

**P5T-500M40G-60-T-55-292FF-OPT250M**

**PMI MODEL P5T-500M40G-60-T-55-292FF-OPT250M IS A SP5T, ABSORPTIVE SINGLE POLE, FIVE THROW PIN DIODE SWITCH THAT OPERATES OVER THE 0.25 GHz TO 40 GHz FREQUENCY RANGE. THIS SWITCH HAS AN INSERTION LOSS OF 6.0 dB, ISOLATION OF 70 dB AND IS SUPPLIED IN A SMALL HOUSING MEASURING 1.35" DIAMETER X 0.40" THICK.**



Reported and Tested By: S. Lange

Date: 06/23/2025

**PRODUCT FEATURE**

**DESCRIPTION:**

PMI MODEL P5T-500M40G-60-T-55-292FF-OPT250M IS A SP5T, ABSORPTIVE SINGLE POLE, FIVE THROW PIN DIODE SWITCH THAT OPERATES OVER THE 0.25 GHz TO 40 GHz FREQUENCY RANGE. THIS SWITCH HAS AN INSERTION LOSS OF 6.0 dB, ISOLATION OF 70 dB AND IS SUPPLIED IN A SMALL HOUSING MEASURING 1.35" DIAMETER X 0.40" THICK.

**SPECIFICATIONS:**

- FREQUENCY RANGE:..... 0.25 GHz TO 40 GHz
- ISOLATION:..... 70 dB MIN
- INSERTION LOSS:..... 6.0 dB MAX
- VSWR:..... 2.5:1 MAX
- RF SWITCHING SPEED:..... 100 ns MAX
- DC VOLTAGE:..... +5 V @ 300 mA TYP  
-5 V @ 100 mA TYP
- INPUT POWER:..... +25 dBm CW MAX (0.25 GHz TO 18 GHz)  
+23 dBm CW MAX (18 GHz TO 40 GHz)  
+20 dBm (HOT SWITCHING)
- CONTROL SIGNAL:..... TTL LOGIC  
SEE LOGIC TABLE
- CONNECTORS IN/OUT:..... 2.92 mm FEMALE CONNECTORS
- CONTROL CONNECTORS:.. SOLDER PINS
- SIZE:..... 1.35" DIAMETER X 0.40" THICK
- FINISH:..... GOLD PLATED

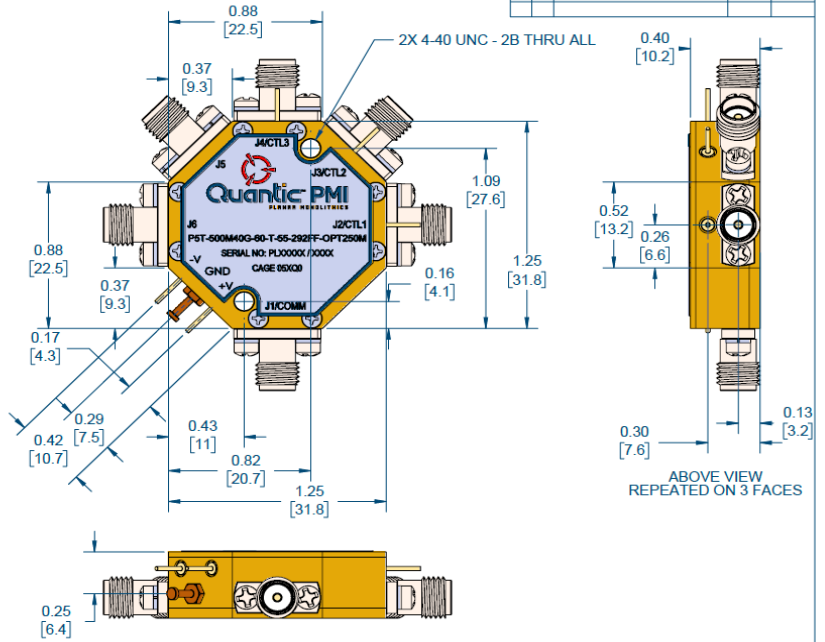
CTL1	CTL2	CTL3	J1-J2	J1-J3	J1-J4	J1-J5	J1-J6
0	0	0	LOSS	ISO.	ISO.	ISO.	ISO.
0	0	1	ISO.	LOSS	ISO.	ISO.	ISO.
0	1	0	ISO.	ISO.	LOSS	ISO.	ISO.
0	1	1	ISO.	ISO.	ISO.	LOSS	ISO.
1	0	0	ISO.	ISO.	ISO.	ISO.	LOSS

**ENVIRONMENTAL RATINGS:**

- TEMPERATURE:..... -55°C TO +85°C (OPERATING)  
-65°C TO +125°C (STORAGE)
- HUMIDITY:..... MIL-STD-202, METHOD 103B COND. B
- SHOCK:..... MIL-STD-202, METHOD 213B COND. B
- ALTITUDE:..... MIL-STD-202, METHOD 105C COND. B
- VIBRATION:..... MIL-STD-202, METHOD 204D COND. B
- TEMPERATURE CYCLE:..... MIL-STD-202, METHOD 107D COND. A

