

**TYPICAL CHARACTERISTICS  
ON  
8SFB-2G18G-SFF**

PMI MODEL NO. 8SFB-2G18G-SFF IS AN 8-CHANNEL SWITCH FILTER BANK THAT OPERATES OVER THE FREQUENCY RANGE OF 2 TO 18 GHz. THIS MODEL IS OUTFITTED WITH SMA FEMALE CONNECTORS.



Reported By Y Li

24 December 2022

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## Product Fetaure

**DESCRIPTION:**  
PMI MODEL NO. 8SFB-2G18G-SFF IS AN 8-CHANNEL SWITCH FILTER BANK THAT OPERATES OVER THE FREQUENCY RANGE OF 2 TO 18 GHz. THIS MODEL IS OUTFITTED WITH SMA FEMALE CONNECTORS.

**SPECIFICATIONS:**

- FREQUENCY RANGE: 2 TO 18 GHz
- INSERTION LOSS: 8 dB TYP, 10 dB MAX
- VSWR: 2.0:1 MAX
- PASS BAND RIPPLE: ±0.5 dB TYP, ±1.0 dB MAX
- INPUT POWER: 15 dBm MAX
- SWITCHING SPEED: 200 ns MAX
- DC SUPPLY: +12V @ 500 mA  
-12V @ 100 mA
- IMPEDANCE: 50 Ω
- INPUT/OUTPUT CONNECTORS: SMA FEMALE
- DC & CONTROL: 9 PIN MICRO-D (FEMALE)
- FINISH: PAINTED BLUE

PIN	FUNCTION
1	+12V
2	GND
3	-12V
4	C1
5	C2
6	C3
7	NC
8	NC
9	NC

CHANNEL	C3	C2	C1	PASSBAND (GHz)	LOWER REJECTION (GHz)	UPPER REJECTION (GHz)
1	0	0	0	2-4	N/A	4.6-13.75 GHz ≤ -60 dB
2	0	0	1	4-6	3.25 GHz ≤ -60 dB	7.25 GHz ≤ -60 dB
3	0	1	0	6-8	3.75 GHz ≤ -60 dB	9.25 GHz ≤ -60 dB
4	0	1	1	8-10	6.75 GHz ≤ -60 dB	11.25 GHz ≤ -60 dB
5	1	0	0	10-12	8.75 GHz ≤ -60 dB	13.25 GHz ≤ -60 dB
6	1	0	1	12-14	10.75 GHz ≤ -60 dB	15.25 GHz ≤ -60 dB
7	1	1	0	14-16	12.75 GHz ≤ -60 dB	17.25 GHz ≤ -60 dB
8	1	1	1	16-18	14.75 GHz ≤ -60 dB	19.25 GHz ≤ -60 dB

BIASING	+12V / -12V
TTL CONTROL VOLTAGE	+3.3-+5V / 0-+0.8V
INPUT RF POWER	+20 dBm

**ENVIRONMENTAL RATINGS:**

- TEMPERATURE: -40°C TO +85°C (OPERATING)  
-55°C TO +125°C (STORAGE)
- OPERATING 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 107D COND. A

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

PMI CONFIDENTIAL AND PROPRIETARY

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	11/8/2002	

APPROVALS	DATE	TITLE
J. ESCANO	11/8/2002	OUTLINE

REV	DESCRIPTION	DATE	BY	CHKD	APP'D
B	05XQ0	27045340			

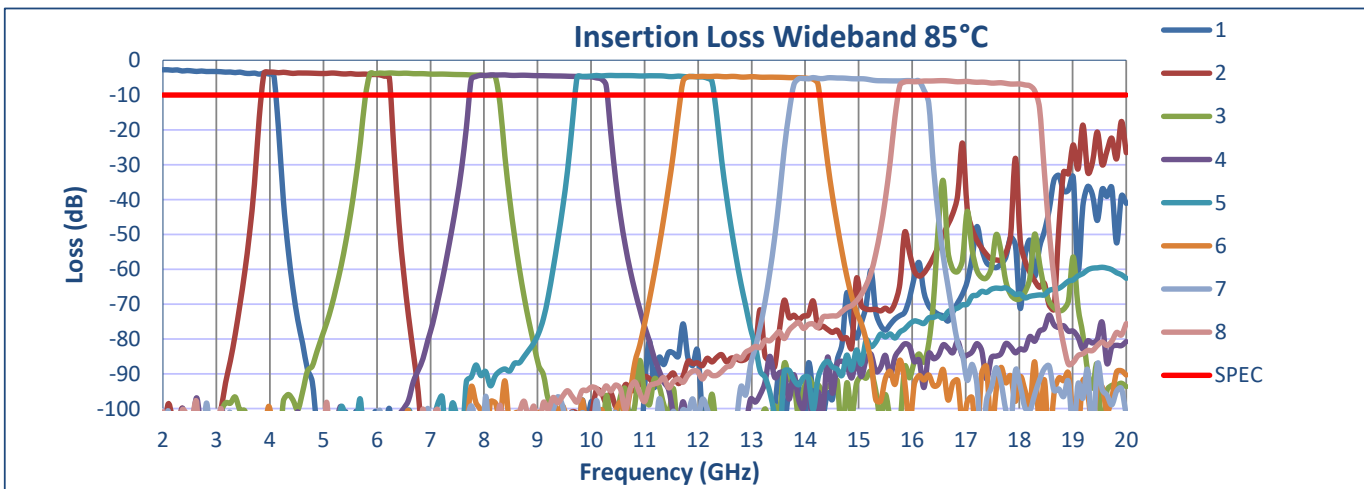
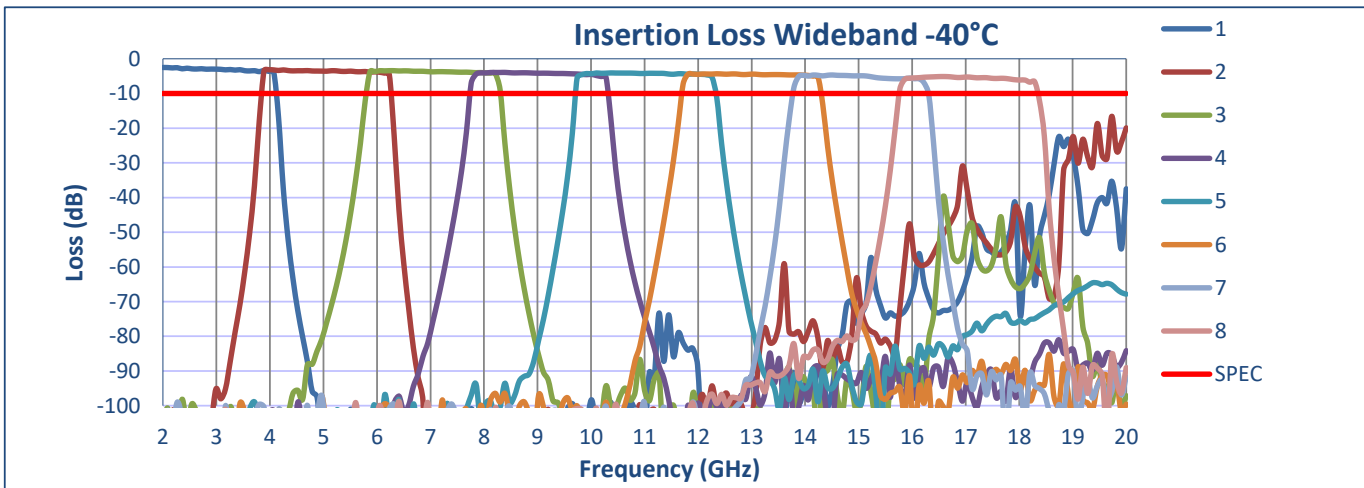
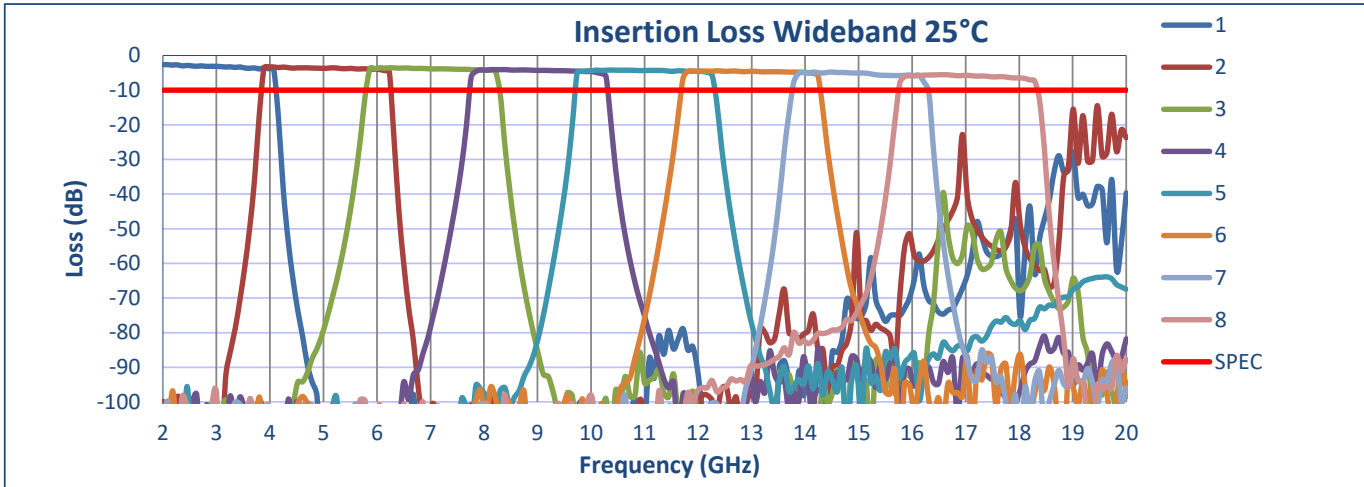
SCALE: 2:3 SHEET 1 OF 1

