AN ABSORPTIVE,
SINGLE POLE SINGLE THROW PIN DIODE SWITCH THAT OPERATES
FROM DC TO 27 GHz. THIS MODEL INCORPORATES A TTL COMPATIBLE
DRIVER FOR EASY SYSTEM INTEGRATION.**



May 19, 2022

Designed By: PMI Engineering

**Tested & Reported By:
Lee McGraw**

7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731
Email: sales@pmi-rf.com



**TYPICAL CHARACTERISTICS
ON
P1T-DC40G-65-T-292FF-1NS-OPT27G**

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Outline Drawing..... 3
Test Data Summary for +25°C, -55°C, +85°C 4

**Isolation, Insertion Loss, Input VSWR, Output VSWR and Switching Speed data for
+25°C, -55°C, +85°C**

Isolation +25°C, -55°C,+85°C 5
Insertion Loss +25°C, -55°C, +85°C 6
Input VSWR +25°C, -55°C, +85°C 7
Output VSWR +25°C, -55°C, +85°C 8
Switching Speed 9,10



TYPICAL CHARACTERISTICS ON P1T-DC40G-65-T-292FF-1NS-OPT27G

OUTLINE DRAWING

REVISIONS			
ZONE	REV.	DESCRIPTION	DATE
	A1	ORIGINAL RELEASE	1/11/11

DESCRIPTION
 PMI MODEL P1T-DC40G-65-T-292FF-1NS-OPT27G IS AN ABSORPTIVE, SINGLE POLE, SINGLE THROW PIN DIODE SWITCH THAT OPERATES FROM 50 MHz TO 27 GHz. THIS MODEL INCORPORATES A TTL COMPATIBLE DRIVER FOR EASY SYSTEM INTEGRATION.

SPECIFICATIONS

- FREQUENCY RANGE: 50 MHz to 27GHz
- ISOLATION: 65dB Typical, 55dB Min.
- INSERTION LOSS: 5.5dB Typical, 6.8dB Max.
- VSWR IN / OUT: 2.0:1 Typical, 2.2:1 Max.
- INPUT POWER: +17 dBm CW MAX
- SWITCHING SPEED: 5ns Typical, 6ns Max.
- RISE/FALL TIME: 0.9ns Typical, 1ns Max.
- CONTROL SIGNAL: TTL "1" = ON
- DC VOLTAGE: +8 to +15V @ 15mA Max.
-8 to -15V @ 40mA Max.
- CONNECTORS IN/OUT: 2.92mm FEMALE CONNECTORS
- CONTROL CONNECTORS: SMC
- FINISH: PAINTED BLUE
- SIZE: 1.2" X 1.3" X 0.5"

MECHANICAL OUTLINE

PMI CONFIDENTIAL AND PROPRIETARY

ENVIRONMENTAL RATINGS

- TEMPERATURE: -40°C TO +85°C (OPERATING)
-55°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 213B COND. B
- VIBRATION: MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107

ALL DIMENSIONS ARE IN INCHES
 TOLERANCES:
 XXX .0000
 XXXXX .00010

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

PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F GROVE ROAD
 FREDERICK, MARYLAND 21704 USA
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 WEBSITE: www.pmi-rf.com
 E-MAIL: sales@pmi-rf.com
 ISO 9001 CERTIFIED

APPROVALS	DATE	TITLE		
JPD	11/18/11	PRODUCT FEATURE		
DRAWN		PART NO.	DWG NO.	REV.
CHECKED		A 05XQ0	27044080	A1
ISSUED		SCALE	N:S	SHEET 1 OF 1

