



## TYPICAL CHARACTERISTICS ON PS-200M10G-8B-STRB-SFF

PMI MODEL PS-200M10G-8B-STRB-SFF IS AN 8-BIT DIGITAL PHASE SHIFTER THAT OPERATES OVER THE 200 MHz TO 10 GHz FREQUENCY RANGE. THIS MODEL OFFERS 360 DEGREES OF PHASE SHIFT WITH THE LEAST SIGNIFICANT BIT OF 1.4 DEGREES.



REPORTED BY: ANTON L.  
TESTED BY: ANTON L.  
DATE: 1/23/26

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

# TYPICAL CHARACTERISTICS ON PS-200M10G-8B-STRB-SFF

## PRODUCT FEATURE

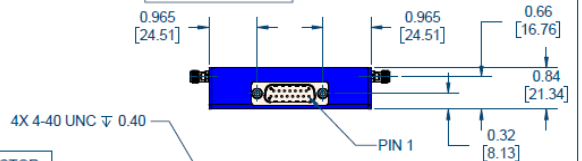
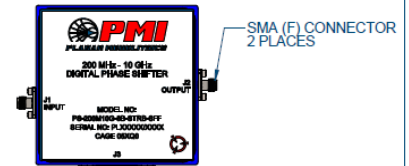
**DESCRIPTION:**  
PM MODEL PS-200M10G-8B-STRB-SFF IS A 8-BIT DIGITAL PHASE SHIFTER THAT OPERATES OVER THE 200 MHz TO 10 GHz FREQUENCY RANGE. THIS MODEL OFFERS 360 DEGREES OF PHASE SHIFT WITH THE LEAST SIGNIFICANT BIT OF 1.4 DEGREES.

**SPECIFICATIONS:**

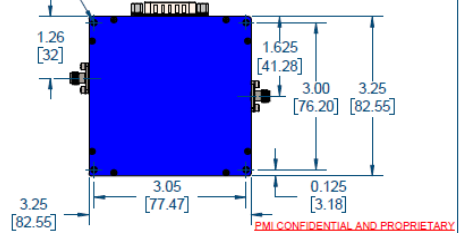
- MEASURED AT -10 dBm INPUT POWER**
- FREQUENCY RANGE: 200 MHz TO 10 GHz
  - CONTROL: 8 BIT TTL
  - INSERTION LOSS: 10.5 dB TYP.
  - PHASE SHIFT: 360°
  - PHASE SHIFT ERROR: ±15° TYP.
  - SWITCHING SPEED: 500 ns MAX.
  - DC SUPPLY: +15 V @ 350 mA MAX.  
-15 V @ 50 mA MAX.
  - CONNECTORS: RF: SMA FEMALE  
CONTROL: 15 PIN SUBMINIATURE D (MALE)  
MATING CONNECTOR SUPPLIED WITH THE UNIT
  - SIZE: 3.25" x 3.25" x 0.84"  
[82.55 mm x 82.55 mm x 21.34 mm]
  - FINISH: PAINTED BLUE



ITT CANNON DA-15P OR EQUIV.  
WITH D110551 JACKPOSTS  
MATING CONNECTORS PROVIDED



ELECTRICAL CONNECTOR PIN ASSIGNMENTS	
PIN	FUNCTION
1	-VDC
2	+VDC
3	Latch/STRB
4	1.4° (LSB)
5	5.6°
6	45°
7	180° (MSB)
8	90°
9	GND
10	N/C
11	22.5°
12	2.8°
13	11.3°
14	N/C
15	N/C



**ENVIRONMENTAL RATINGS:**

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

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

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	1/19/26	

**Quantic PMI**  
7309-A GROVE ROAD FREDERICK, MD 21704 USA  
WEB: WWW.QUANTICPMI.COM

APPROVALS	DATE	TITLE
AL	1/19/26	OUTLINE
DESIGNED		PS-200M10G-8B-STRB-SFF
TESTED		SIZE: 05XQ0
		DRG NO: 27054100
		SCALE: 0.1
		SHEET 1 OF 1