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

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	12/03/04	



PMI CONFIDENTIAL AND PROPRIETARY

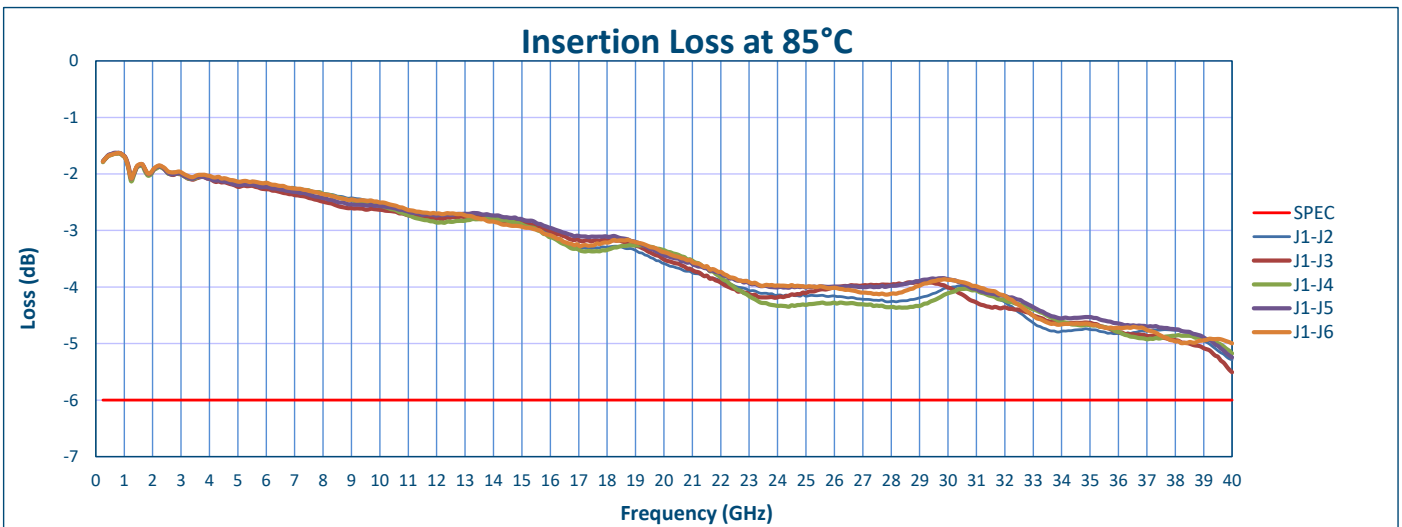
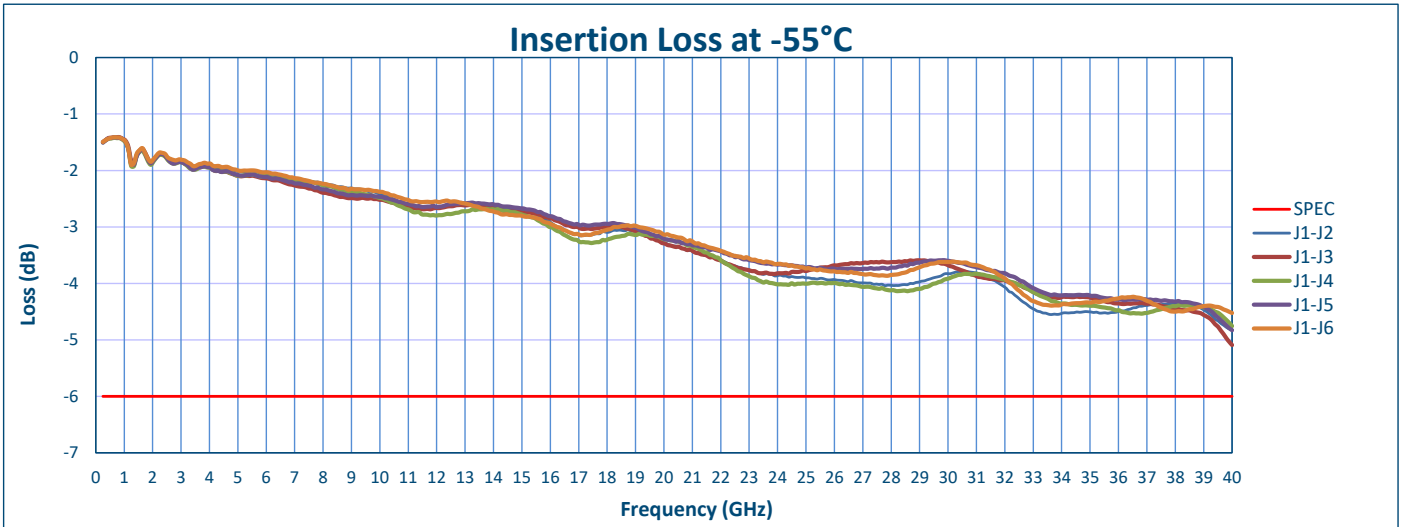
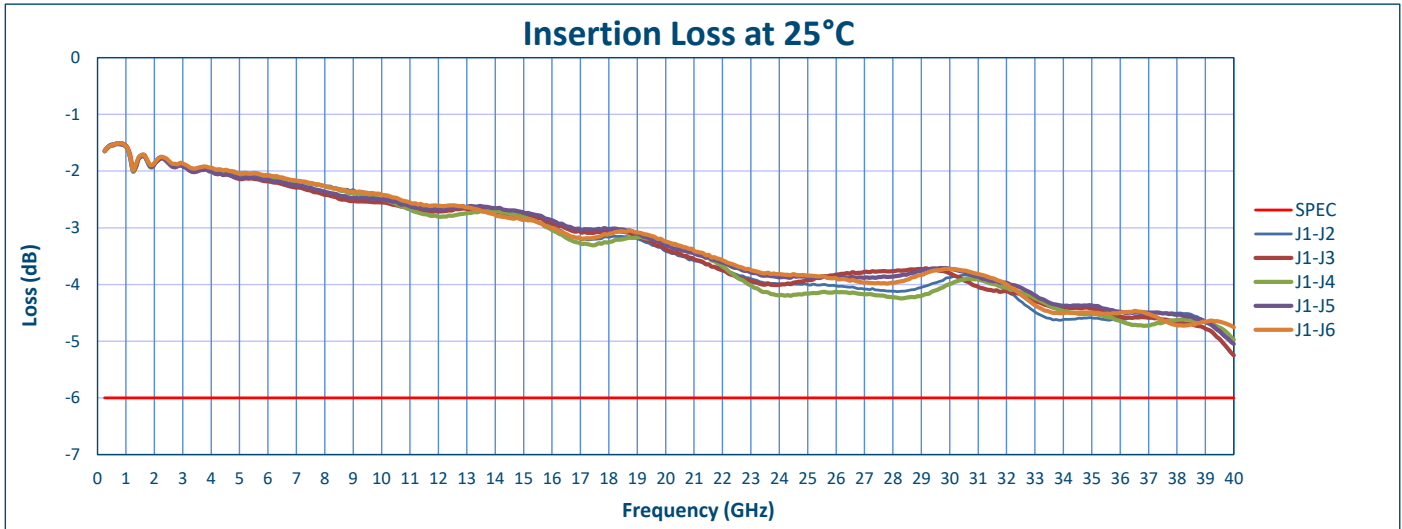
<small>DO NOT CONFIDENTIALIZE UNLESS INDICATED BY THE DESIGNER AND THE CUSTOMER HAS BEEN ADVISED BY THE DESIGNER</small> DATE: 12/03/04 JOB: 27050220 JOB: 27050220		PART NO.	 7309-A GROVE ROAD, FREDERICK, MARYLAND 21704 USA WEB: WWW.QUANTICPMI.COM
MATERIAL:	APPROVALS:	DATE:	TITLE:
	S LANGE	12/03/04	OUTLINE
NEXT ASSY:	DESIGNED:		P5T-500M40G-60-T-55-292FF-OPT250M
USED ON:	TESTED:		REV: 12/03/04
APPLICATION:			REV: B
			REV: D5XQ0
			REV: 27050220
			REV: A1
			SCALE 2:1
			SHEET 1 OF 1