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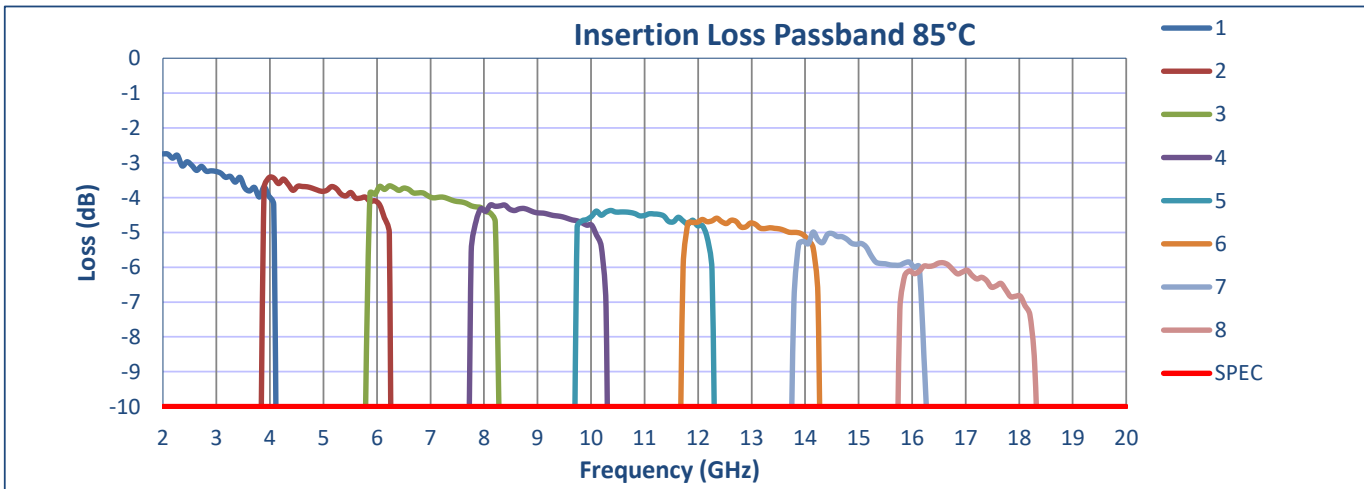
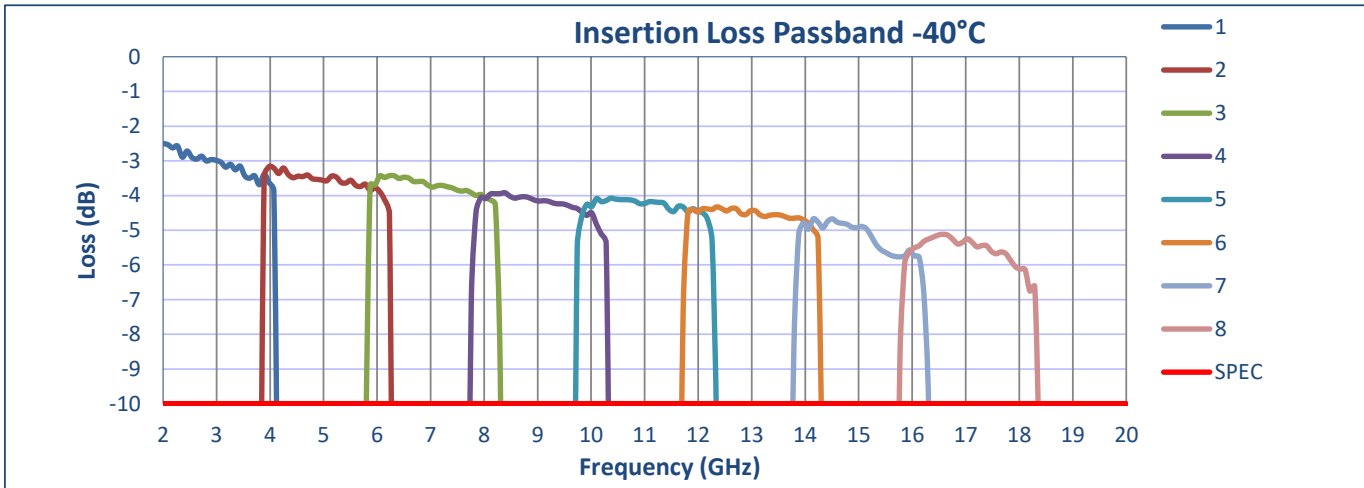
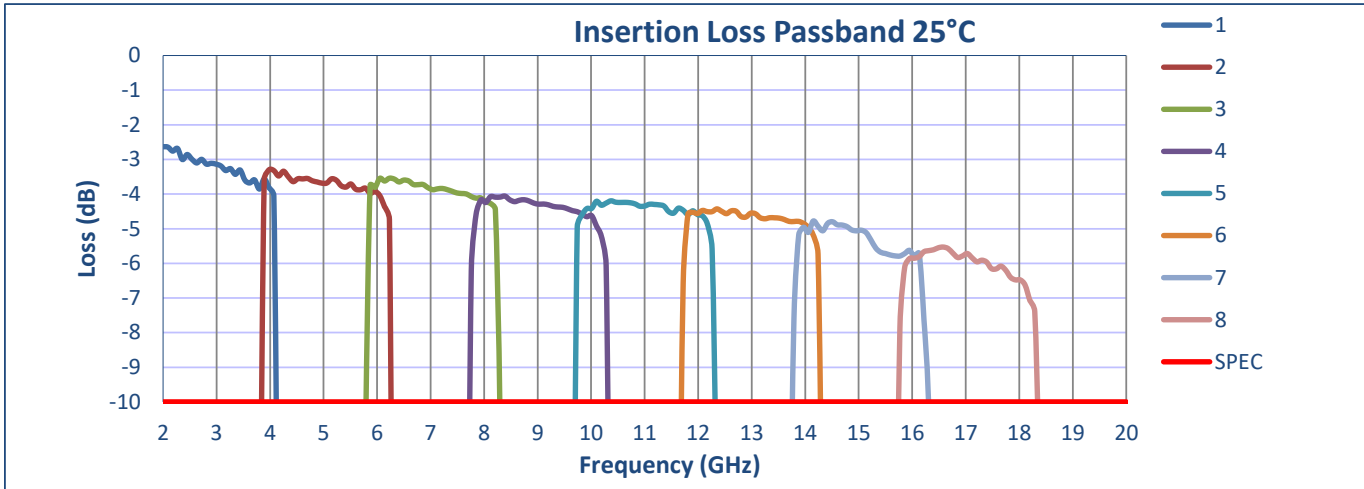
### Technical Specifications

TEST ITEM	PARAMETERS	SPECIFIED VALUE	TEST RESULTS -40°C	TEST RESULTS 25°C	TEST RESULTS 85°C
1	Frequency Range	2 GHz to 18 GHz	<b>2 GHz to 18 GHz</b>		
2	Insertion Loss	8dB Typ, 10 dB Max	Channel 1: 3.9 dB Channel 2: 3.9 dB Channel 3: 4.1 dB Channel 4: 4.6 dB Channel 5: 4.5 dB Channel 6: 4.8 dB Channel 7: 5.8 dB Channel 8: 6.1 dB	Channel 1: 4 dB Channel 2: 4 dB Channel 3: 4.2 dB Channel 4: 4.7 dB Channel 5: 4.6 dB Channel 6: 5 dB Channel 7: 5.8 dB Channel 8: 6.5 dB	Channel 1: 4.2 dB Channel 2: 4.2 dB Channel 3: 4.4 dB Channel 4: 4.8 dB Channel 5: 4.8 dB Channel 6: 5.2 dB Channel 7: 6 dB Channel 8: 6.8 dB
3	VSWR: In/Out	2:1 Max.	Channel 1: 1.5:1 Channel 2: 1.7:1 Channel 3: 1.4:1 Channel 4: 1.5:1 Channel 5: 1.7:1 Channel 6: 1.5:1 Channel 7: 1.4:1 Channel 8: 1.5:1	Channel 1: 1.5:1 Channel 2: 1.7:1 Channel 3: 1.4:1 Channel 4: 1.5:1 Channel 5: 1.6:1 Channel 6: 1.5:1 Channel 7: 1.4:1 Channel 8: 1.6:1	Channel 1: 1.5:1 Channel 2: 1.6:1 Channel 3: 1.4:1 Channel 4: 1.6:1 Channel 5: 1.7:1 Channel 6: 1.5:1 Channel 7: 1.5:1 Channel 8: 1.6:1
4	Pass Band Ripple	±0.5 dB Typ., ±1.0 dB Max.	Channel 1: ± 0.7 dB Channel 2: ± 0.4 dB Channel 3: ± 0.3 dB Channel 4: ± 0.3 dB Channel 5: ± 0.2 dB Channel 6: ± 0.2 dB Channel 7: ± 0.5 dB Channel 8: ± 0.5 dB	Channel 1: ± 0.7 dB Channel 2: ± 0.4 dB Channel 3: ± 0.3 dB Channel 4: ± 0.3 dB Channel 5: ± 0.2 dB Channel 6: ± 0.3 dB Channel 7: ± 0.5 dB Channel 8: ± 0.5 dB	Channel 1: ± 0.7 dB Channel 2: ± 0.4 dB Channel 3: ± 0.4 dB Channel 4: ± 0.3 dB Channel 5: ± 0.2 dB Channel 6: ± 0.3 dB Channel 7: ± 0.5 dB Channel 8: ± 0.5 dB
5	Rejection	60 dB At Channel Frequencies: 1: 4.6-13.75 GHz 2: 3.25 GHz, 7.25 GHz 3: 3.75 GHz, 9.25 GHz 4: 6.75 GHz, 11.25 GHz 5: 8.75 GHz, 13.25 GHz 6: 10.75 GHz, 15.25 GHz 7: 12.75 GHz, 17.25 GHz 8: 14.75 GHz, 19.25 GHz	Channel 1: 69 dB Channel 2: 83, 102 dB Channel 3: 97, 89 dB Channel 4: 86, 79 dB Channel 5: 87, 87 dB Channel 6: 82, 78 dB Channel 7: 93, 85 dB Channel 8: 74, 83 dB	Channel 1: 70 dB Channel 2: 81, 99 dB Channel 3: 107, 88 dB Channel 4: 86, 80 dB Channel 5: 88, 85 dB Channel 6: 82, 78 dB Channel 7: 96, 79 dB Channel 8: 70, 88 dB	Channel 1: 70 dB Channel 2: 82, 103 dB Channel 3: 101, 93 dB Channel 4: 84, 81 dB Channel 5: 80, 86 dB Channel 6: 81, 81 dB Channel 7: 88, 87 dB Channel 8: 64, 77 dB
6	Switching Speed	200 ns Max.	<b>131 ns See Plots</b>		
7	Input Power	15 dBm Max.	<b>15 dBm See Plots</b>	<b>15 dBm See Plots</b>	<b>15 dBm See Plots</b>
8	DC Supply	+12VDC @ 500 mA -12VDC @ 100 mA	<b>+ 12 VDC @ 490 mA - 12 VDC @ 54 mA</b>	<b>+ 12 VDC @ 490 mA - 12 VDC @ 54 mA</b>	<b>+ 12 VDC @ 490 mA - 12 VDC @ 54 mA</b>