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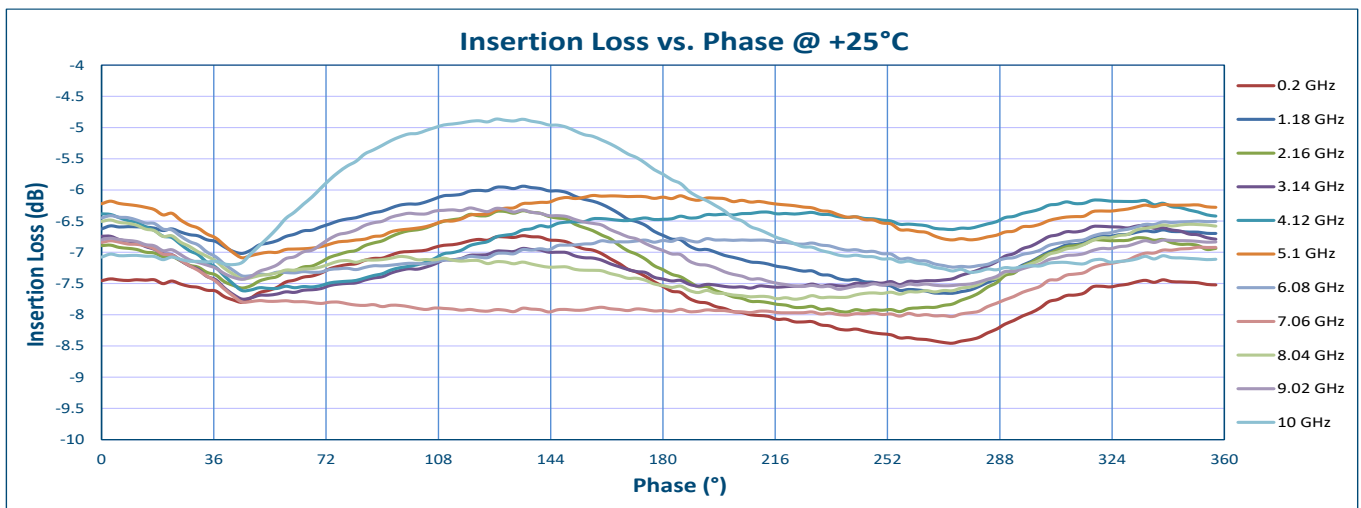
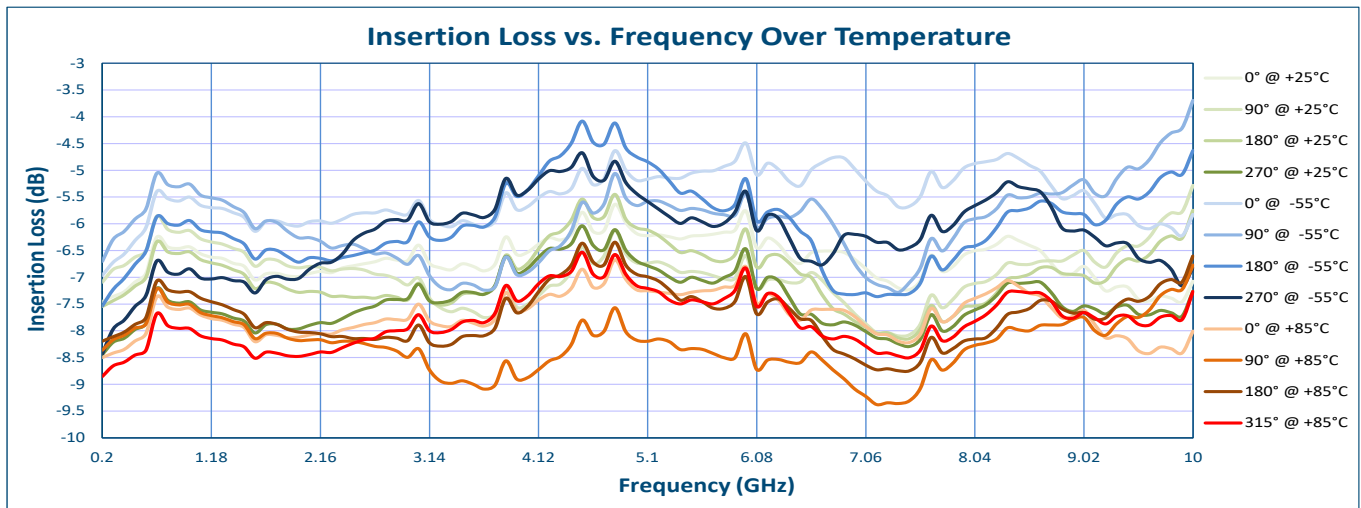
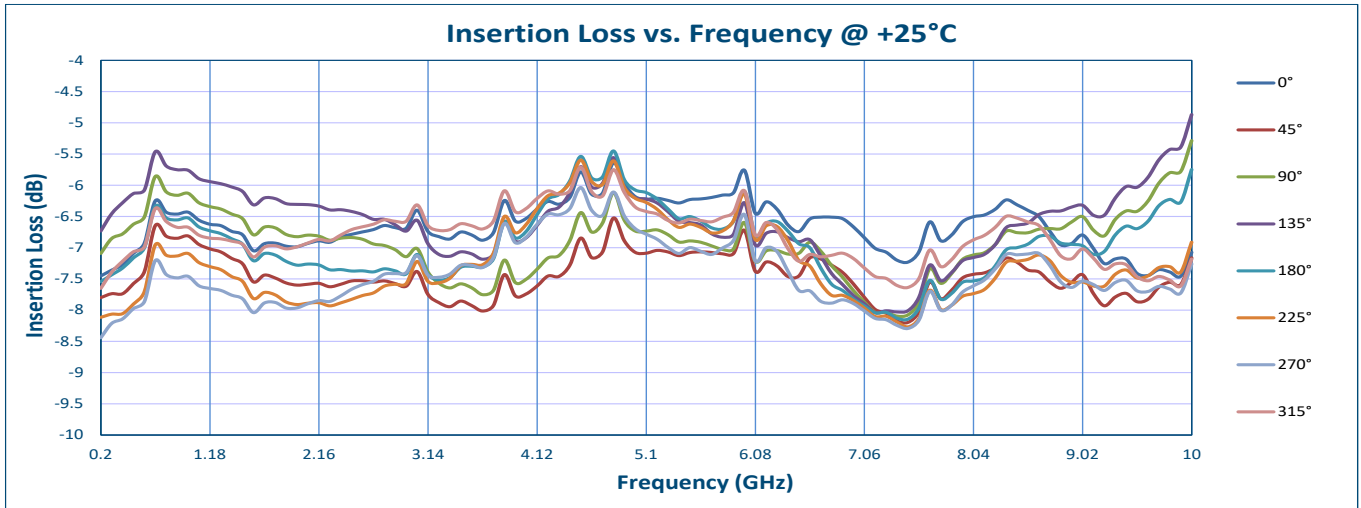
## TECHNICAL SPECIFICATIONS