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**TYPICAL CHARACTERISTICS
ON
P1T-DC40G-65-T-292FF-1NS-OPT27G**

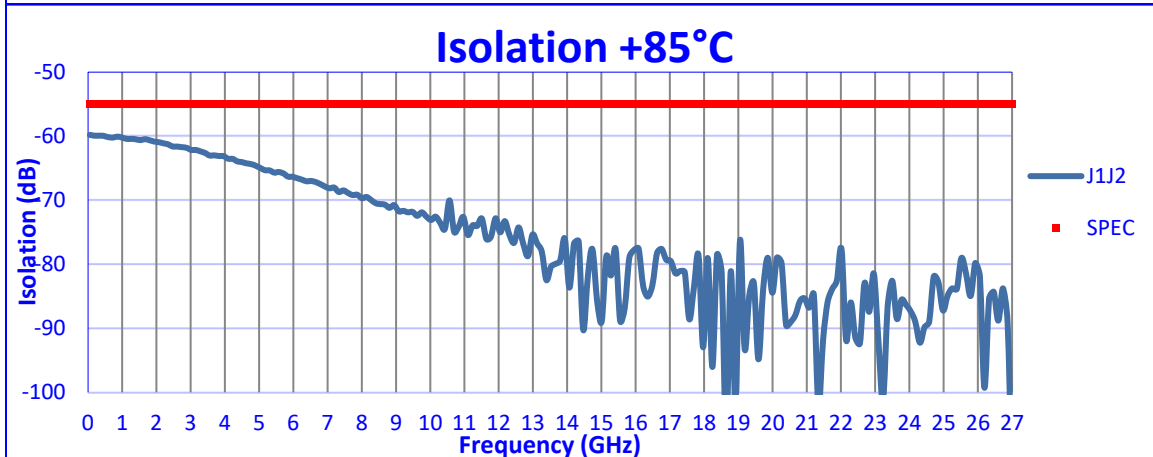
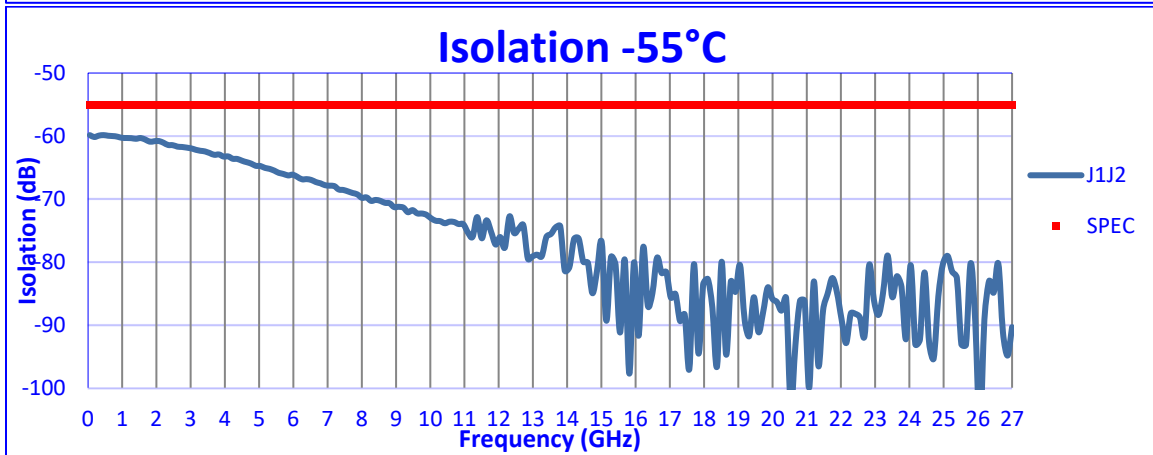
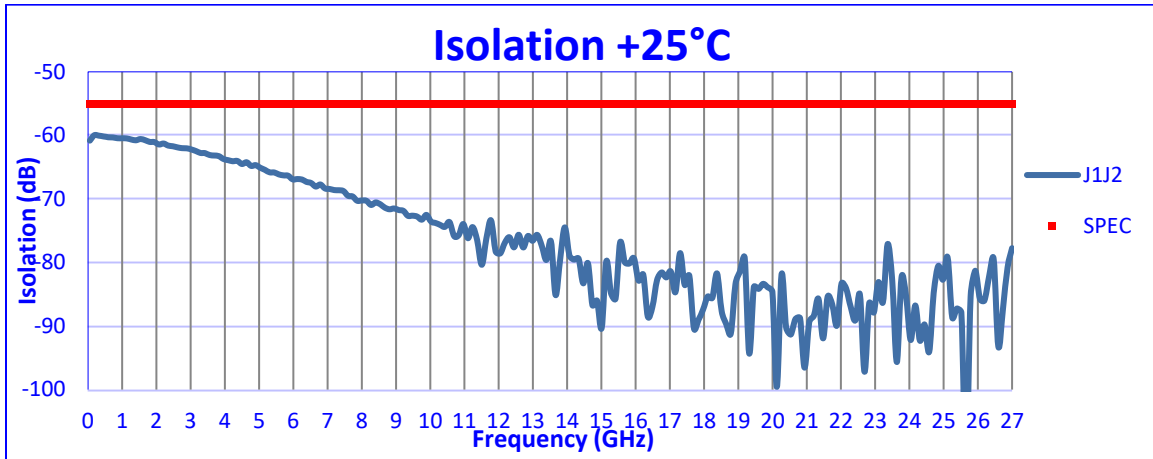
TEST DATA SUMMARY