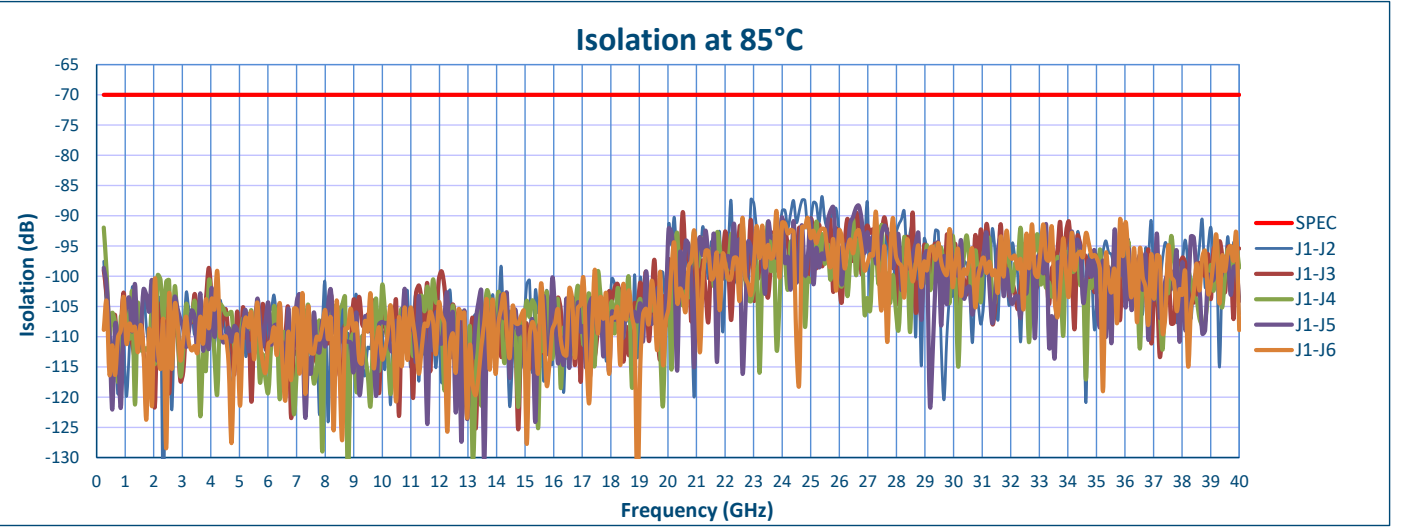
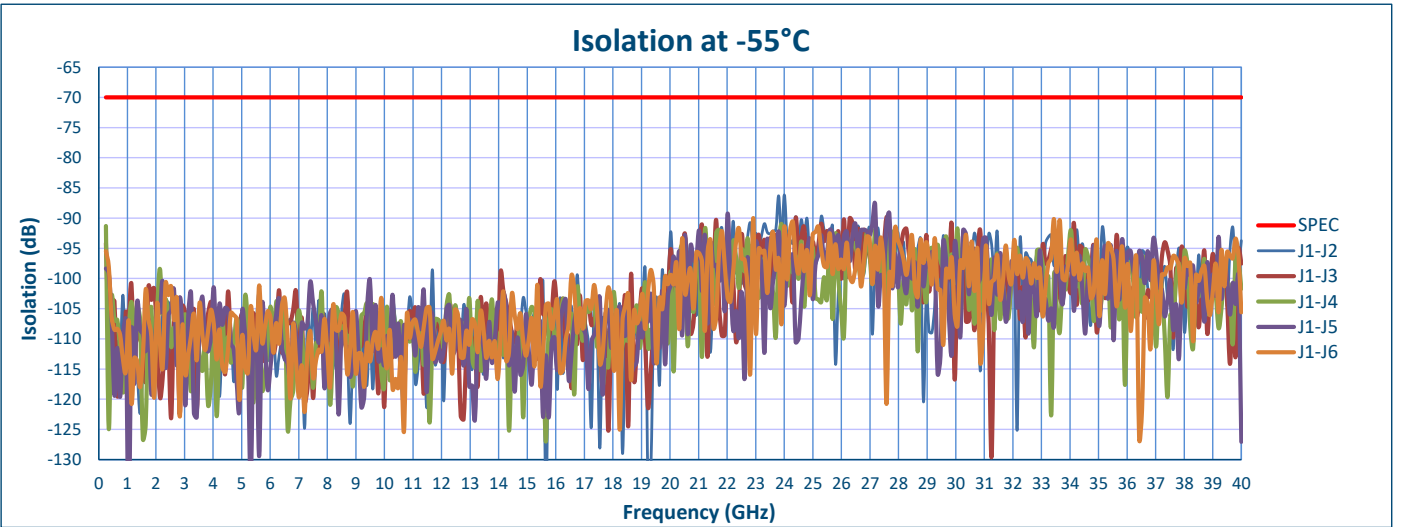
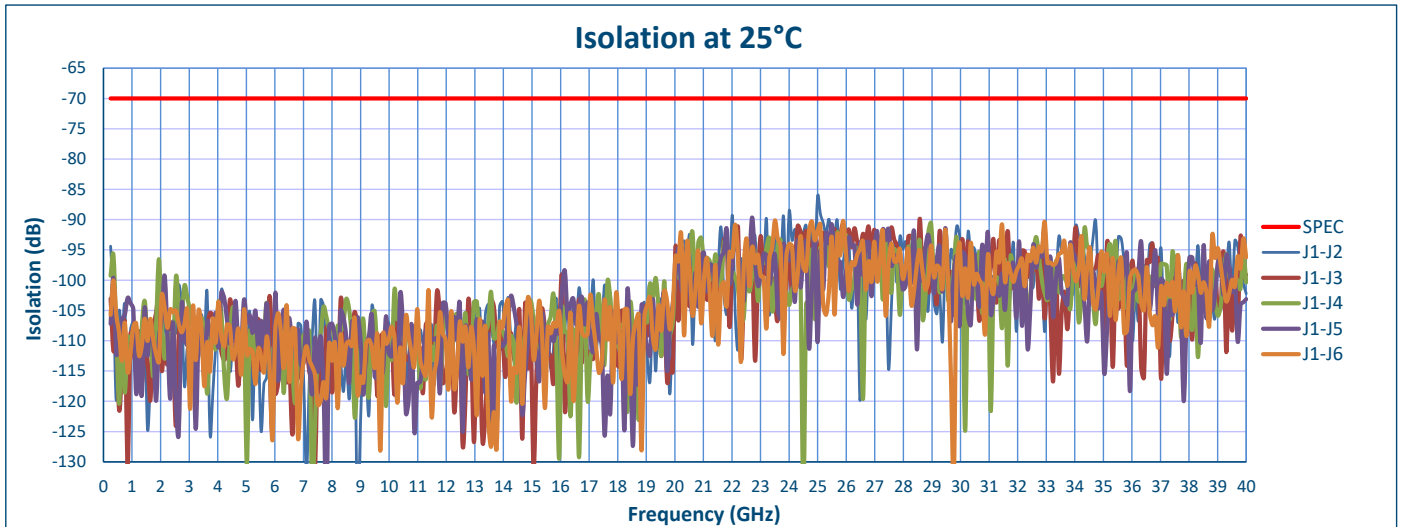
TEST DATA