Data Taken at -10 dBm Input Power

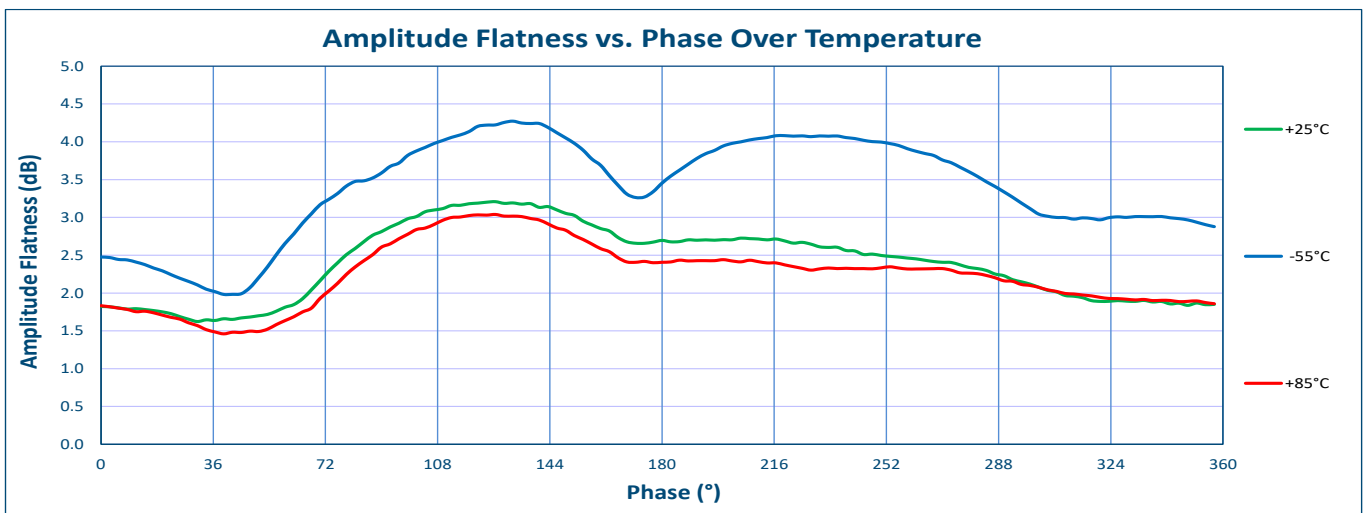
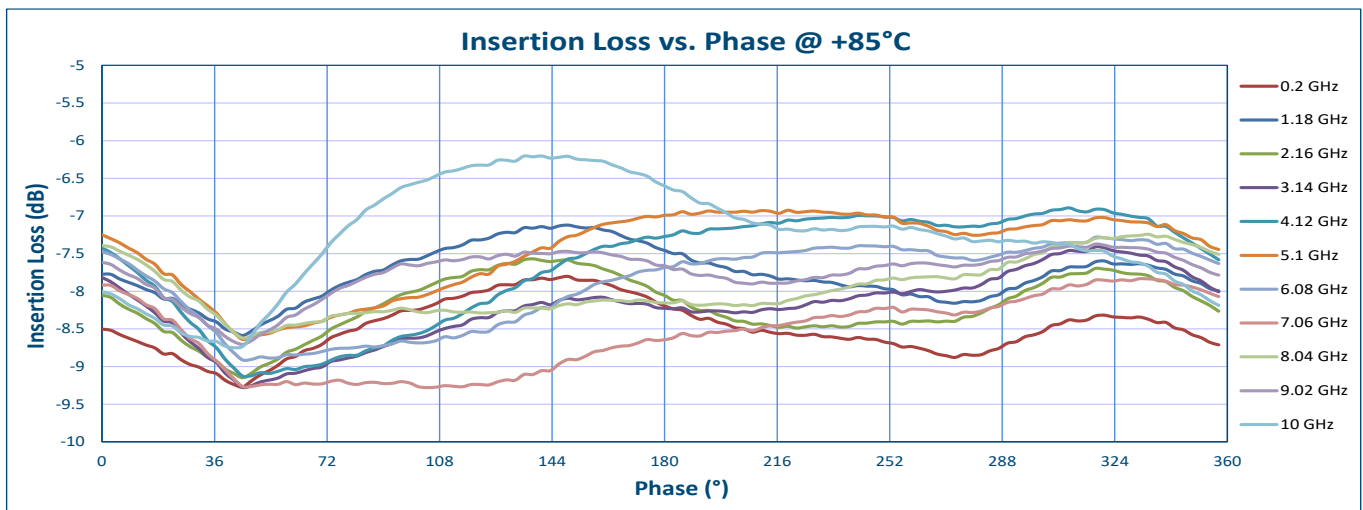
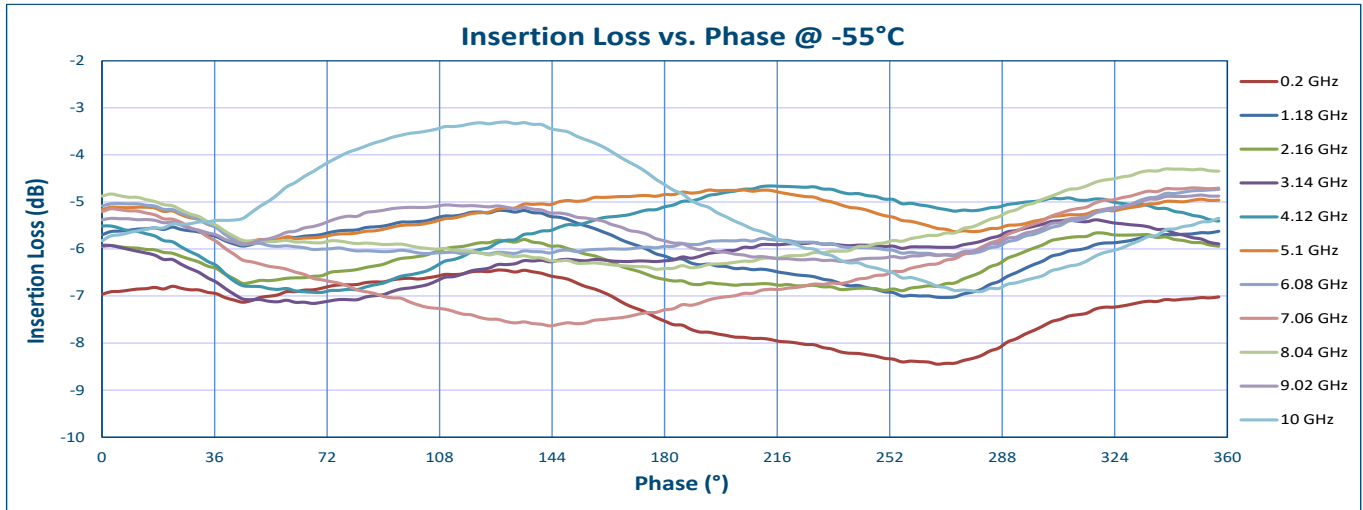
Test Item No.	Parameters	Specified Value	Measured Value		
			-55°C	+25°C	+85°C
1	Frequency Range:	200 MHz to 10 GHz	200 MHz to 10 GHz		
2	Control:	8 Bit TTL	8 Bit TTL		
3	Insertion Loss:	10.5 dB MAX.	8.4 dB	8.5 dB	9.5 dB
4	Phase Shift:	360°	362.01°	359.01°	355.94°
5	Phase Shift Error:	±15° TYP.	±15.56° See Plot	±9.02° See Plot	±11.52° See Plot
6	Switching Speed:	500 ns MAX.	284 ns	292 ns	308 ns
7	DC Supply:	+15 V @ 350 mA MAX. -15 V @ 50 mA MAX.	+15 V @ 320 mA -15 V @ 40 mA		

-55°C			+25°C			+85°C		
Programed Phase Shift	Average Phase Shift	Average Signed Phase Shift Error	Programed Phase Shift	Average Phase Shift	Average Signed Phase Shift Error	Programed Phase Shift	Average Phase Shift	Average Signed Phase Shift Error
DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG
1.4	1.73	0.33	1.4	1.73	0.33	1.4	1.76	0.36
2.8	3.26	0.46	2.8	3.33	0.53	2.8	3.40	0.60
5.6	6.15	0.55	5.6	6.31	0.71	5.6	6.48	0.88
11.2	11.69	0.49	11.2	12.15	0.95	11.2	12.65	1.45
22.5	21.85	-0.65	22.5	23.31	0.81	22.5	24.91	2.41
45.0	40.79	-4.21	45.0	44.93	-0.07	45.0	49.17	4.17
90.0	85.21	-4.79	90.0	89.92	-0.08	90.0	95.63	5.63
180.0	172.10	-7.90	180.0	175.07	-4.93	180.0	181.35	1.35