Test Item No.	Parameters	Specified Value	+25°C	-55°C	+85°C
1	Frequency Range	0.05 GHz to 27 GHz	0.05 GHz to 27 GHz	0.05 GHz to 27 GHz	0.05 GHz to 27 GHz
2	Isolation	55 dB Min. 65 dB Typ.	60 dB	59.9 dB	59.8 dB
3	Insertion Loss	6.8 dB Max. 5.5 dB Typ.	4.5 dB	4.4 dB	4.6 dB
4	VSWR: In/Out	2.2:1 Max. 2:1 Typ.	2.07:1 In 2.13:1 Out	2.1:1 In 2.14:1 Out	2.11:1 In 2.14:1 Out
5	Input Power	17 dBm CW Max.	Pass	Pass	Pass
6	DC Supply	+8 to +15V @ 15 mA Max. -8 to -15V @ 40 mA Max.	+15VDC @ 12 mA -15VDC @ 30 mA	+15VDC @ 12 mA -15VDC @ 30 mA	+15VDC @ 12 mA -15VDC @ 30 mA
7	Switching Speed	6 ns Max. 5 ns Typ.	2.7ns See Plots	2.7ns See Plots	2.7ns See Plots
8	Control Signal	TTL LOGIC 0 : Isolation 1 : Insertion	Pass	Pass	Pass
9	Rise/Fall Time	0.9 ns Typical, 1 ns Max	0.6 ns Rise 0.9 ns Fall	0.6 ns Rise 0.9 ns Fall	0.6 ns Rise 0.9 ns Fall