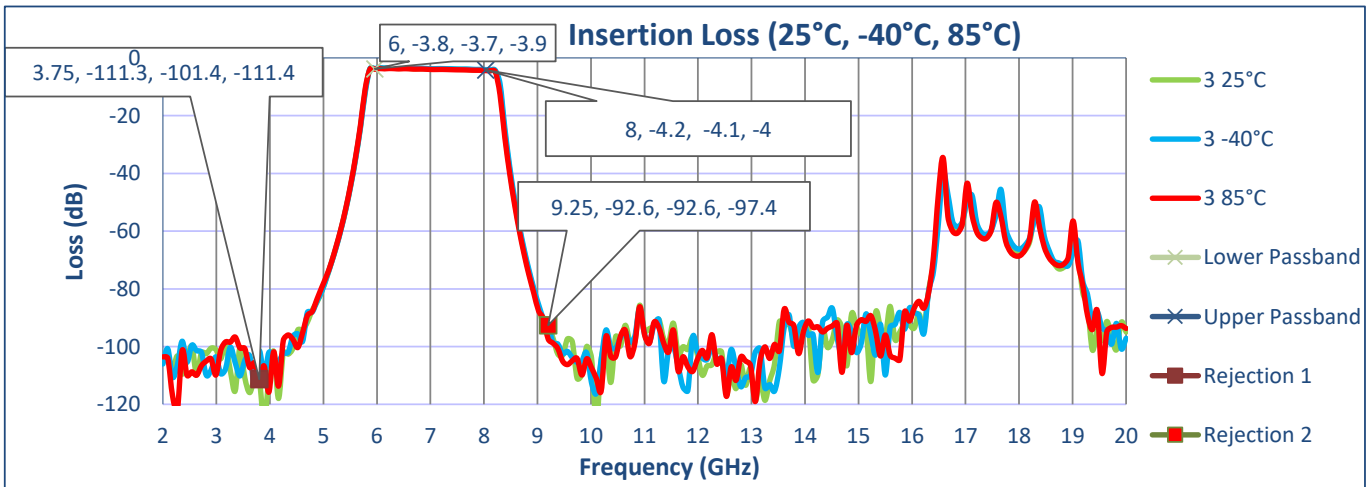
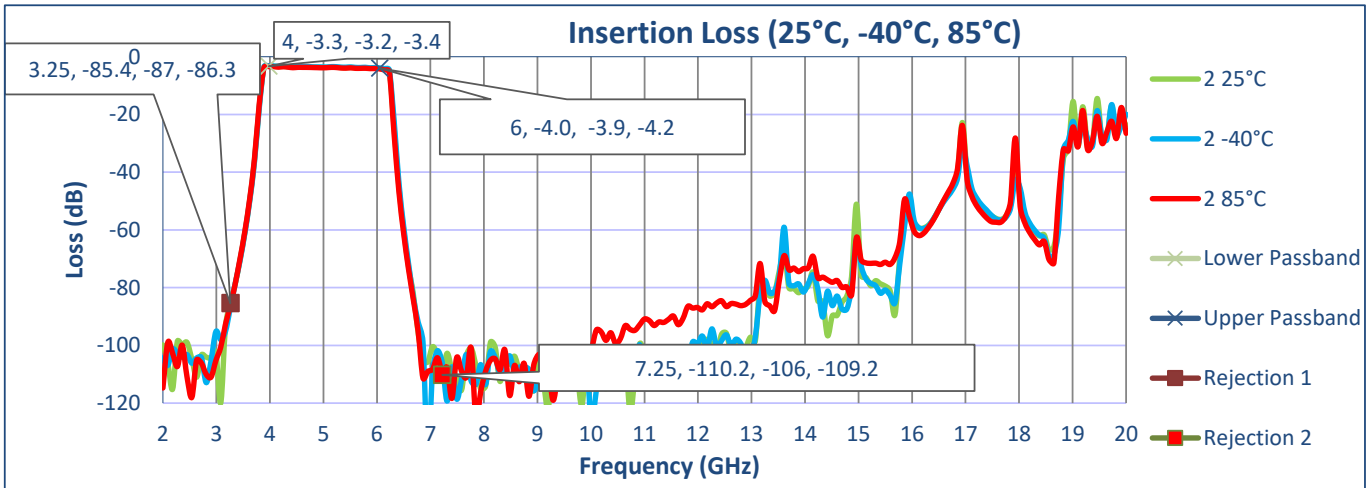
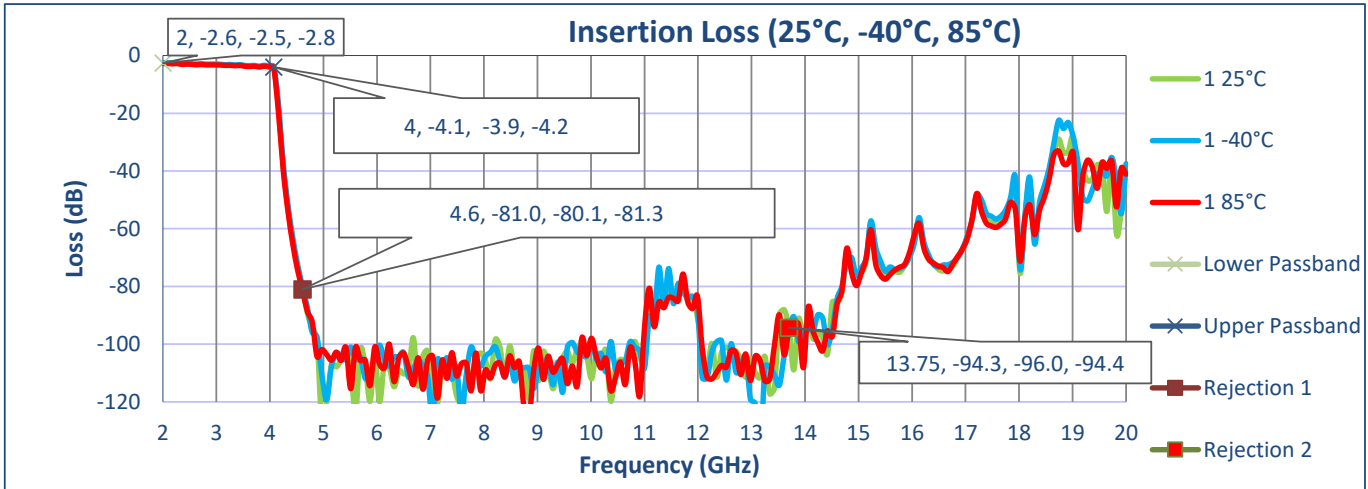
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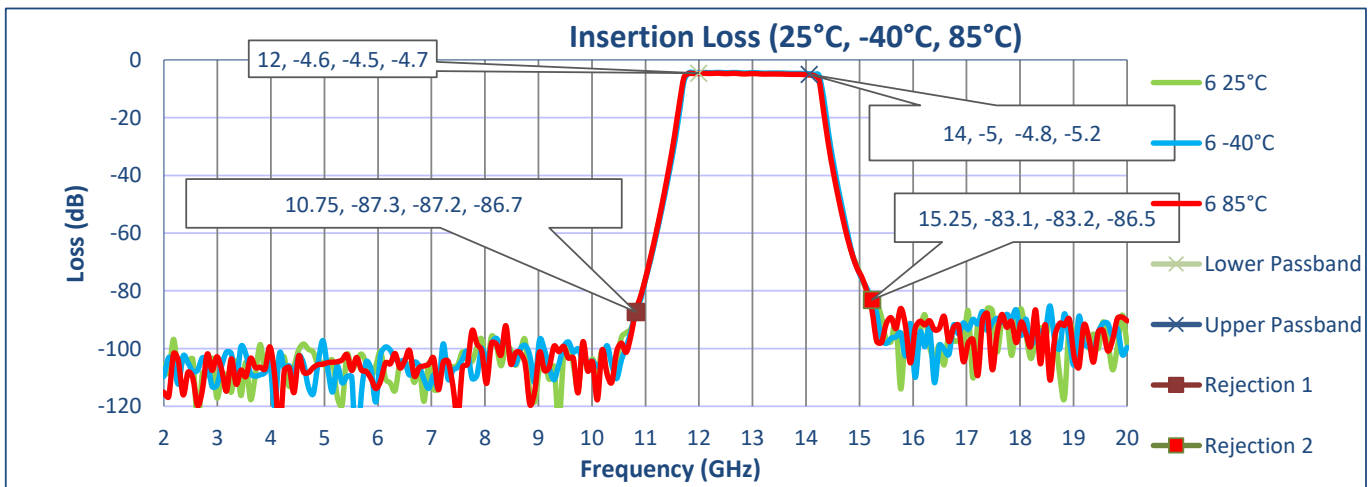
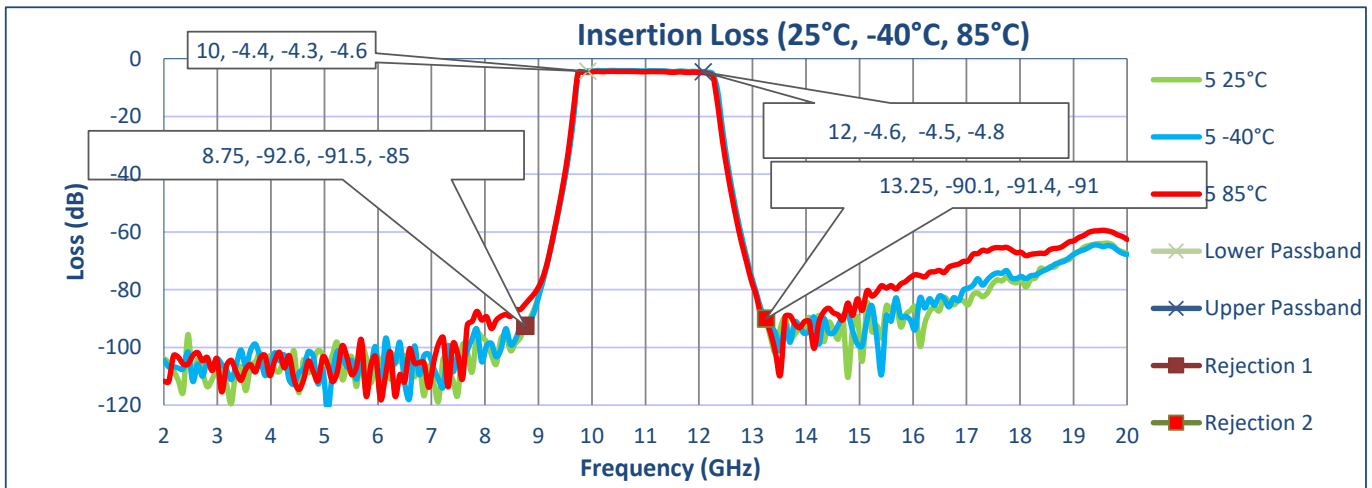
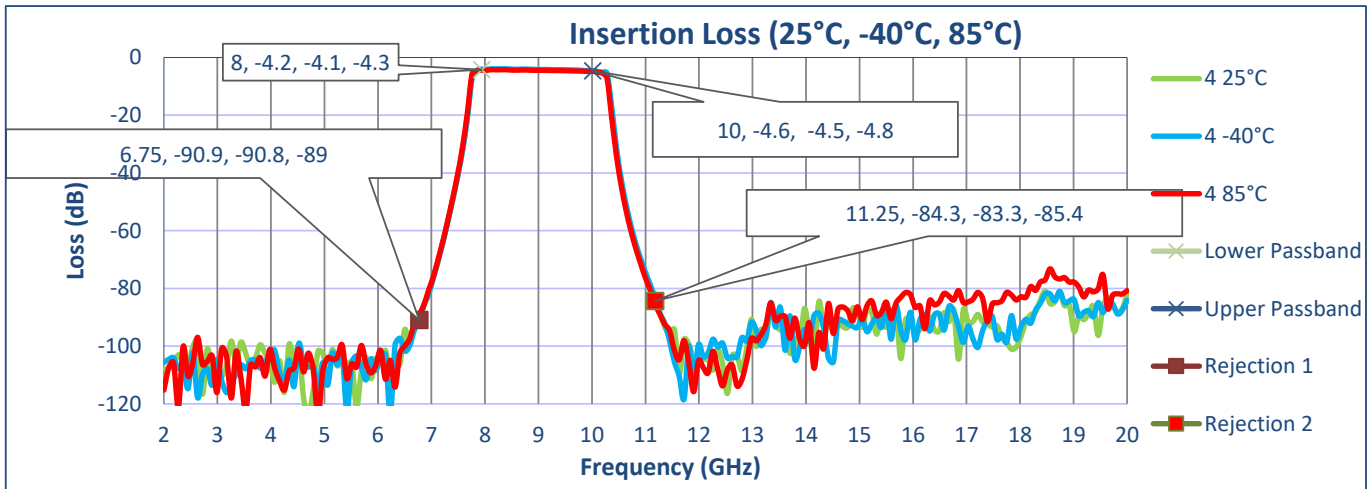
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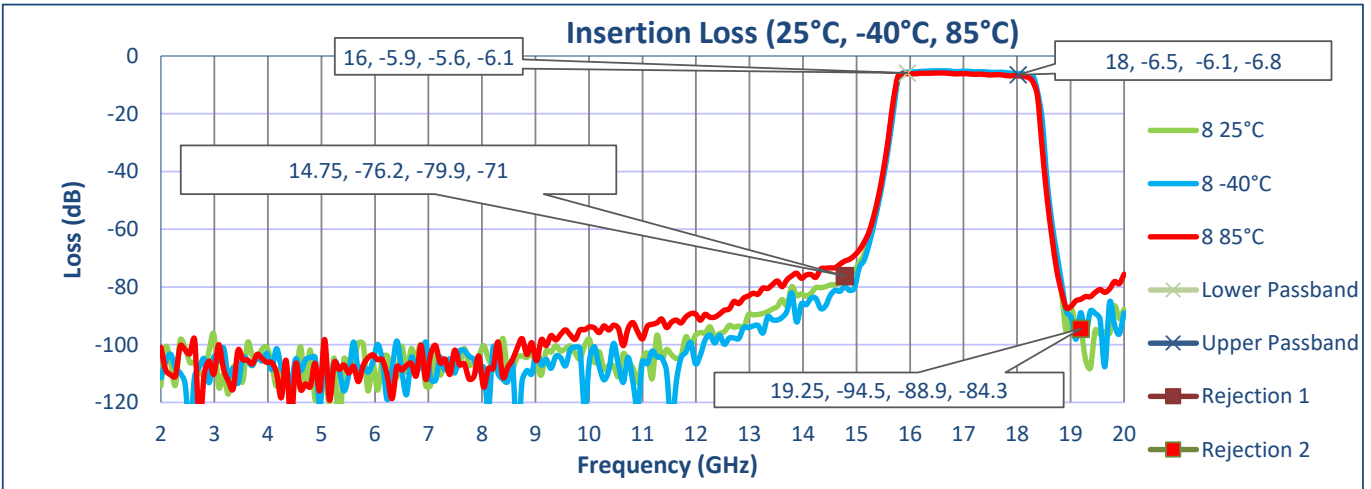
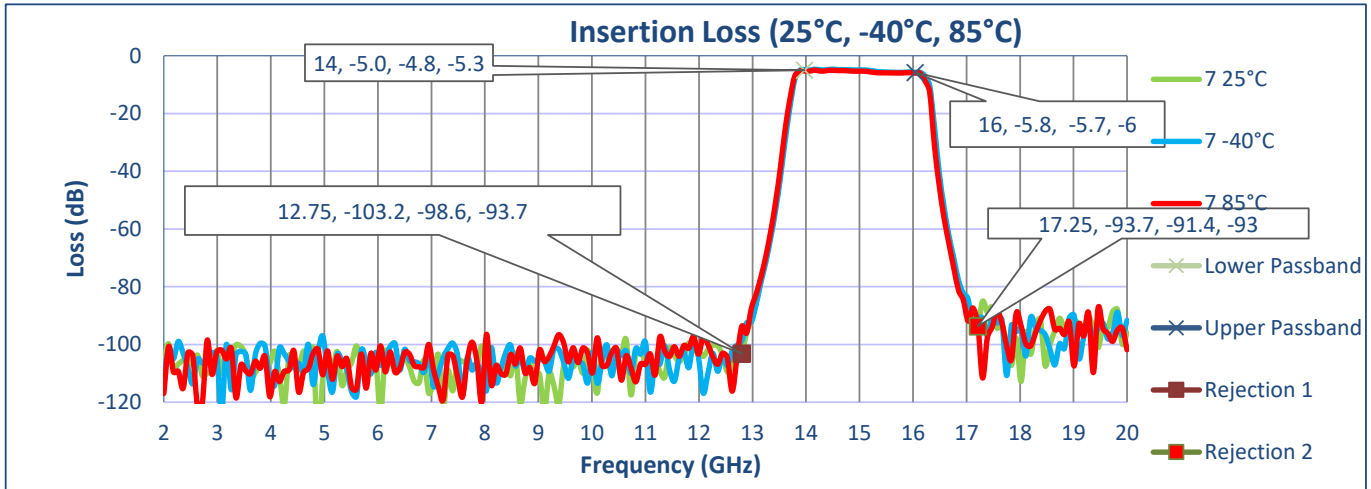
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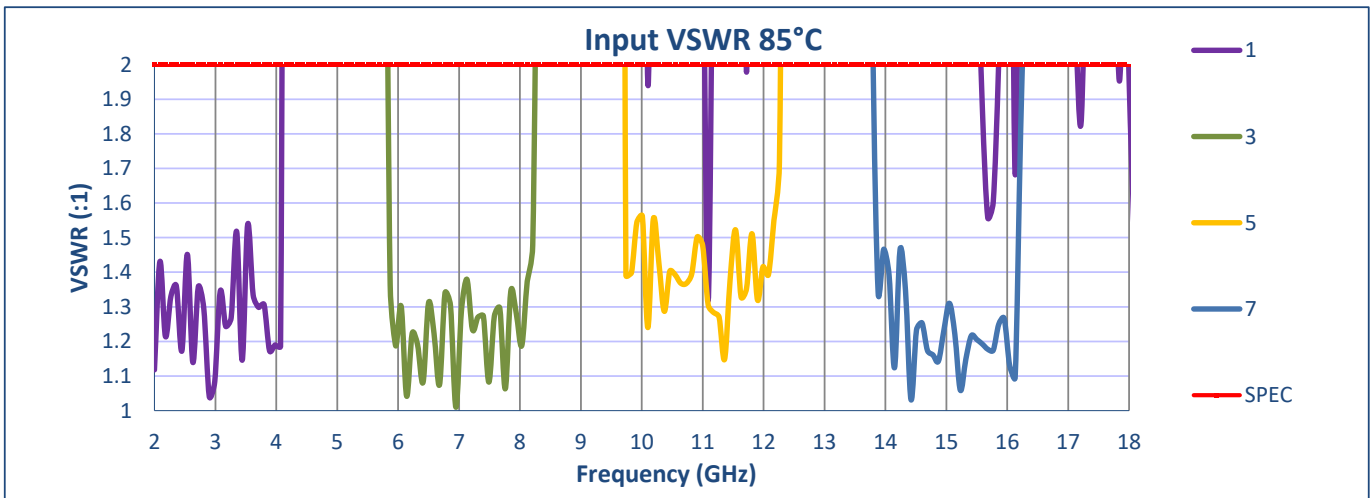
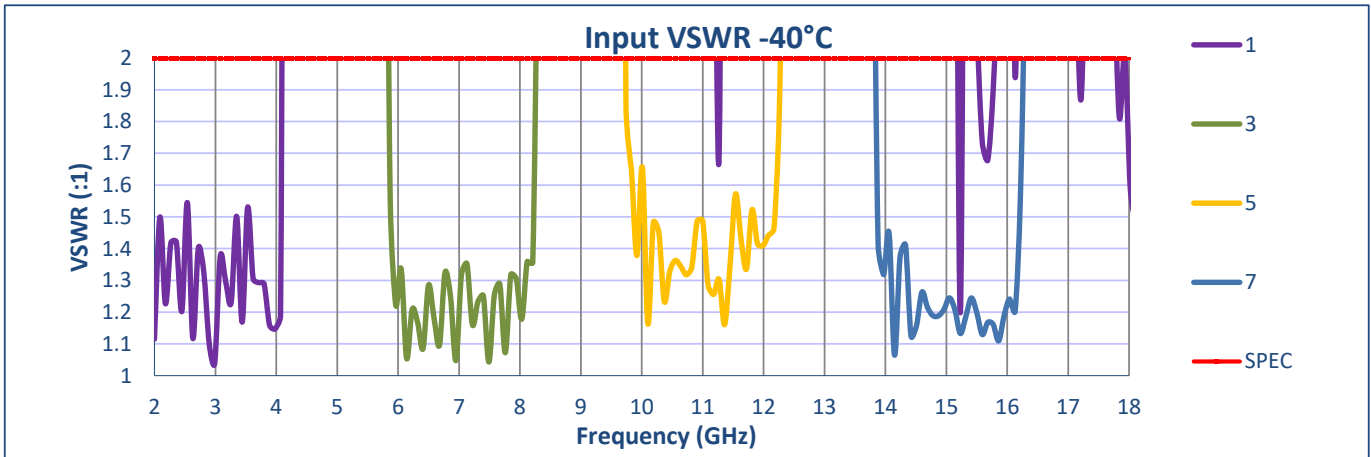
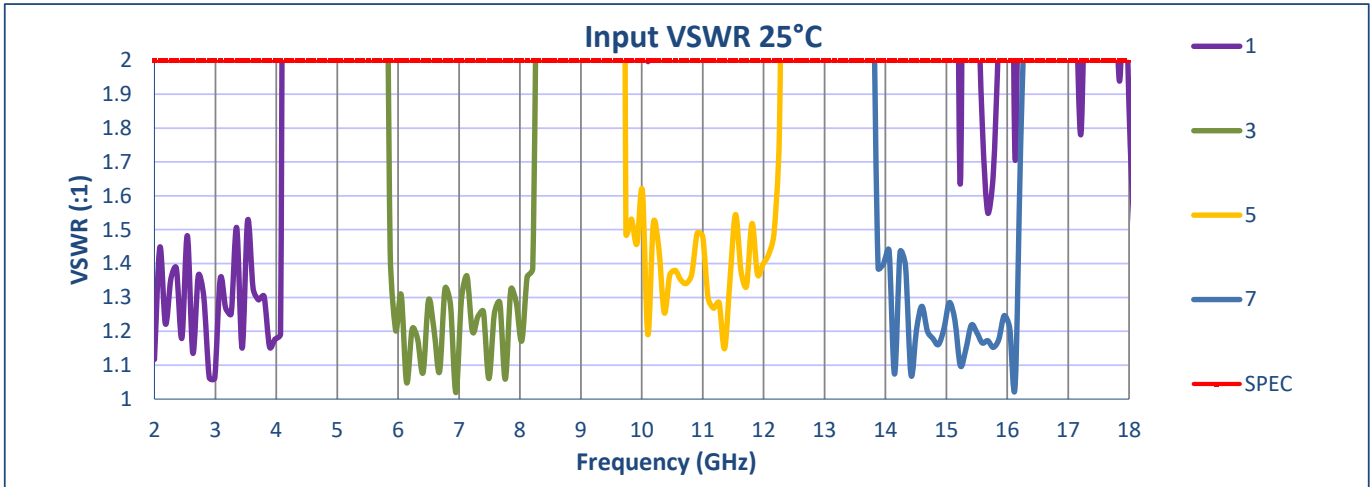