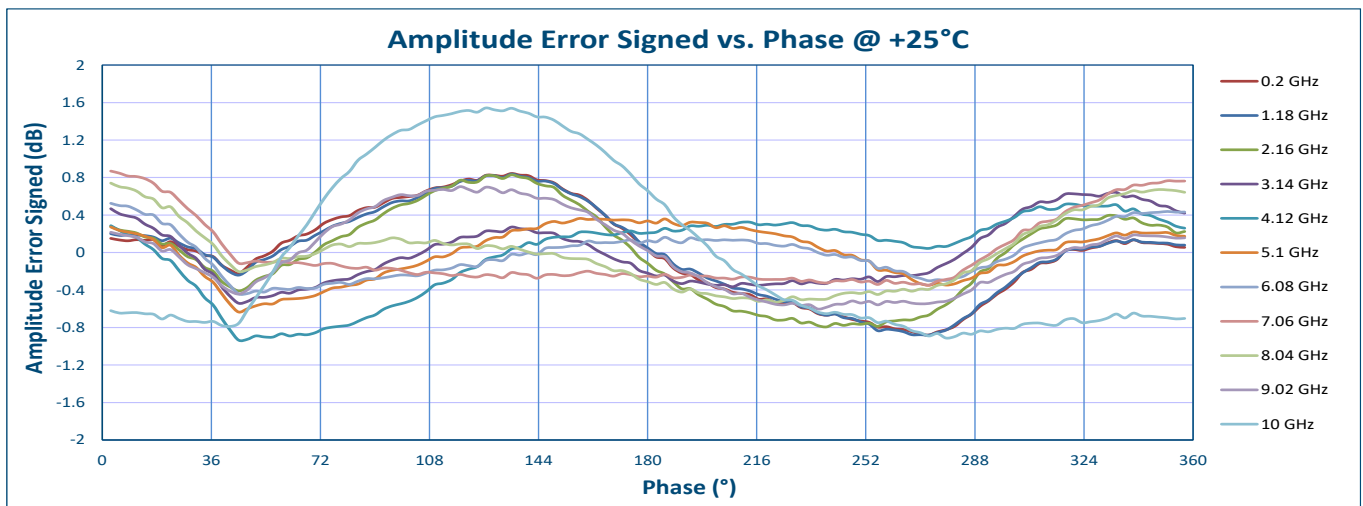
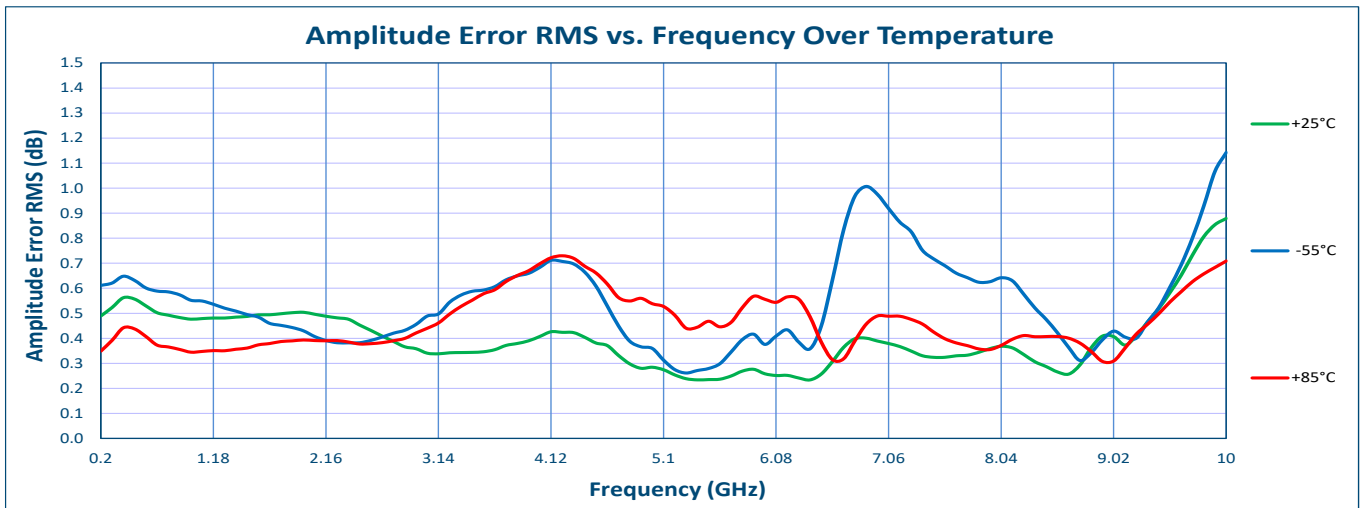
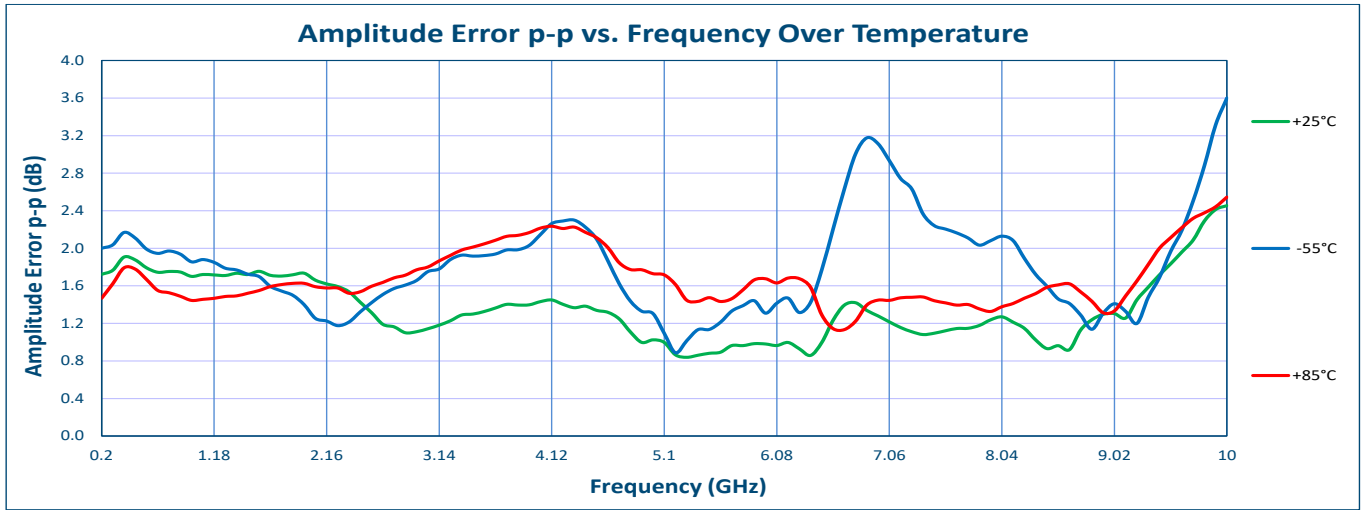
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