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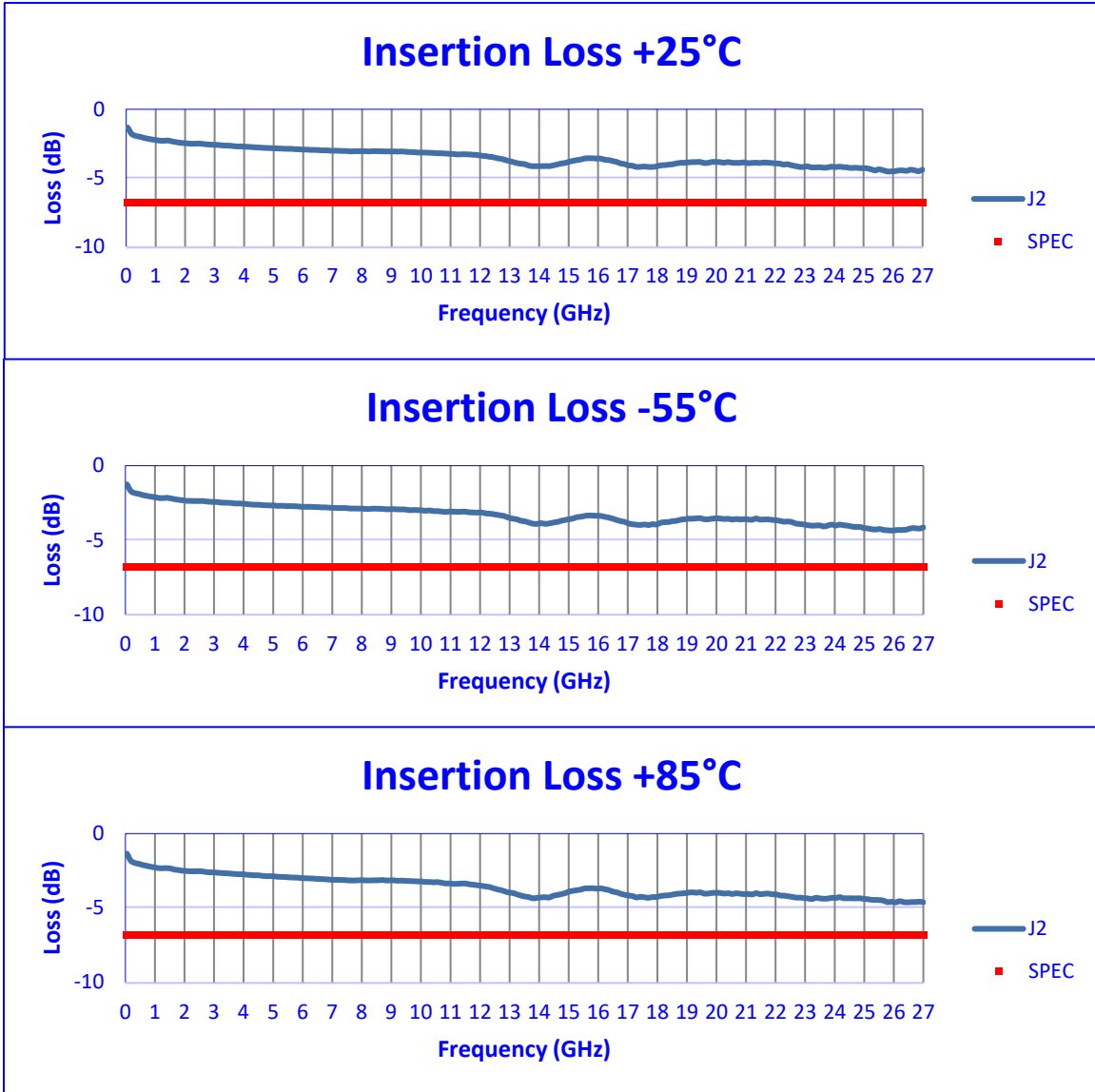
**TYPICAL CHARACTERISTICS
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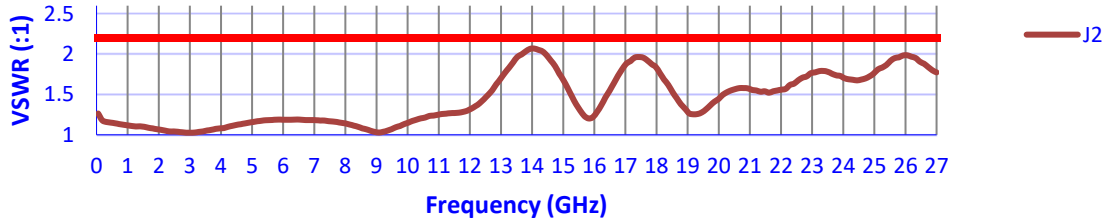


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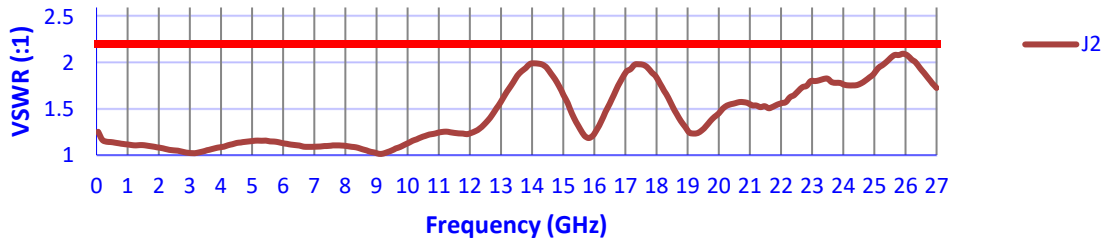