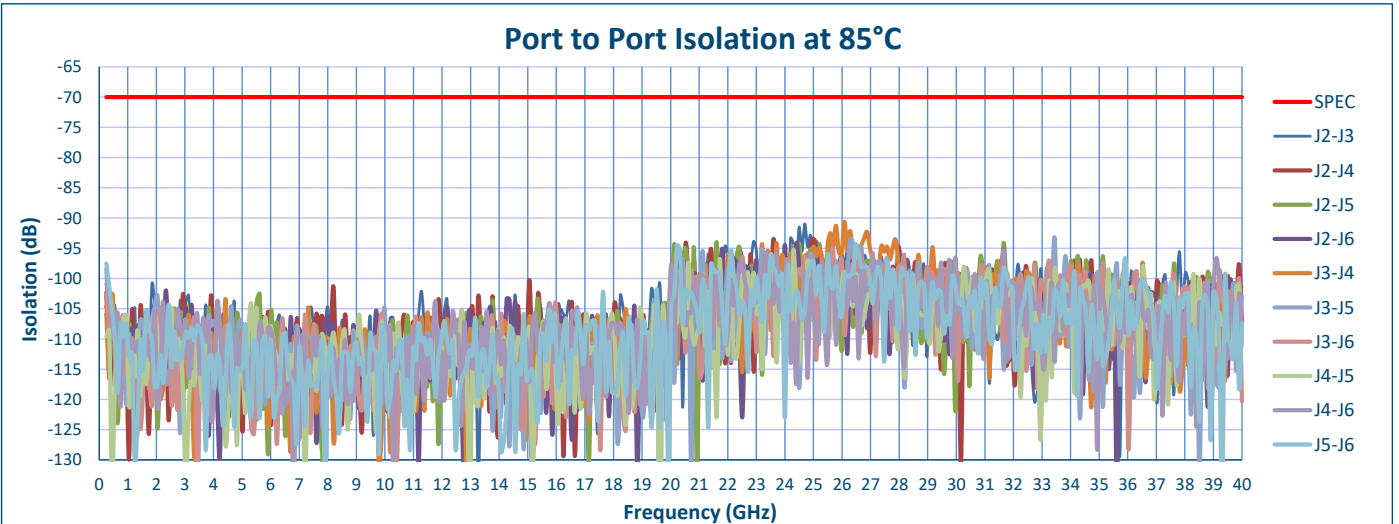
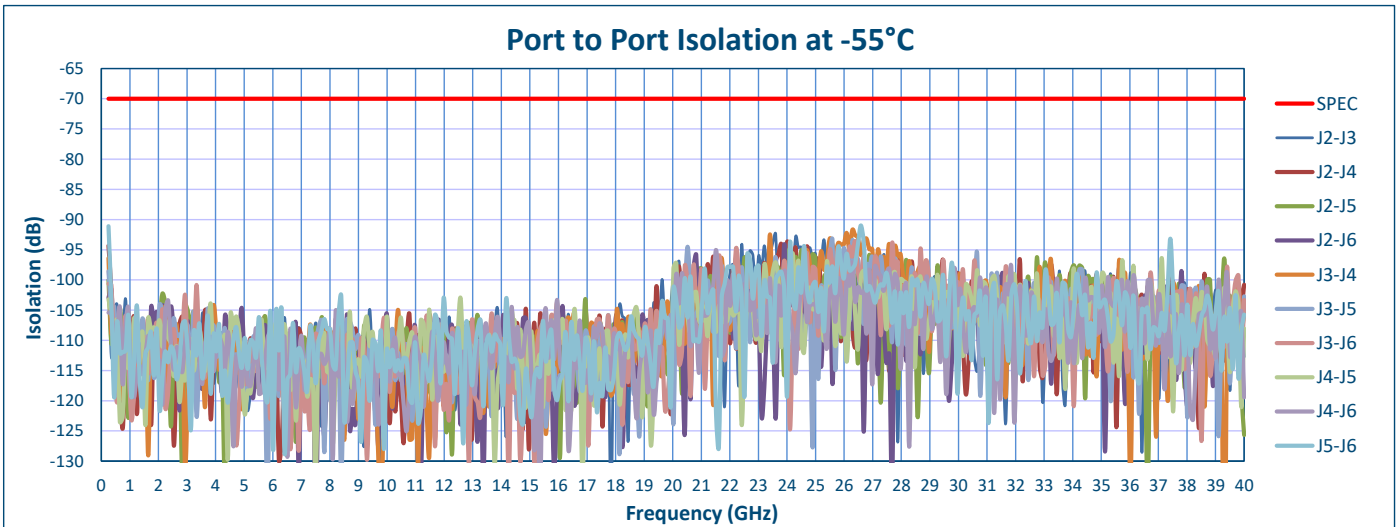
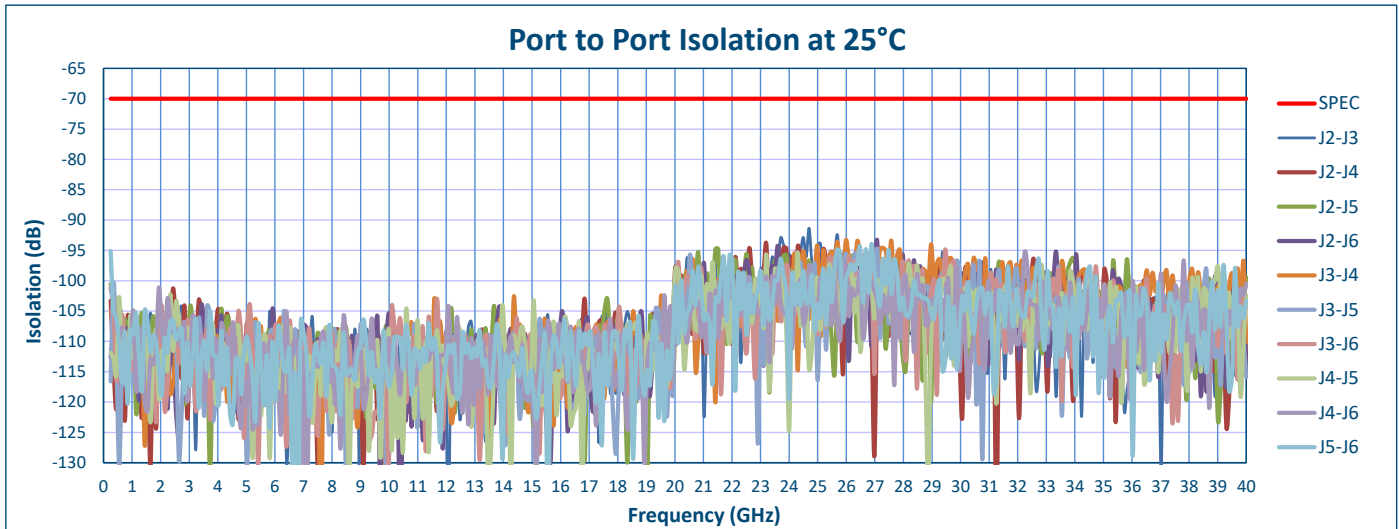
TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			+25°C	-55°C	+85°C
1	Frequency Range:	250 MHz to 40 GHz	250 MHz to 40 GHz		
2	Insertion Loss:	6 dB Max.	5.25 dB Max.	5.09 dB Max.	5.51 dB Max.
3	VSWR:	2.5:1 Max.	1.87:1 Max.	1.94:1 Max.	1.86:1 Max.
4	Isolation:	70 dB Min.	86.25 dB Min.	86.15 dB Min.	86.8 dB Min.
5	Switching Speed:	100 ns Max.	34.44 ns Max. See Graphs		
6	Input Power:	+25 dBm CW Max. (250 MHz to 18 GHz) +23 dBm CW Max. (18 GHz to 40 GHz) +20 dBm CW Max. (HOT SWITCHING)	+25 dBm CW Max. (250 MHz to 18 GHz) +23 dBm CW Max. (18 GHz to 40 GHz) +20 dBm CW Max. (HOT SWITCHING)		
7	Control Signal:	TTL Logic See Logic Table	TTL Logic See Logic Table		
8	DC Supply:	5 V @ 300 mA Typ. -5 V @ 100 mA Typ.	+5 V @ 126 mA -5 V @ 56 mA		