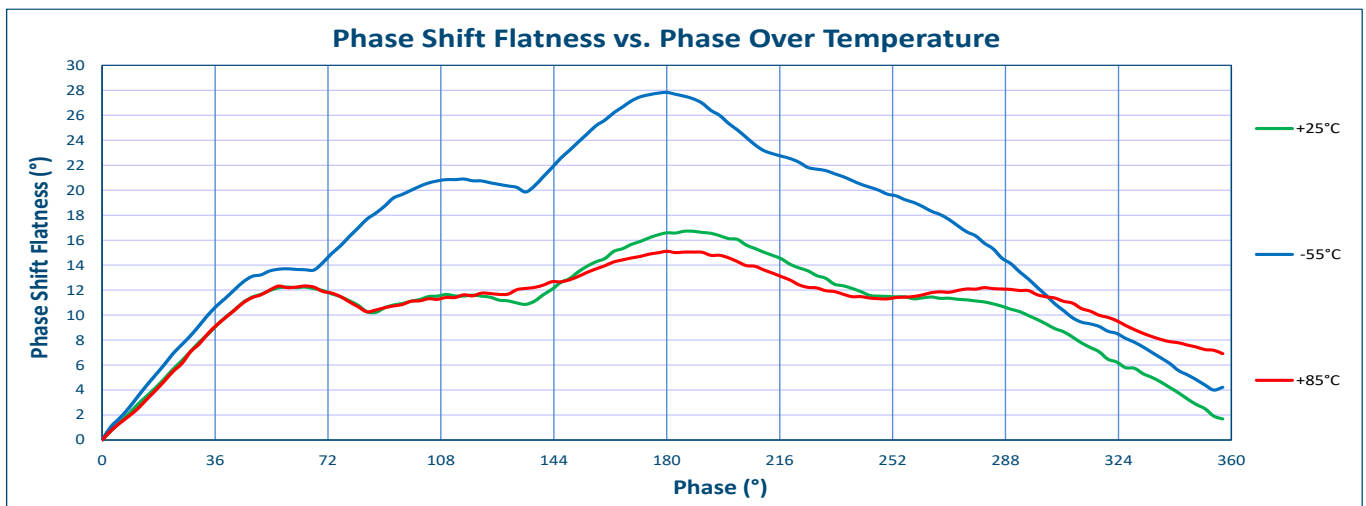
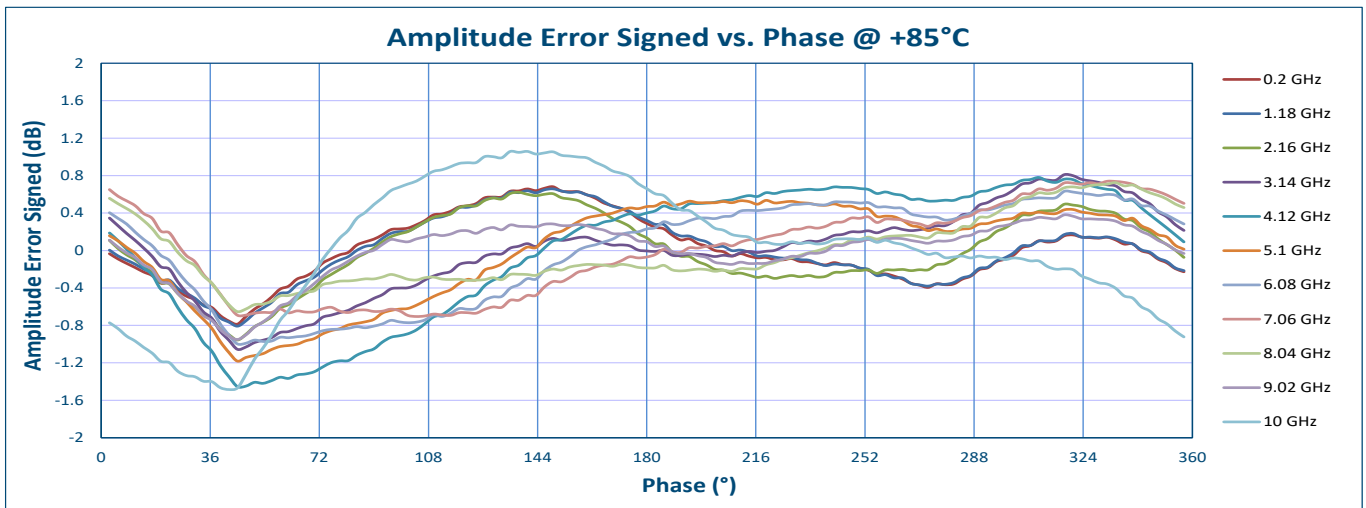
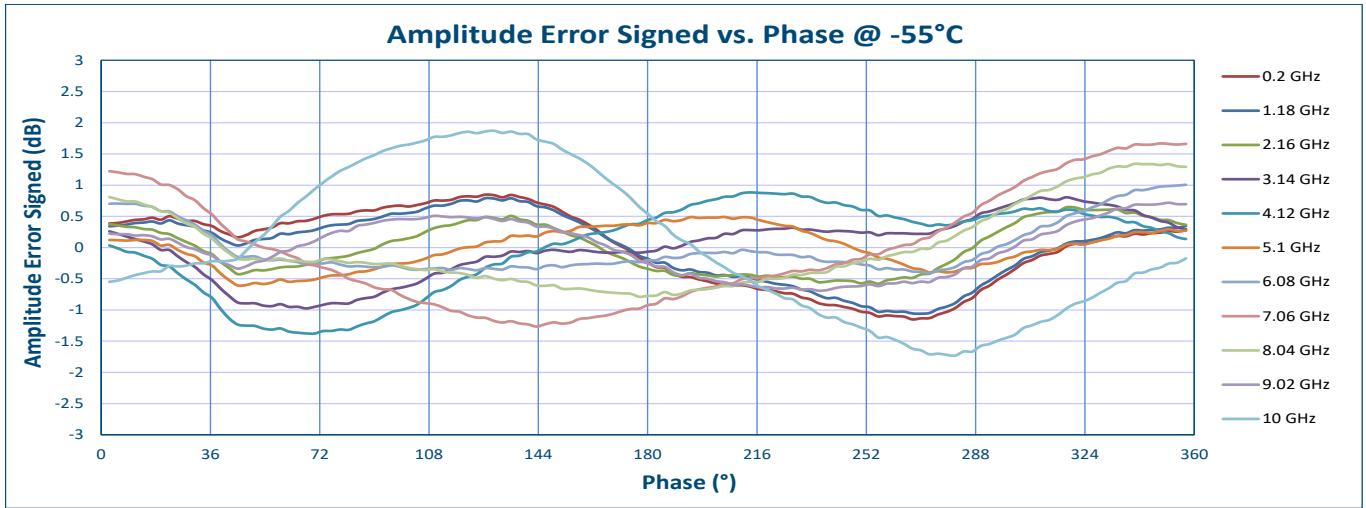
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