**TYPICAL CHARACTERISTICS
ON
P1T-DC40G-65-T-292FF-1NS-OPT27G**

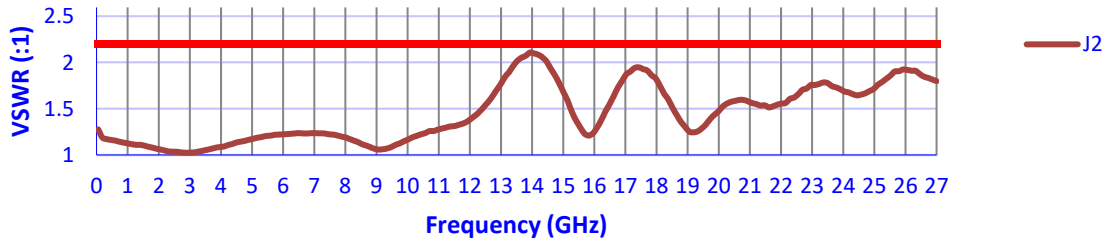
Input VSWR +25°C



Input VSWR -55°C



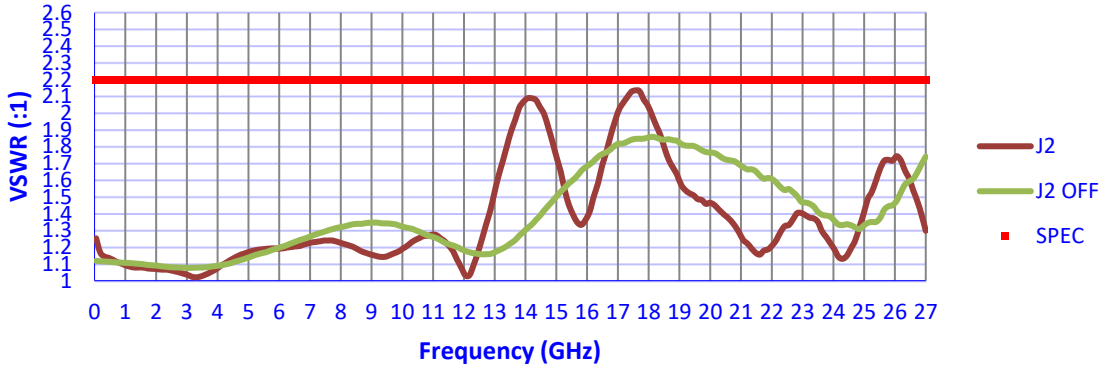
Input VSWR +85°C



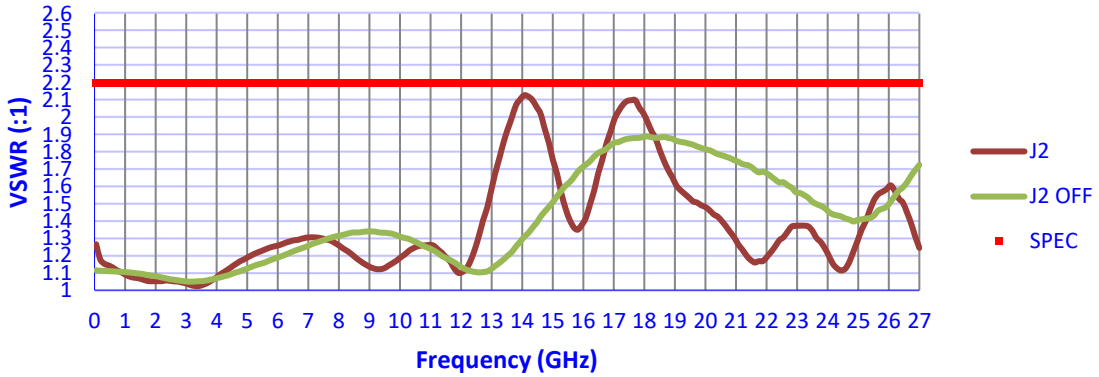


**TYPICAL CHARACTERISTICS
ON
P1T-DC40G-65-T-292FF-1NS-OPT27G**