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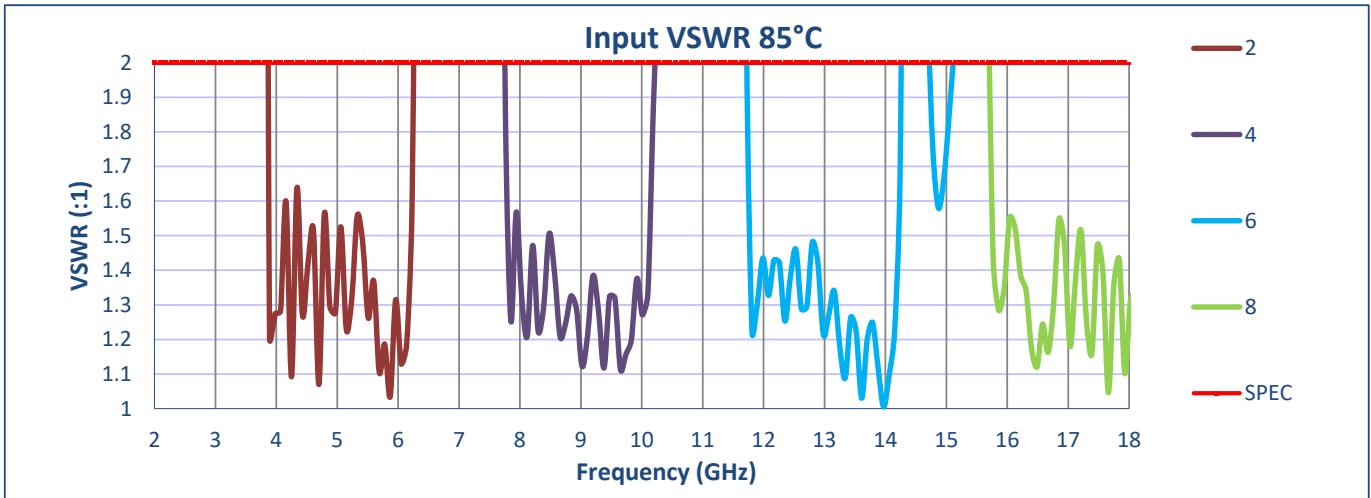
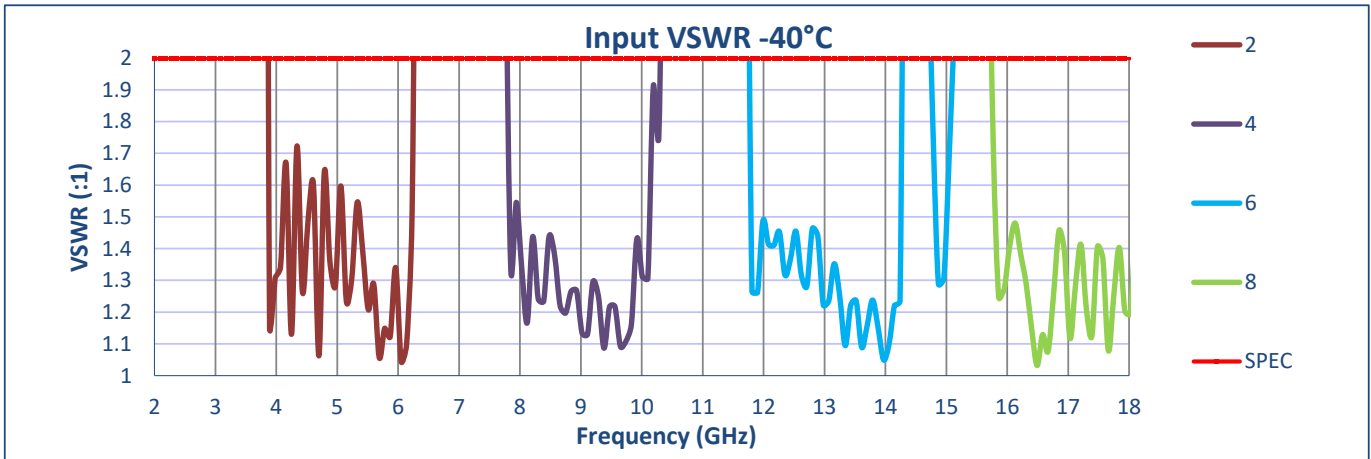
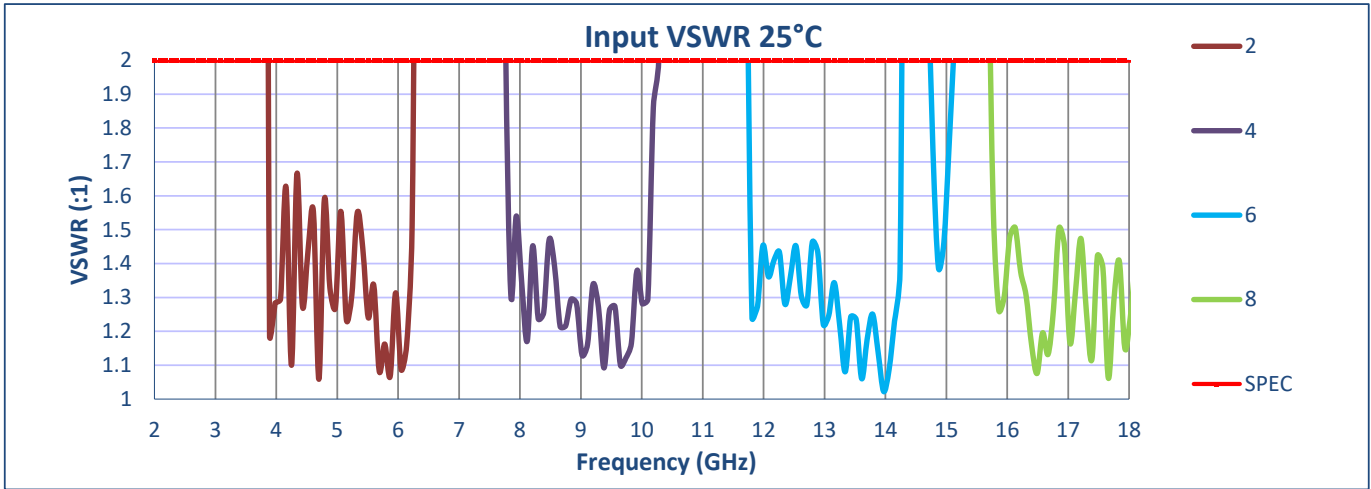