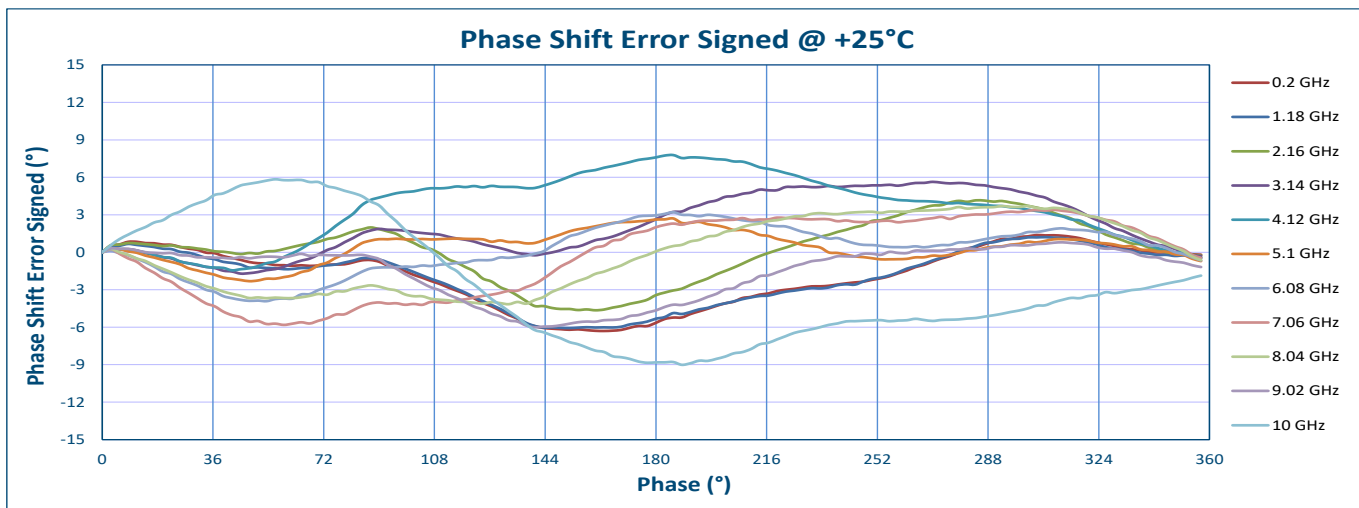
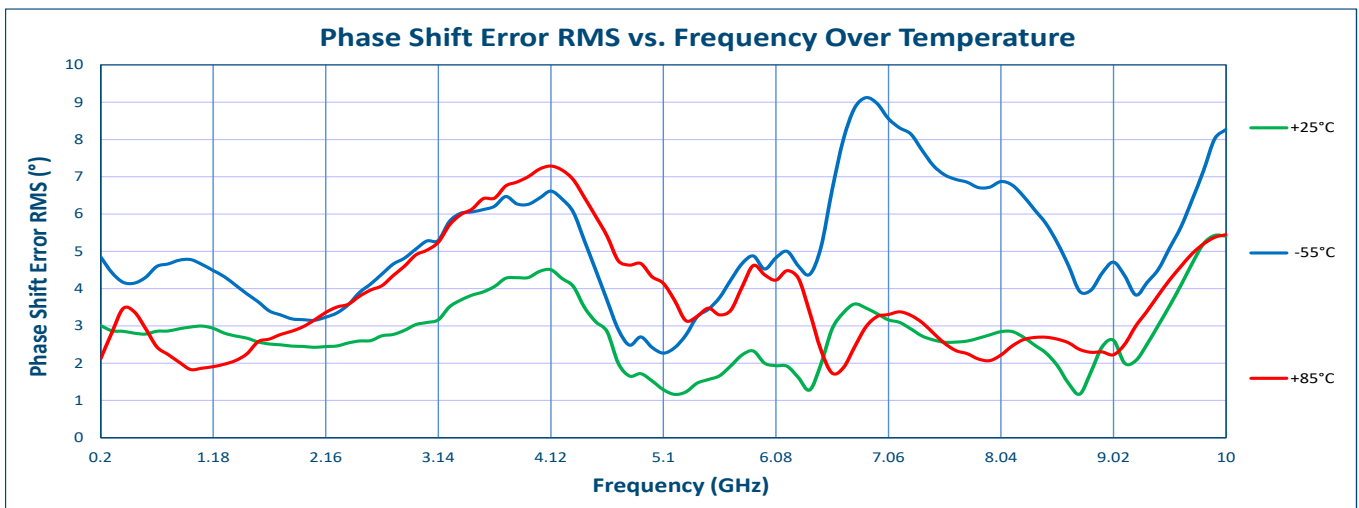
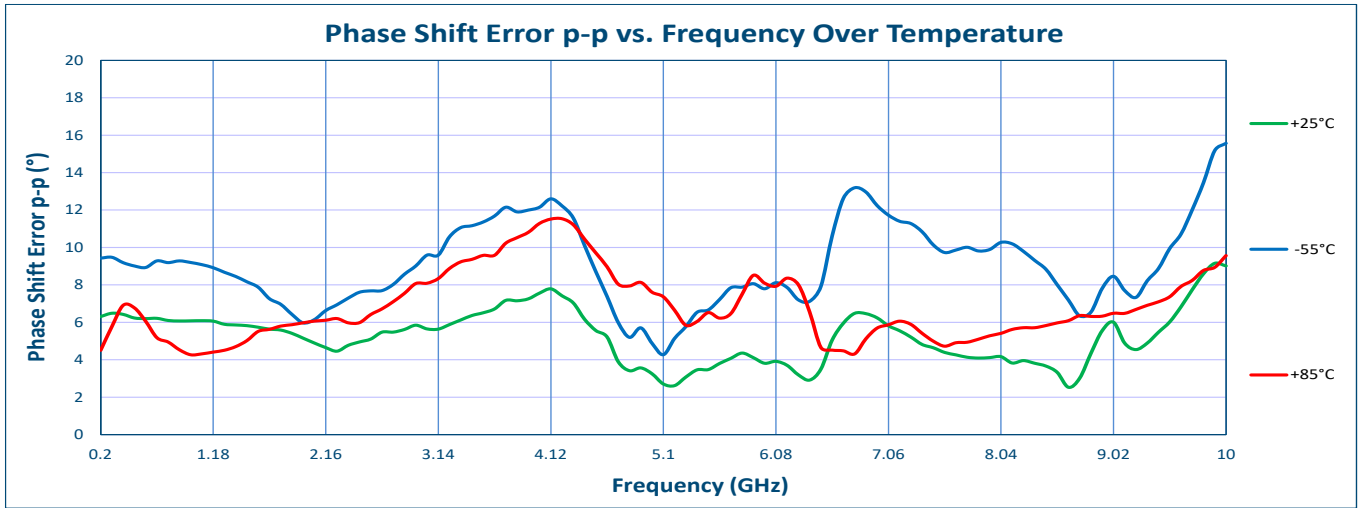
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