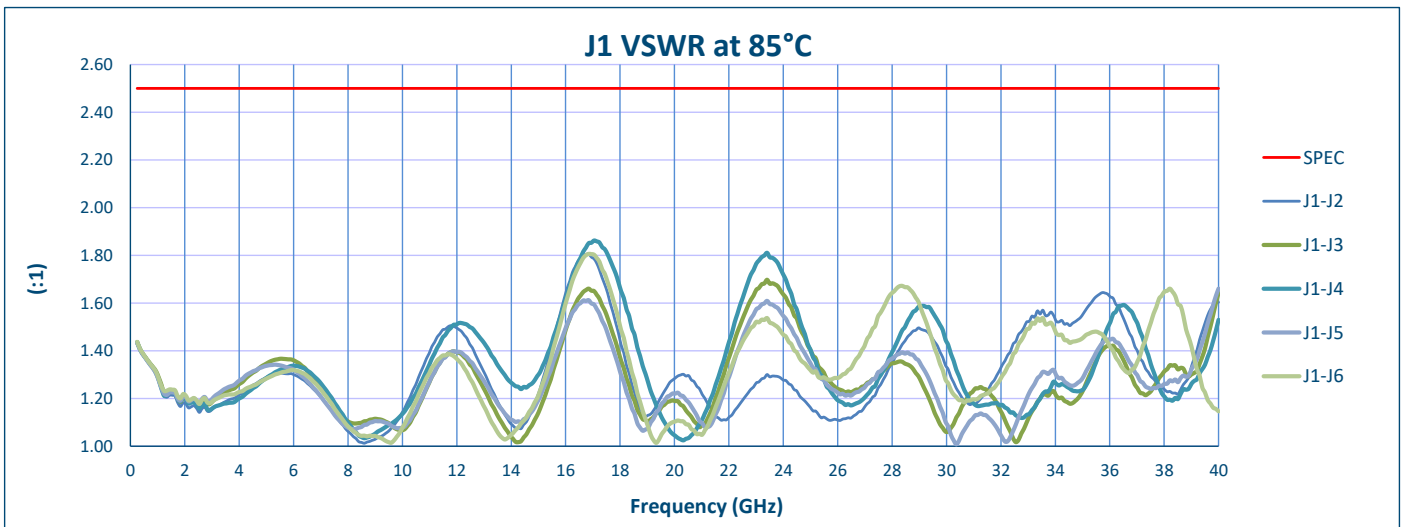
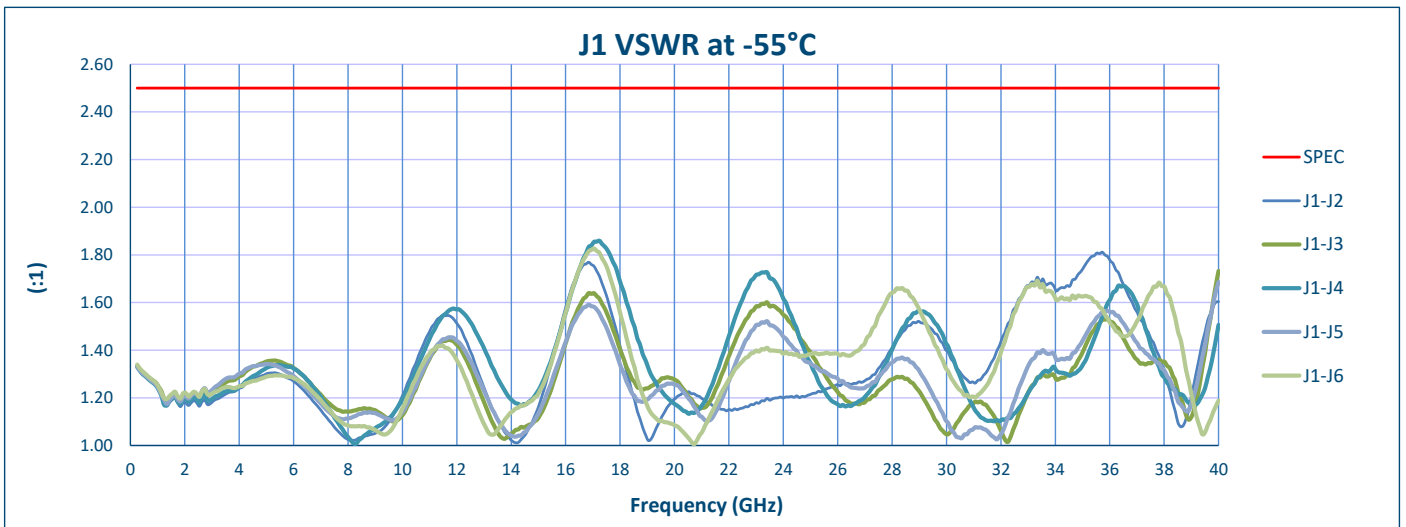
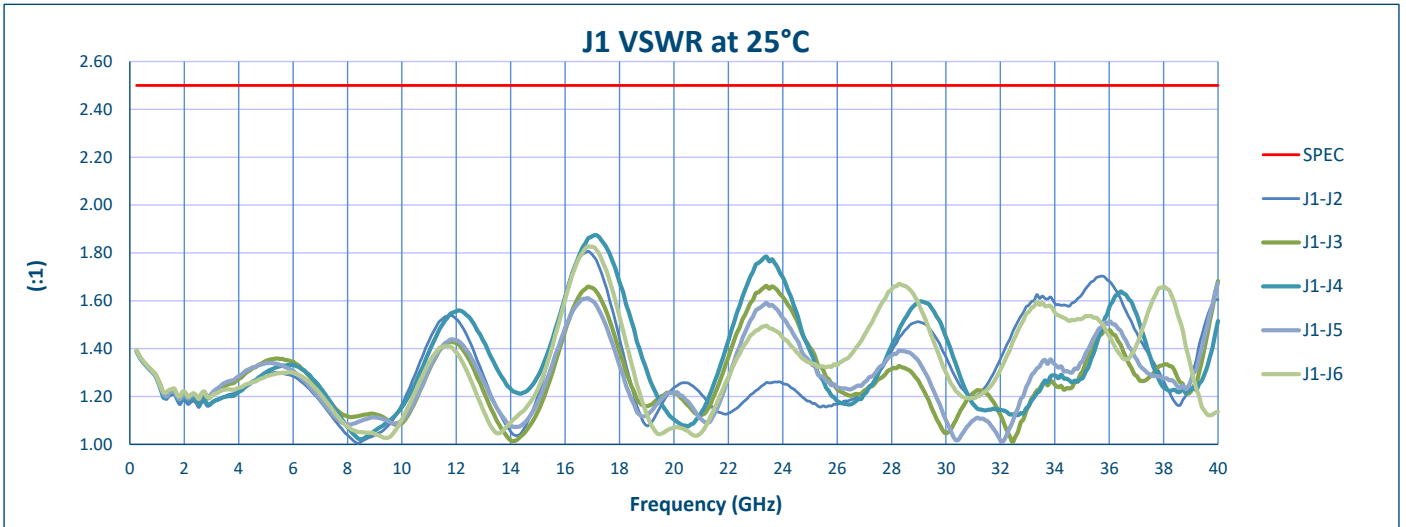
TTL LOGIC CONTROL TABLE