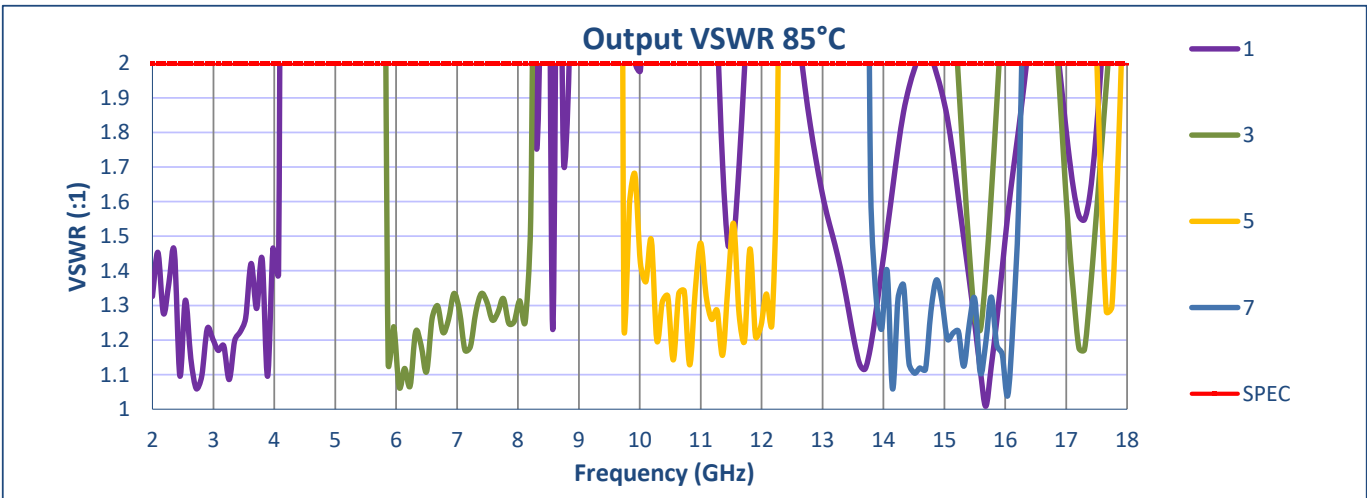
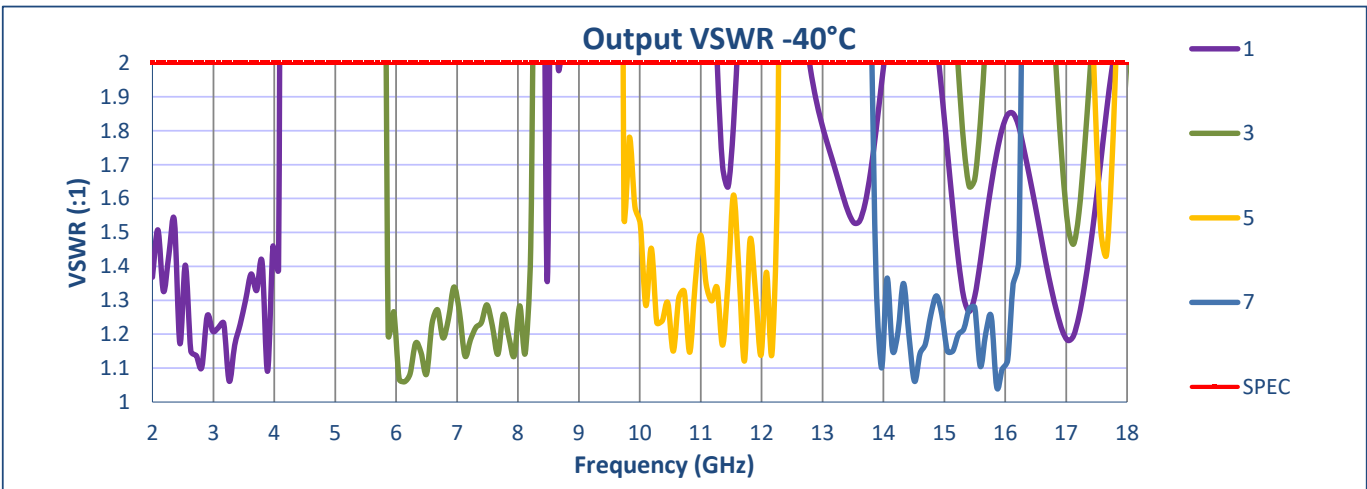
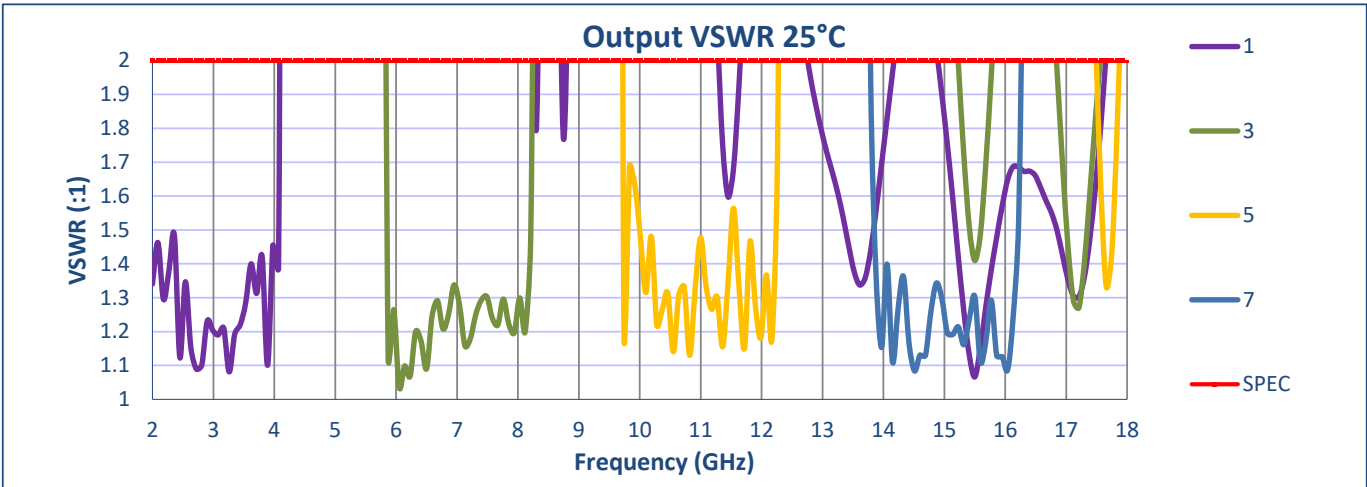
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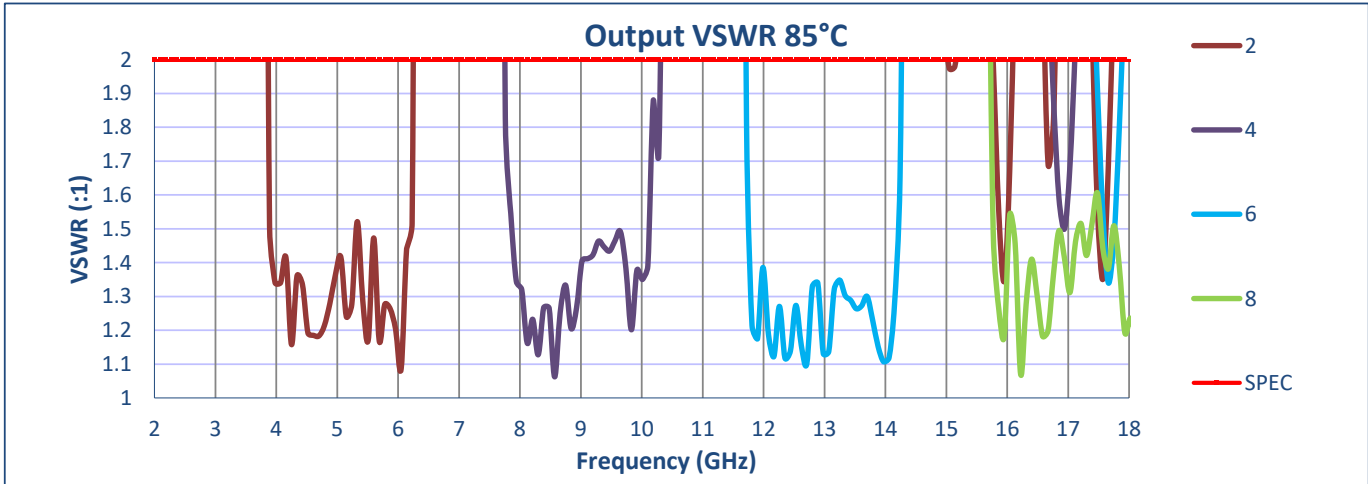
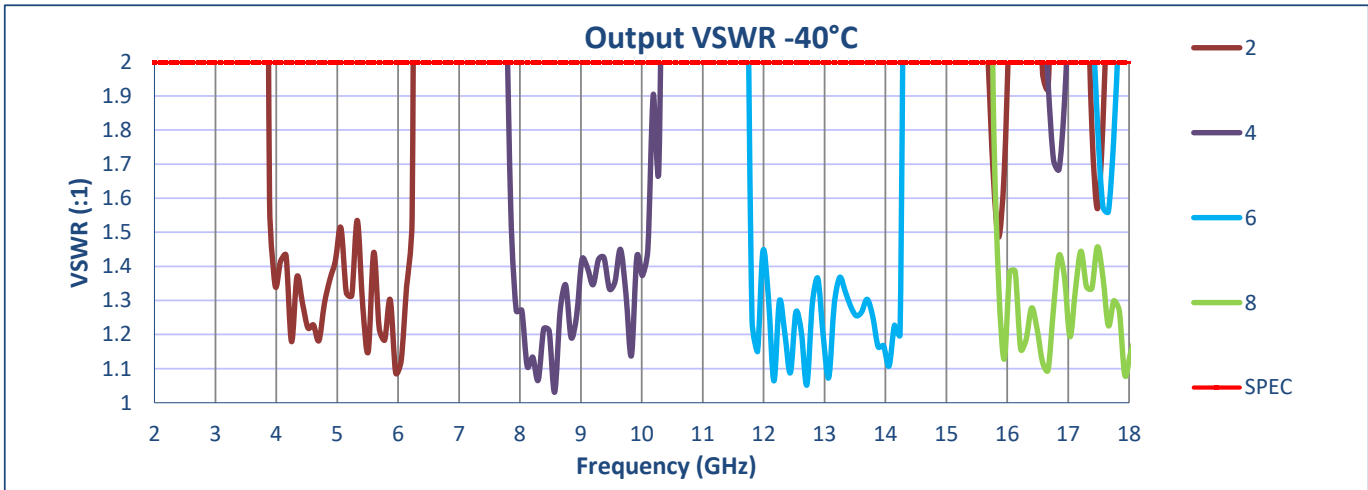
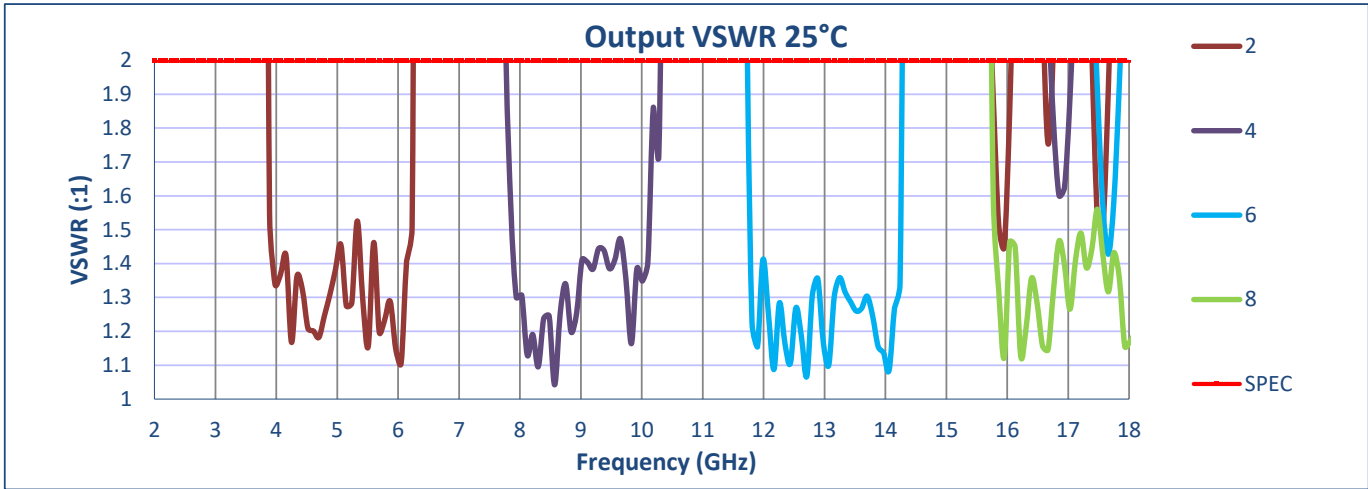
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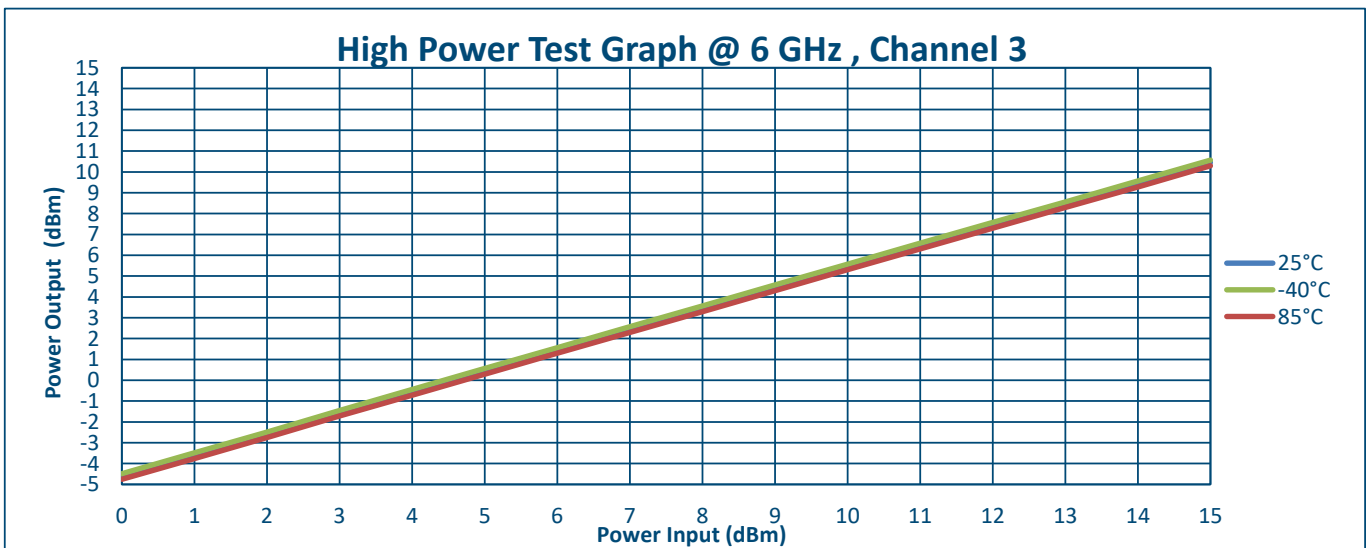
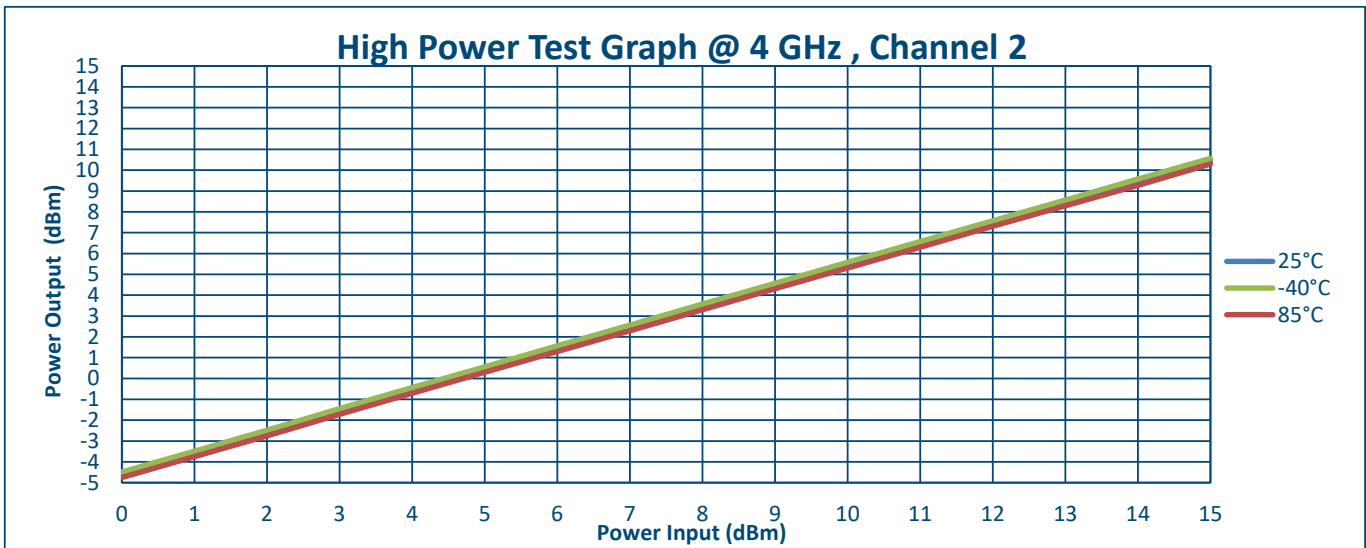
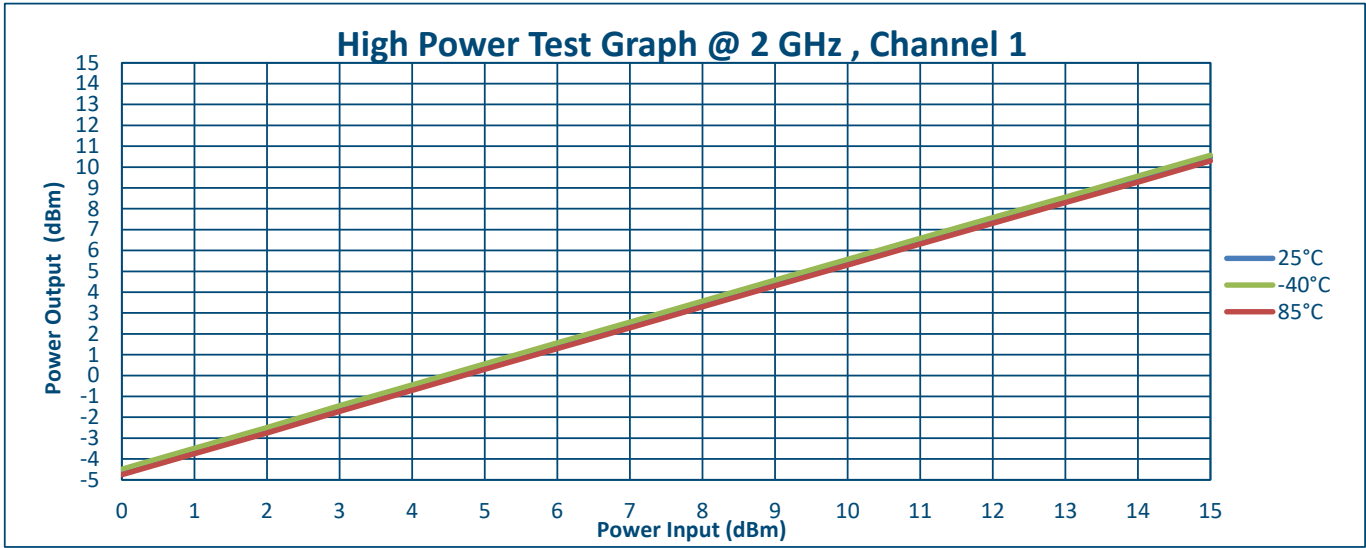