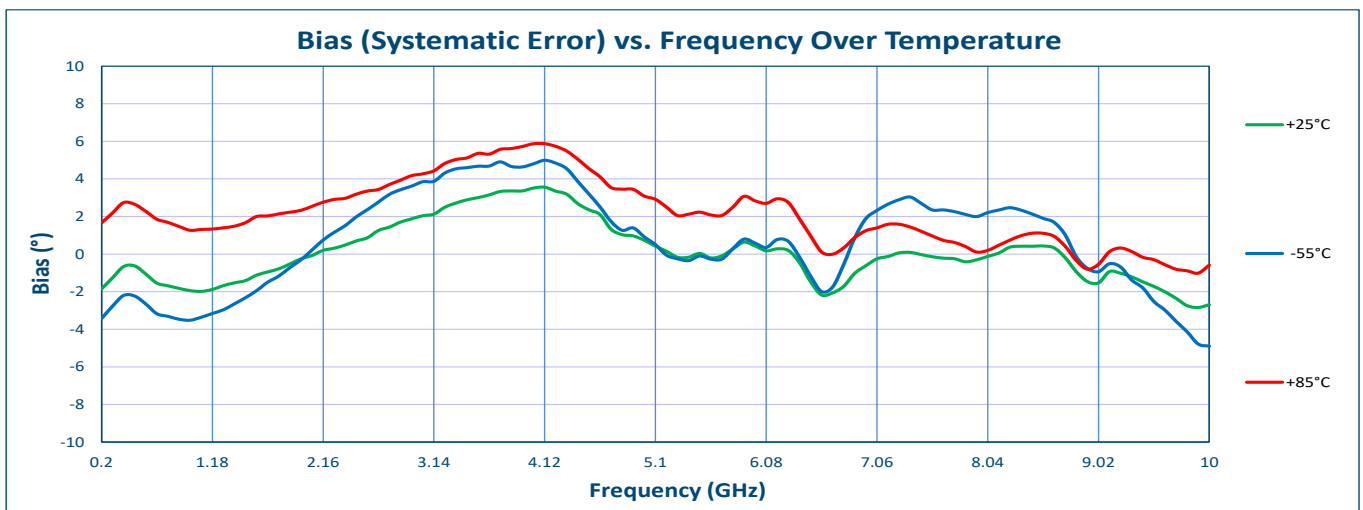
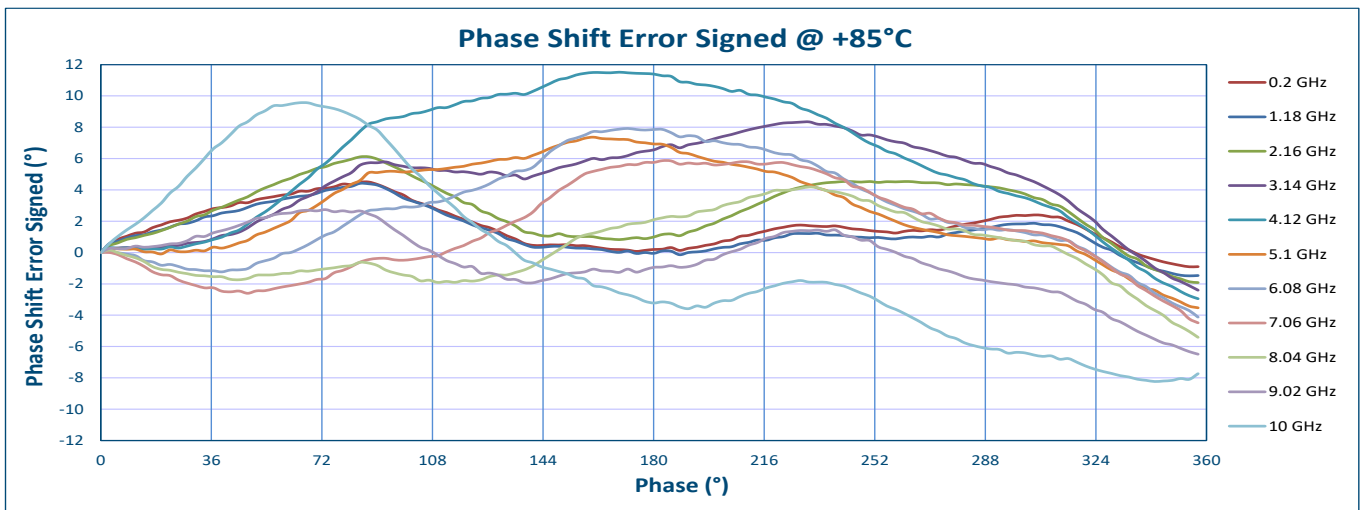
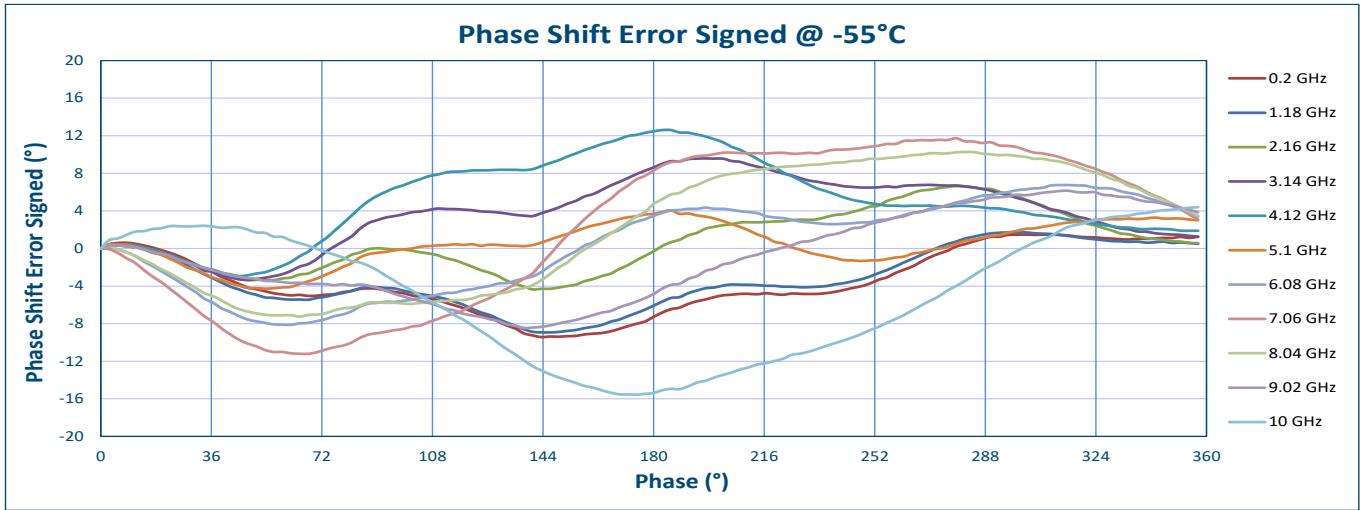
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