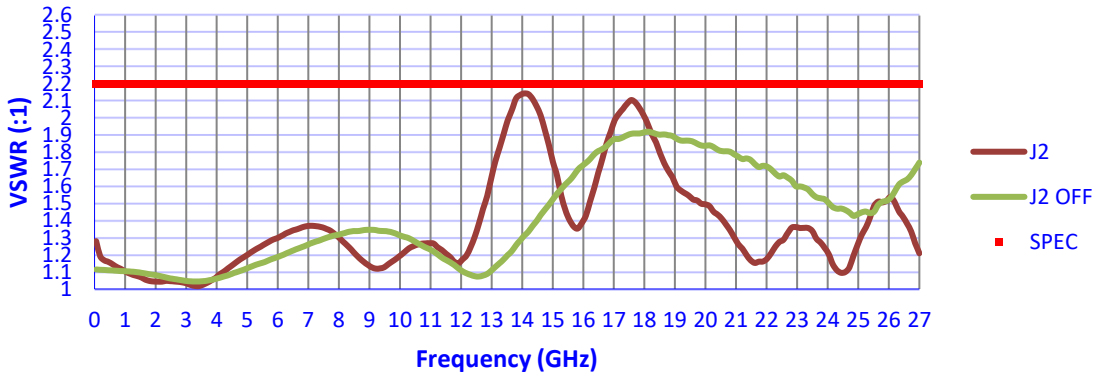
Output VSWR -55°C



Output VSWR +25°C



Output VSWR +85°C



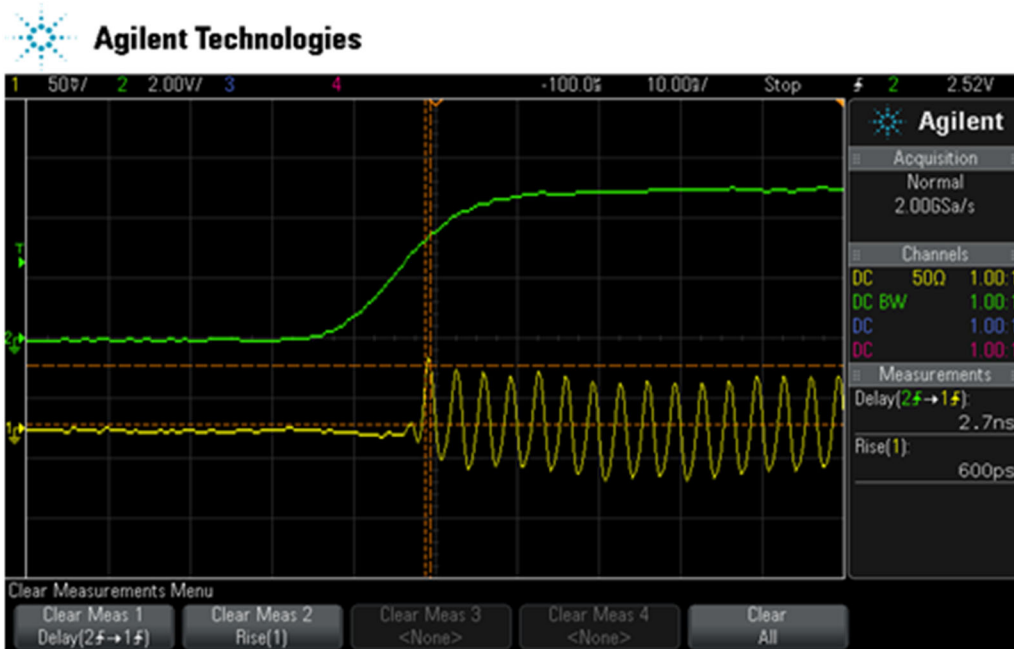
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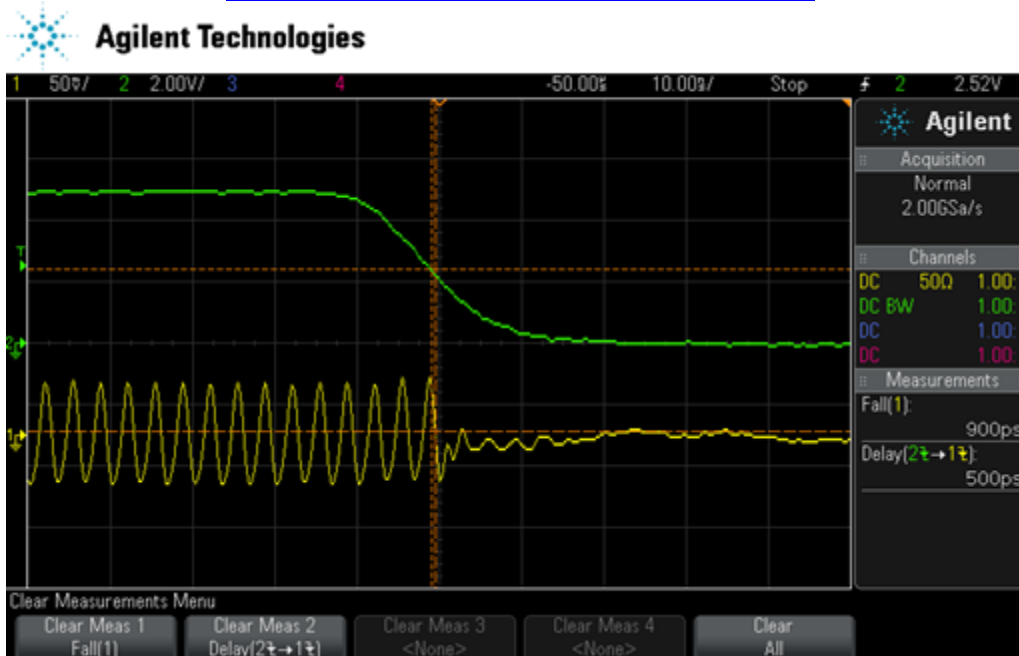
TYPICAL CHARACTERISTICS ON P1T-DC40G-65-T-292FF-1NS-OPT27G