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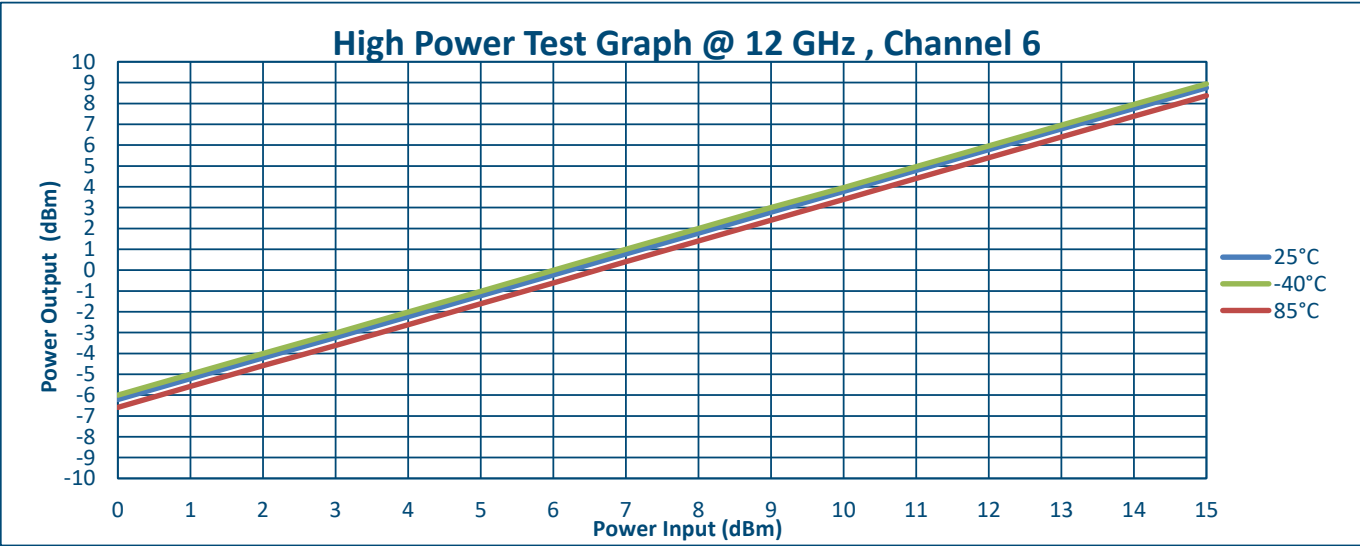
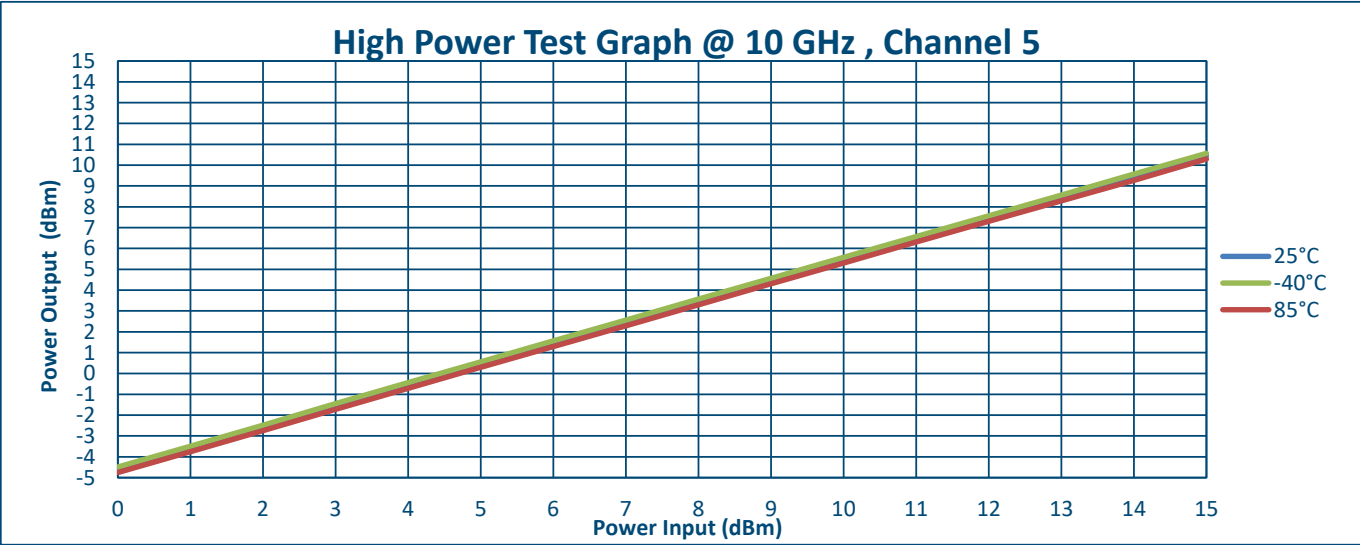
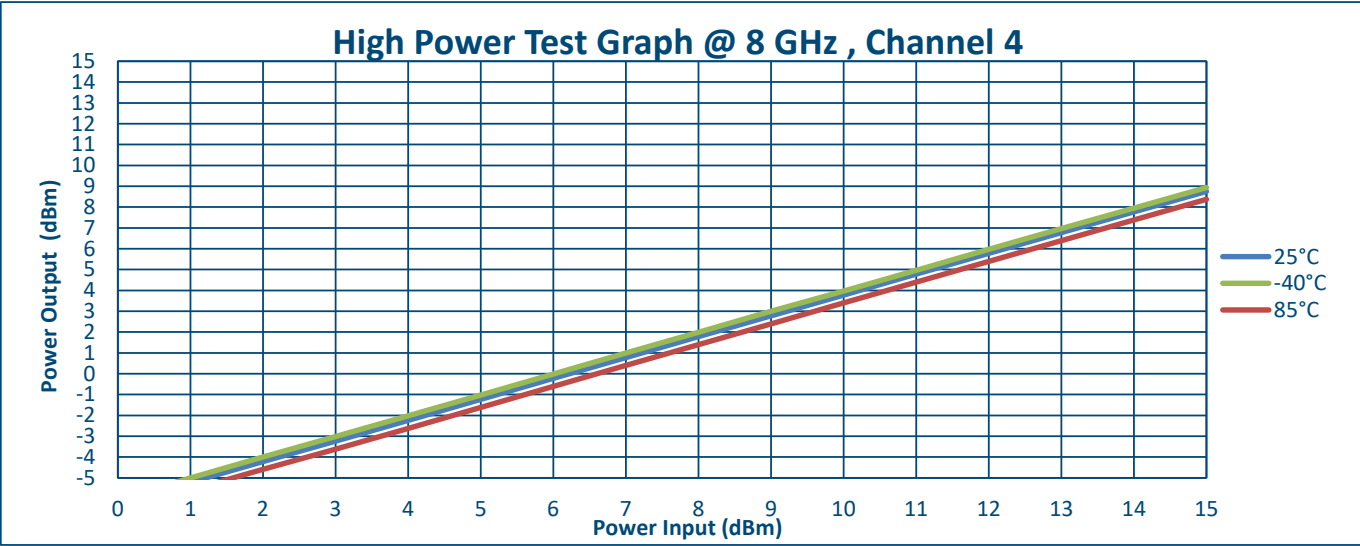