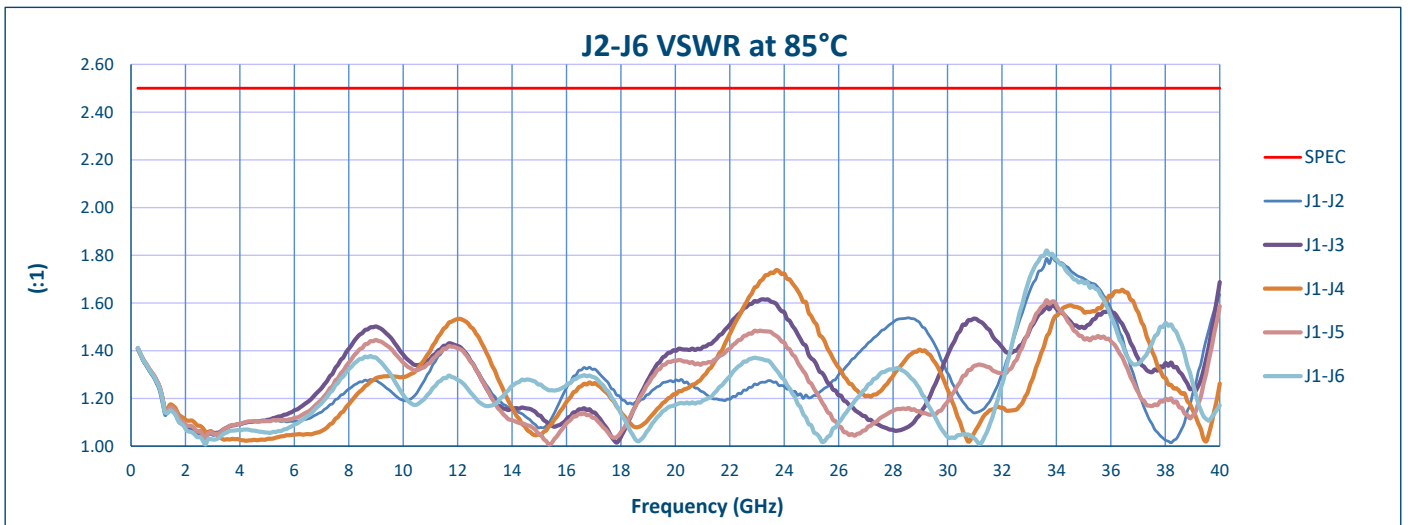
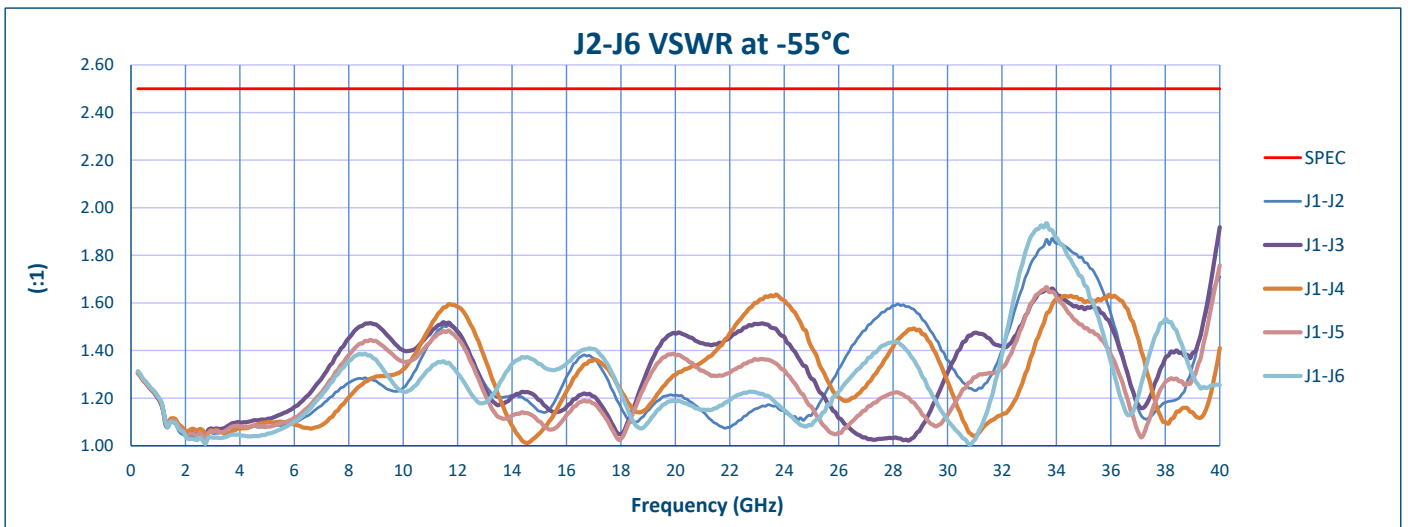
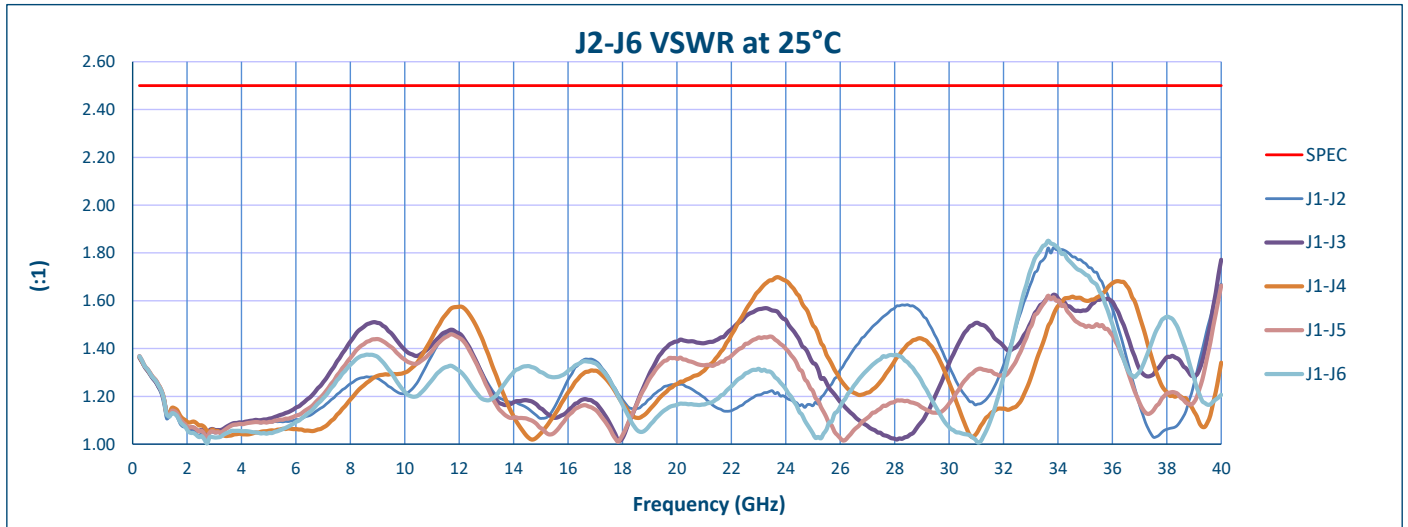
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0	0	0	LOSS	ISO.	ISO.	ISO.	ISO.
0	0	1	ISO.	LOSS	ISO.	ISO.	ISO.
0	1	0	ISO.	ISO.	LOSS	ISO.	ISO.
0	1	1	ISO.	ISO.	ISO.	LOSS	ISO.
1	0	0	ISO.	ISO.	ISO.	ISO.	LOSS