Switching Speed

Delay On and Rise Time – 10ns per Div.



Delay Off and Fall Time – 10ns per Div.

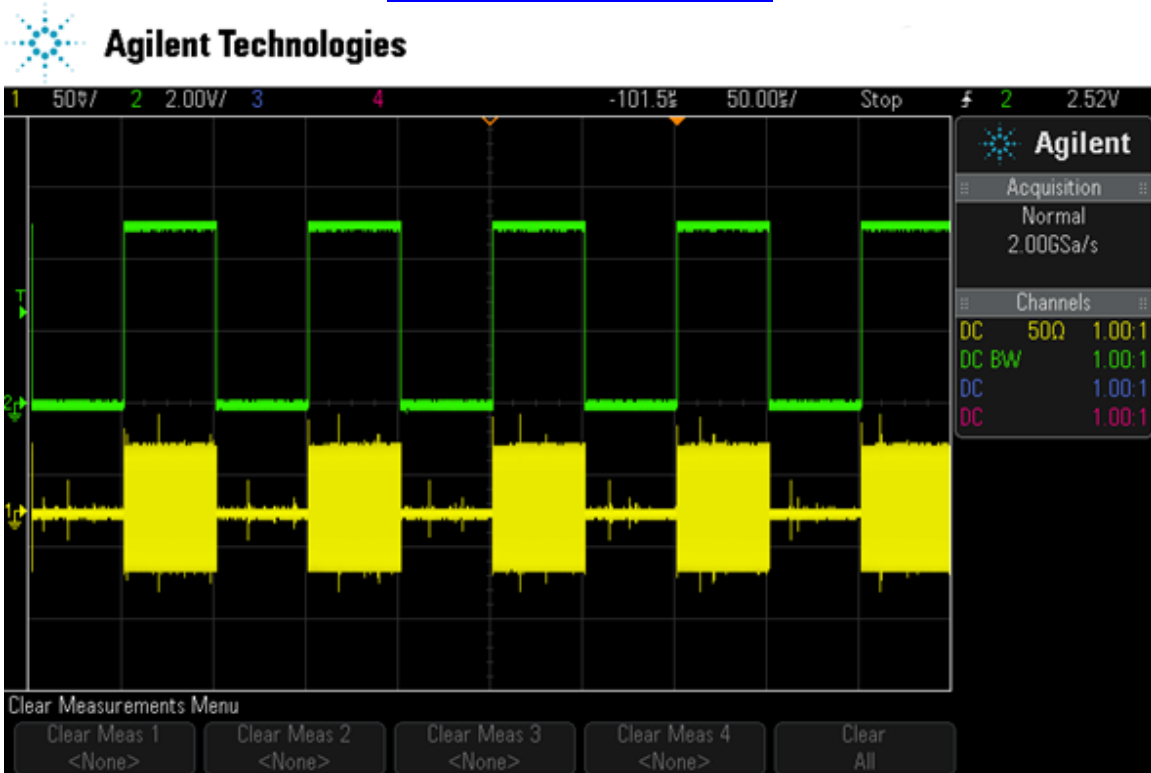


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**TYPICAL CHARACTERISTICS
ON
P1T-DC40G-65-T-292FF-1NS-OPT27G**

Full Pulse – 50ns per Div.



Green: TTL switch input E1
Yellow: RF Signal at 300MHz

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