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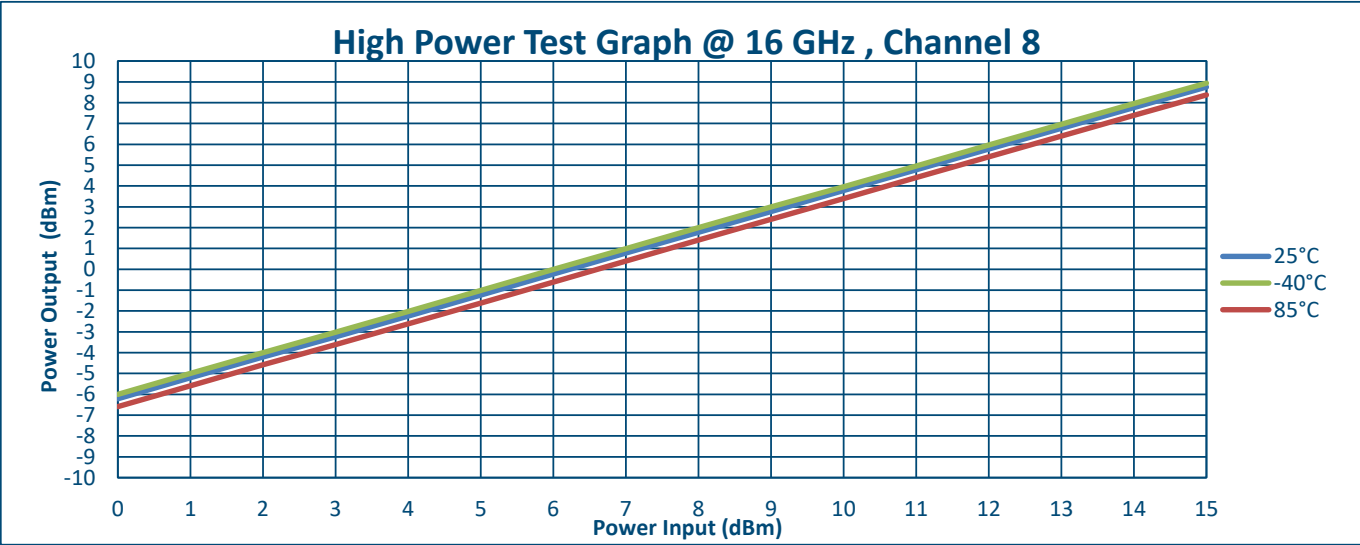
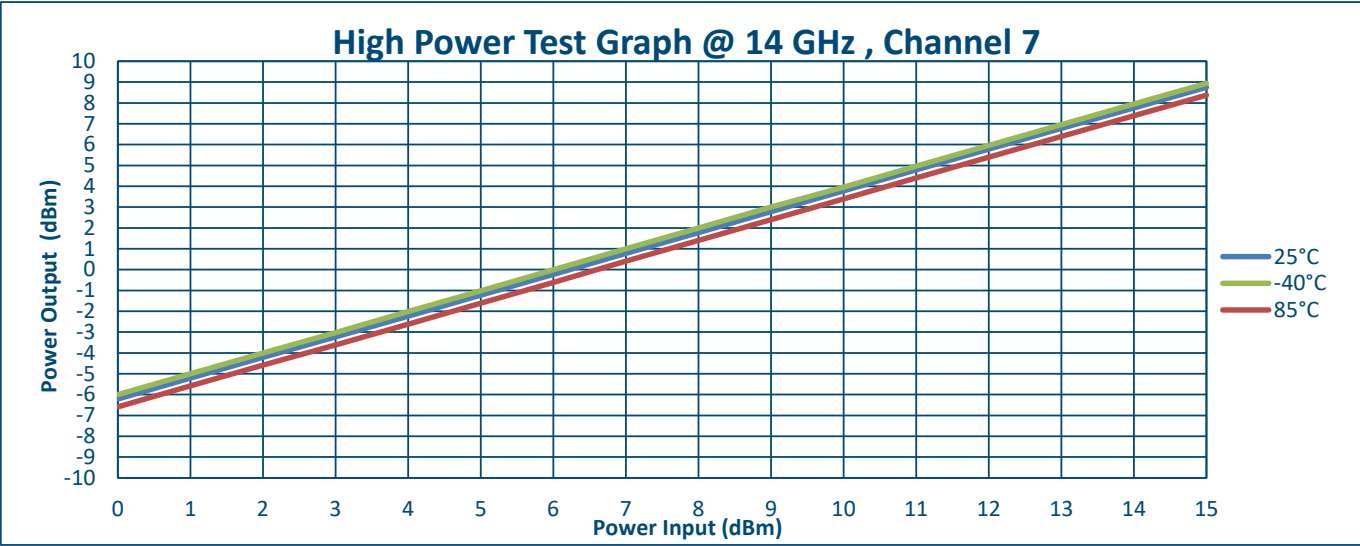