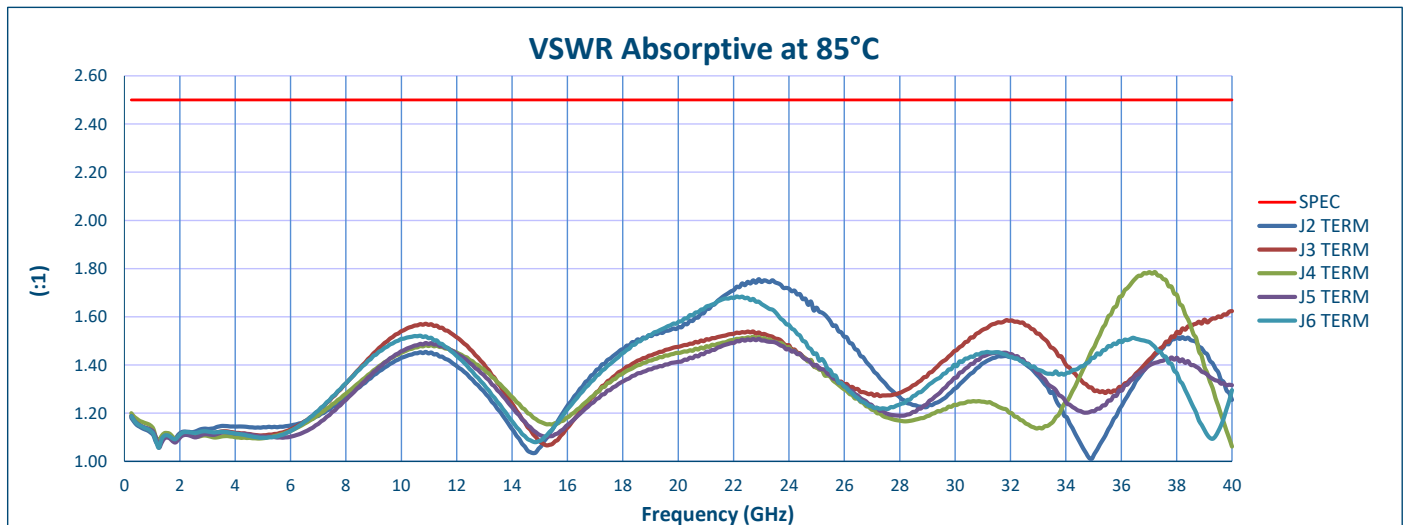
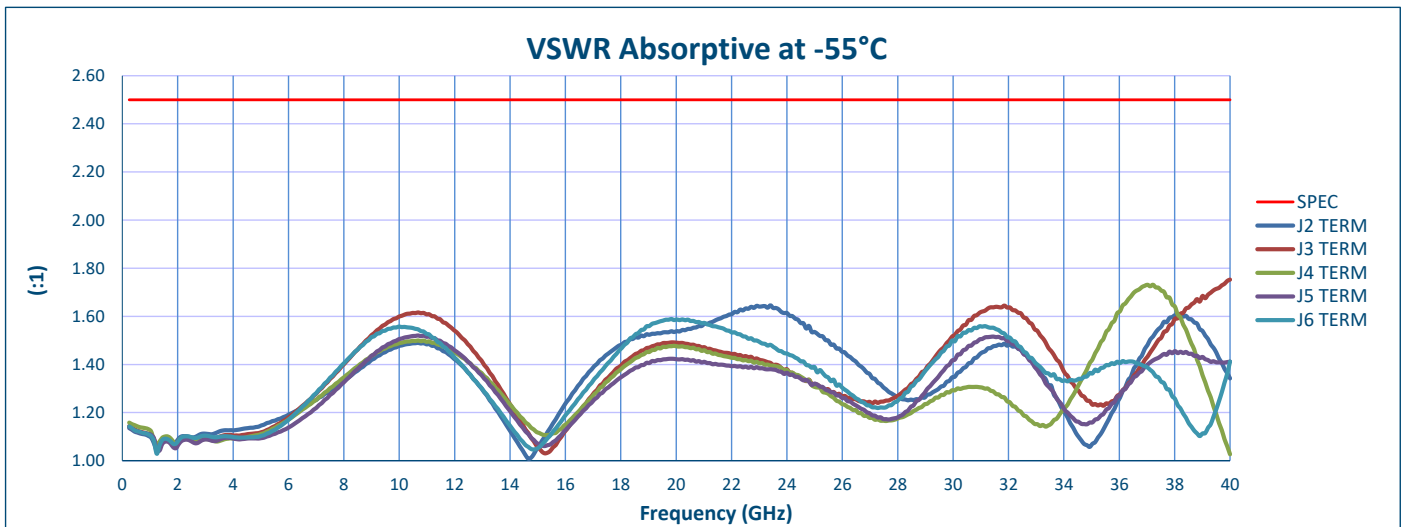
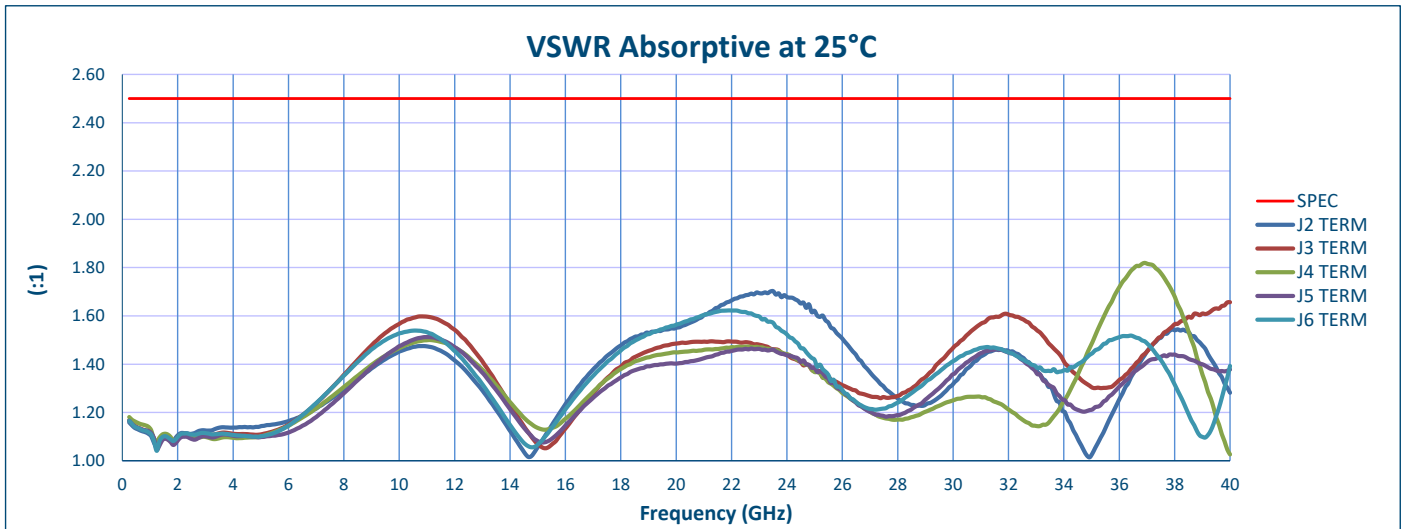


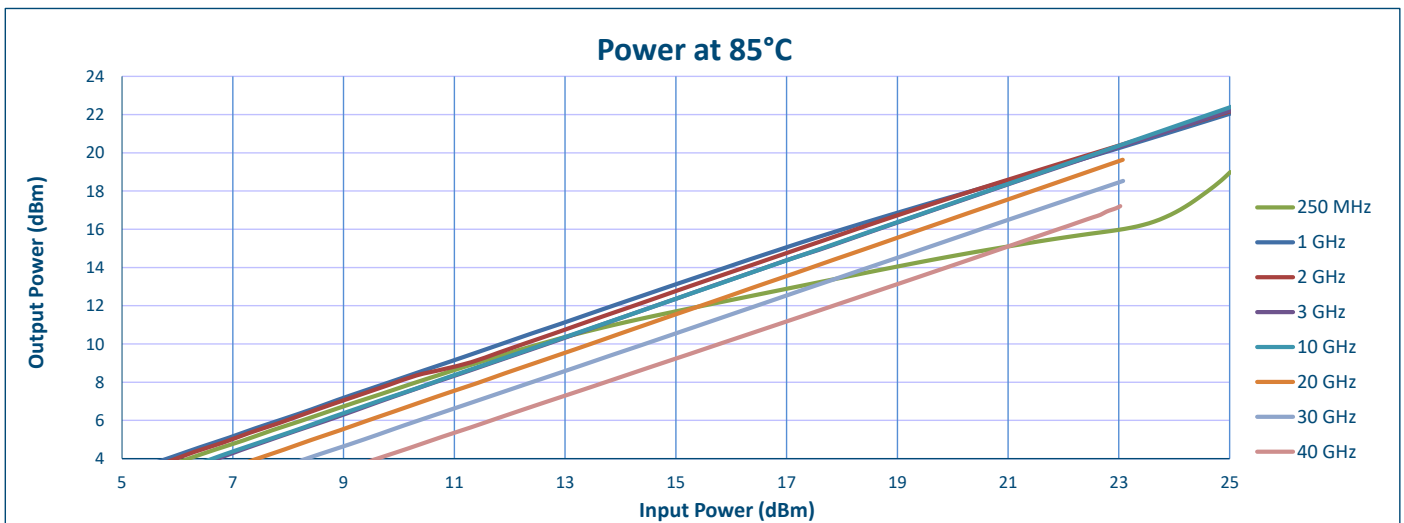
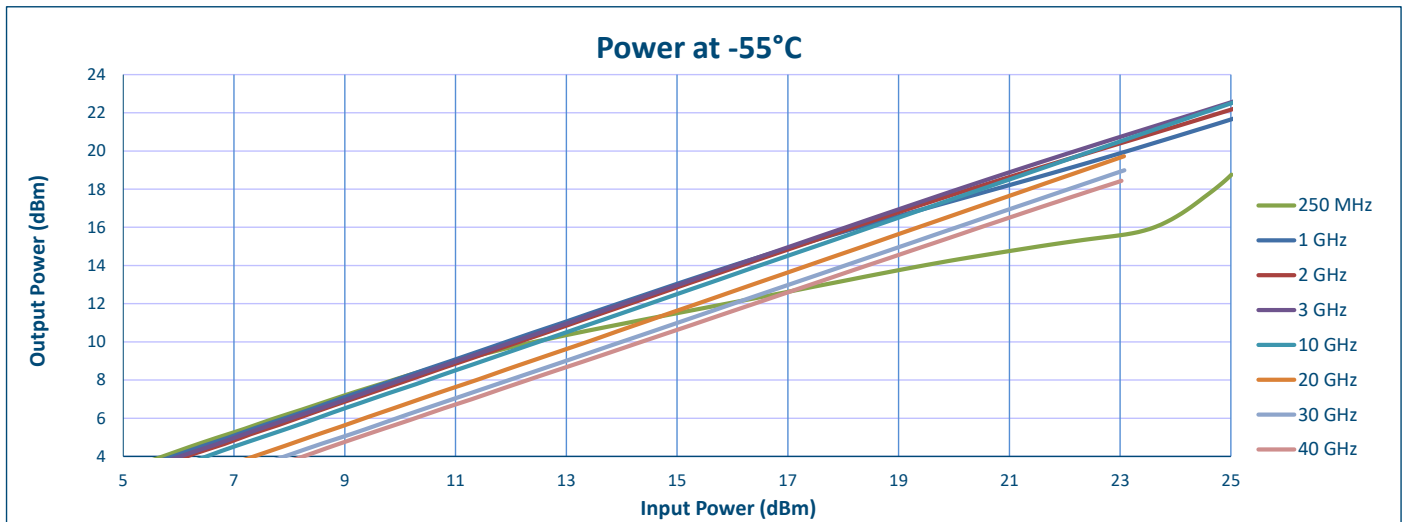
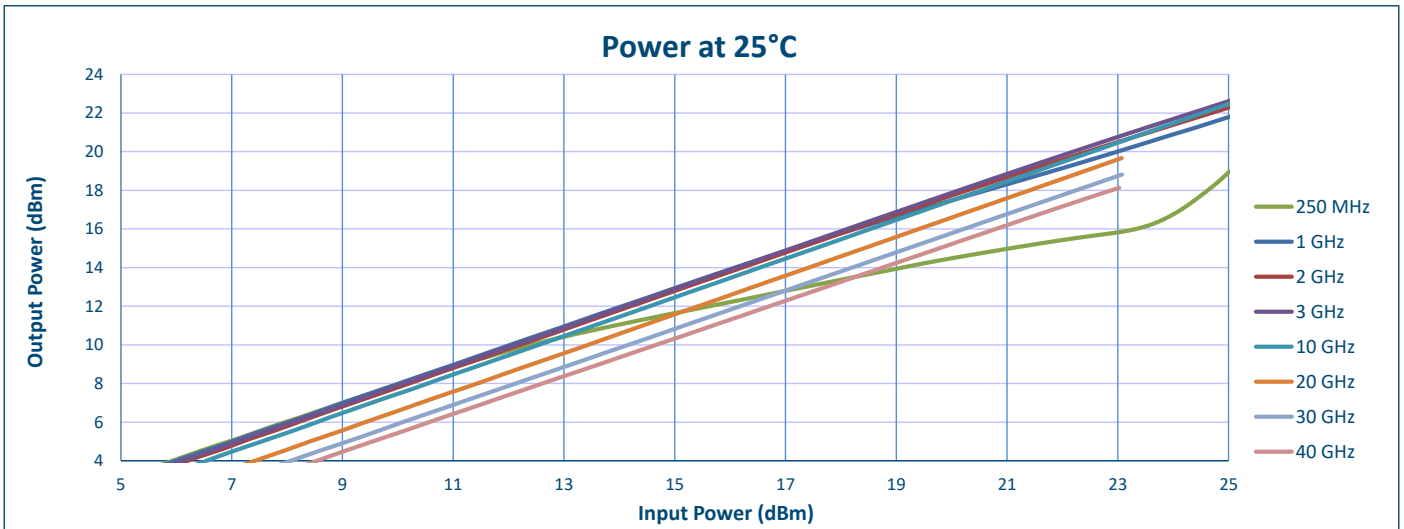