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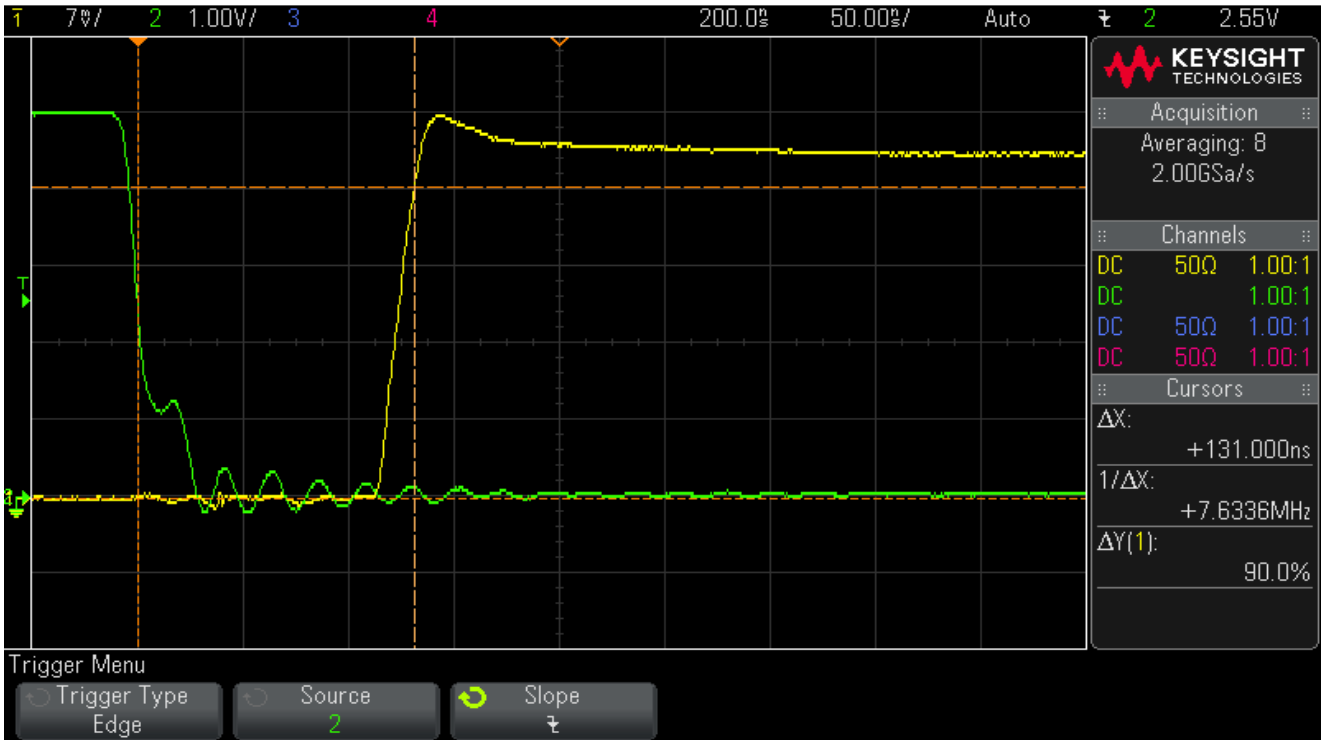
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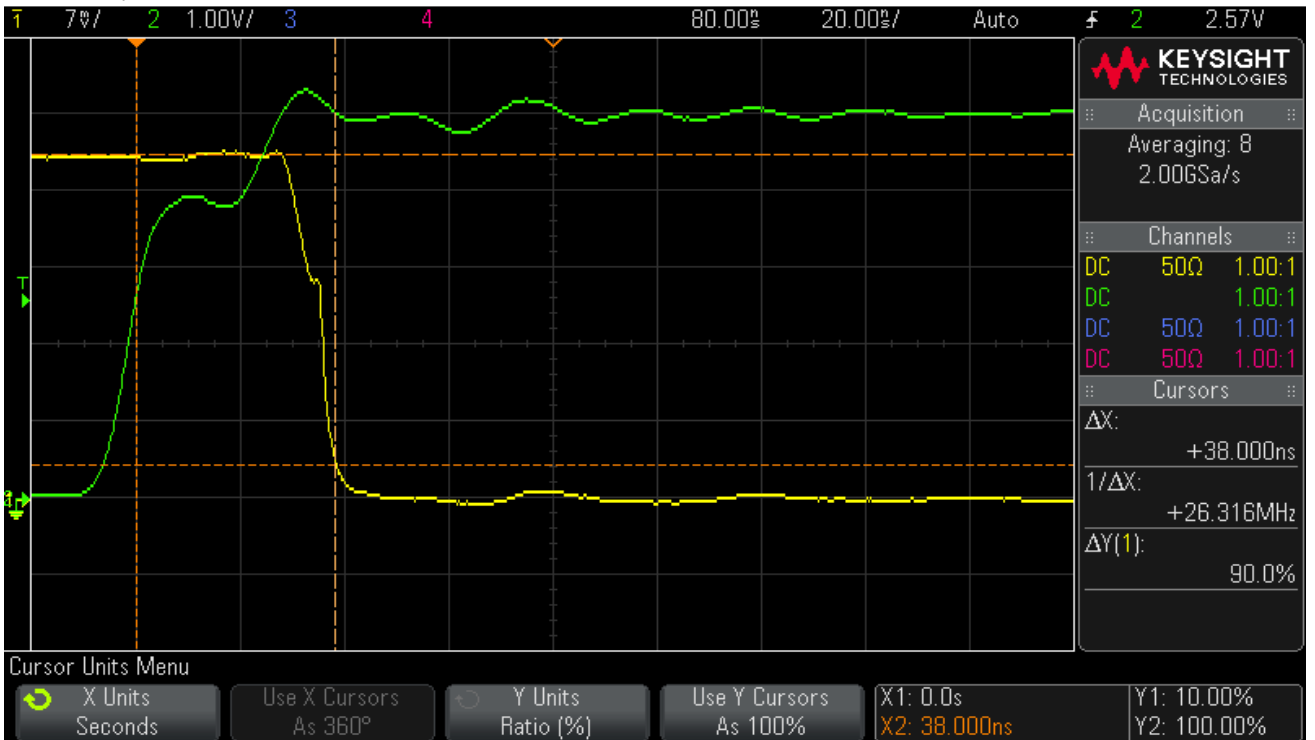
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**Switching Speed**

DSO-X 3034A, MY52103312: Thu Jan 19 04:55:12 2023



DSO-X 3034A, MY52103312: Thu Jan 19 04:54:08 2023



**Green TTL  
2 GHz Input**

**Yellow - Channel 1 Output**

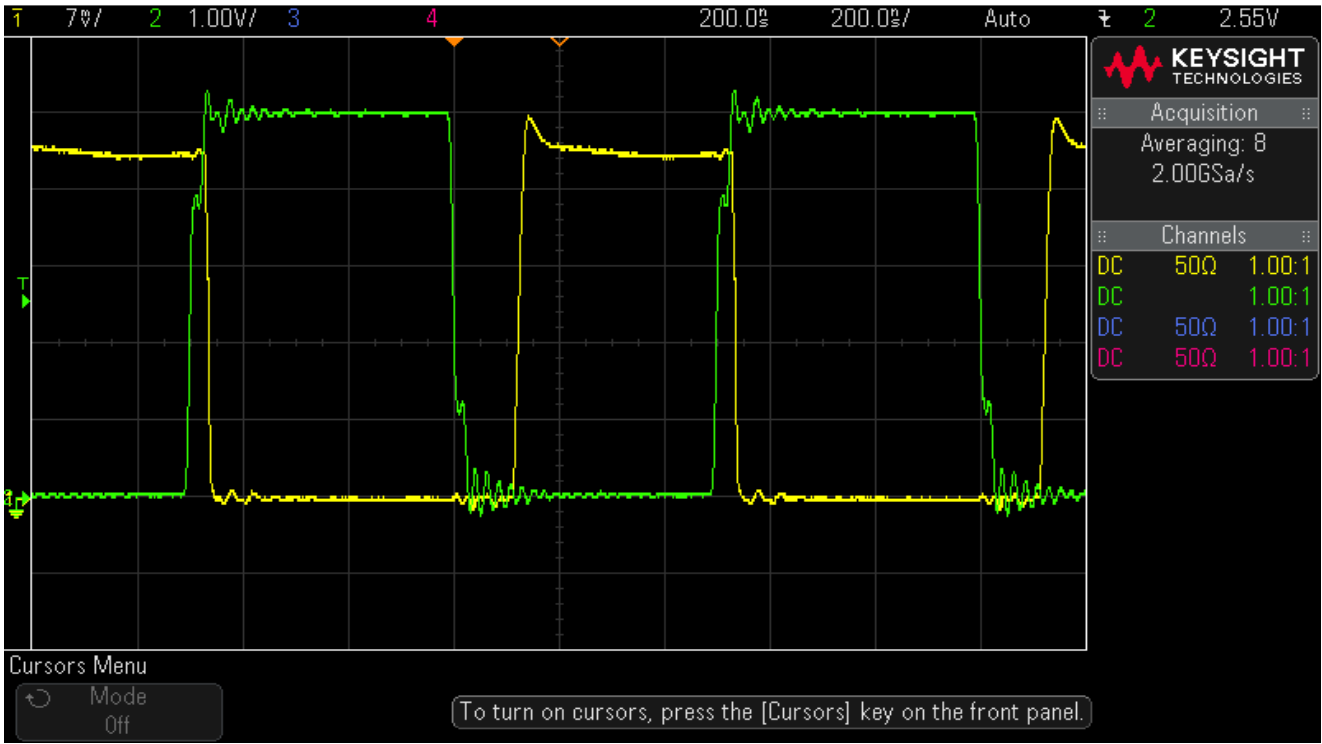
7309-A Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731  
Email: sales@quanticpmi.com



**TYPICAL CHARACTERISTICS  
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**Full Pulse**

DSO-X 3034A, MY52103312: Thu Jan 19 04:55:46 2023



**Green TTL**

**Yellow - Channel 1 Output**

**2 GHz Input**