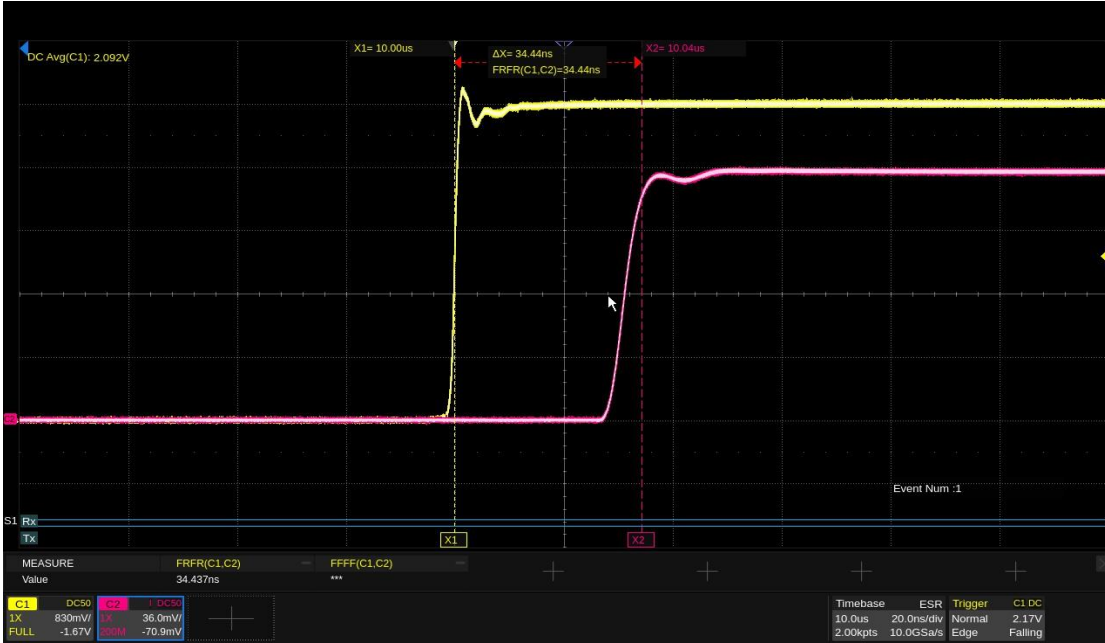






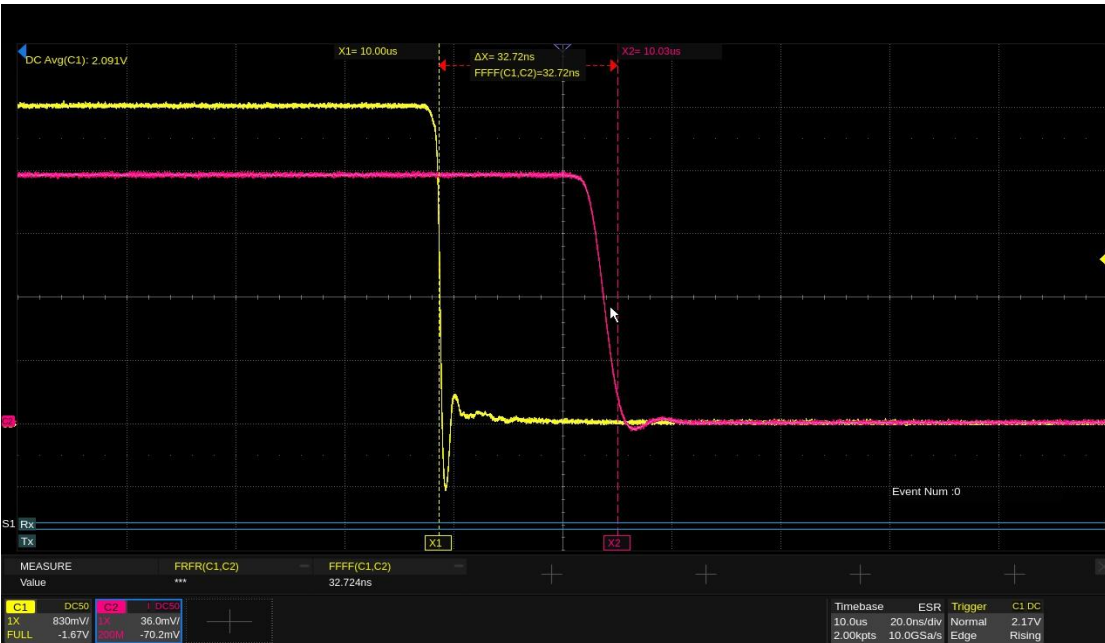


**Switching Speed On**



Yellow: TTL  
Pink: RF  
Switching Speed: 34.44 ns

**Switching Speed Off**



Yellow: TTL  
Pink: RF  
Switching Speed: 32.72 ns

**Full Pulse**

**Yellow: TTL**  
**Pink: RF**