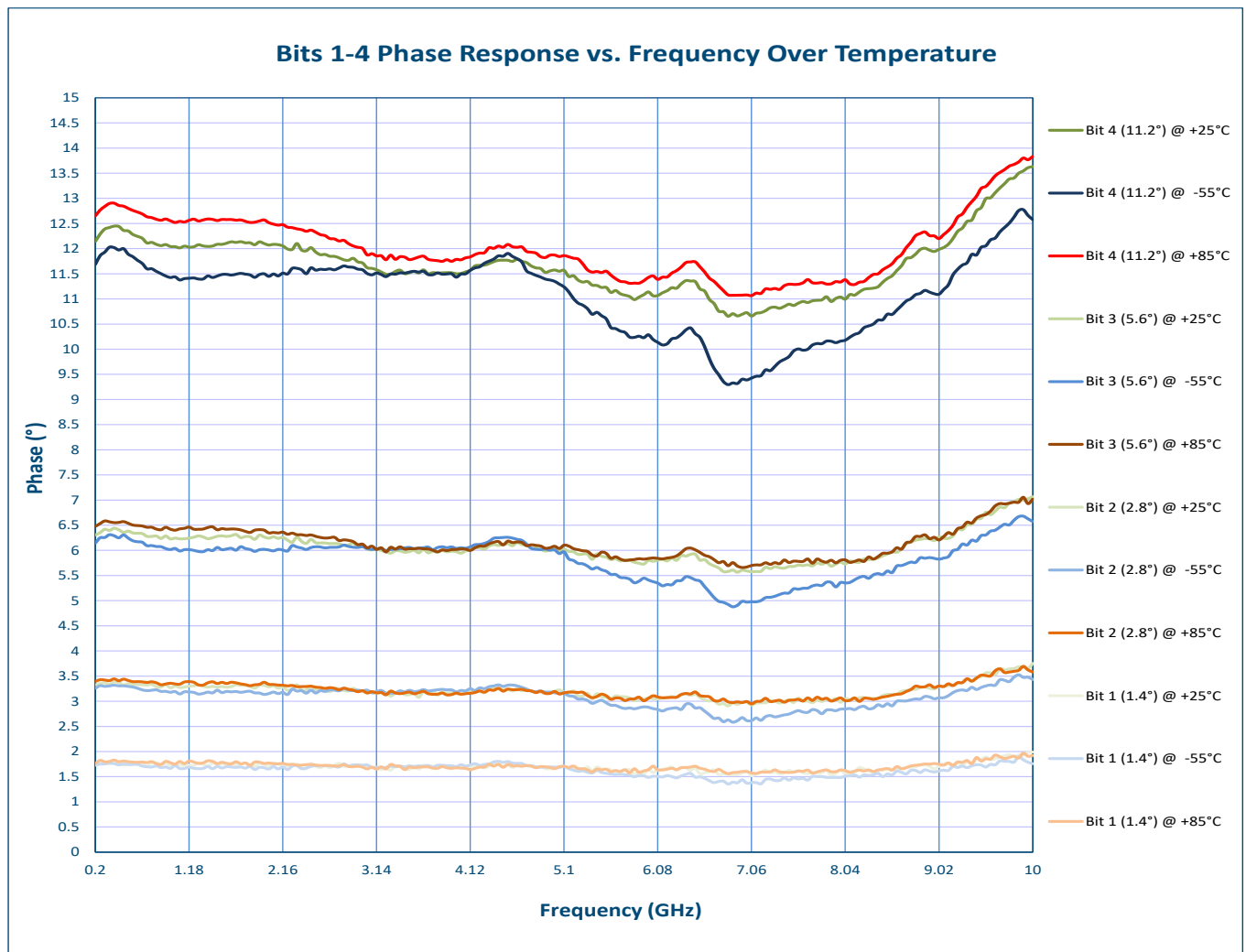
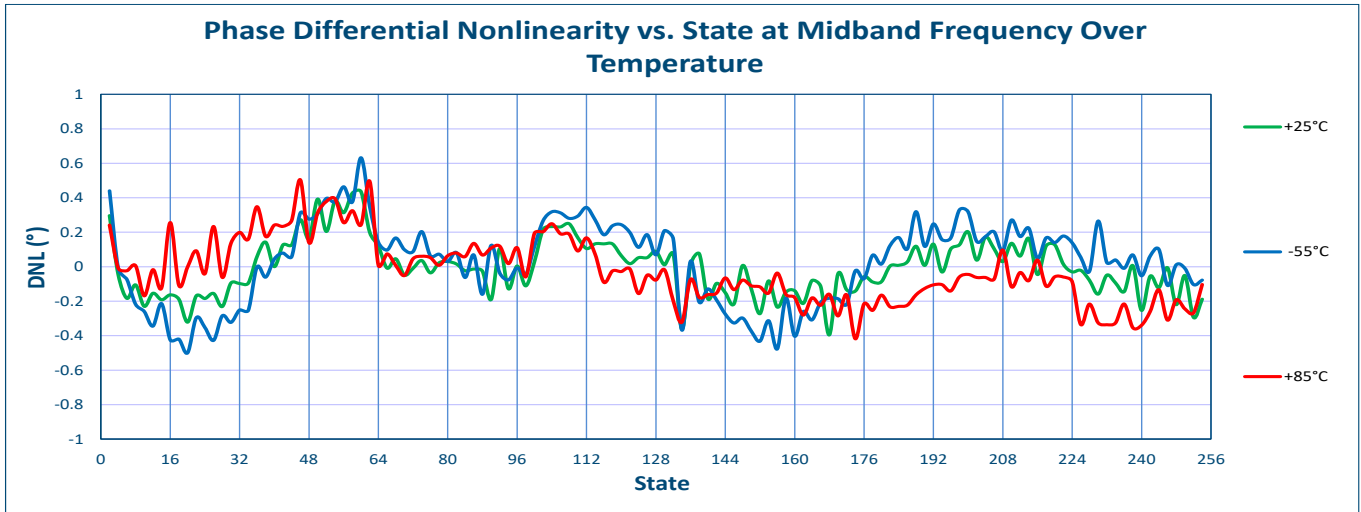
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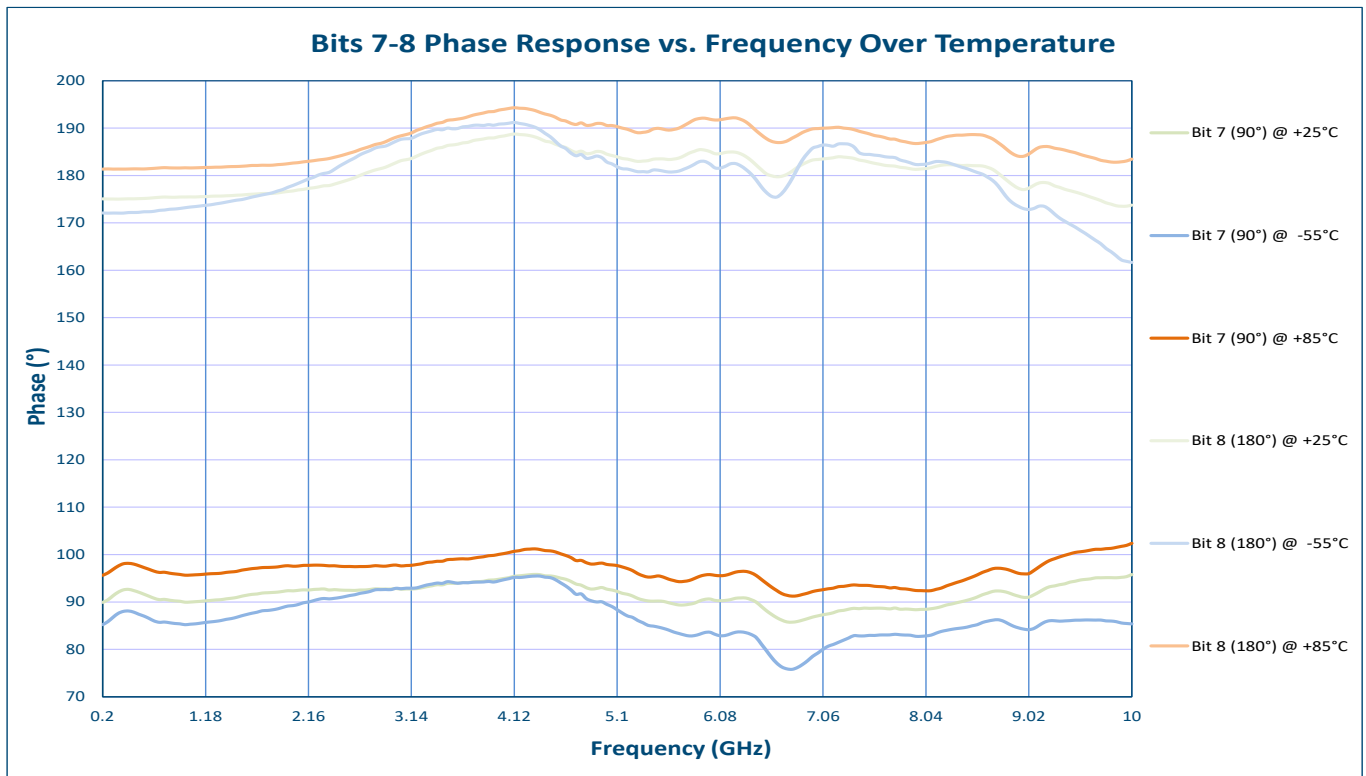
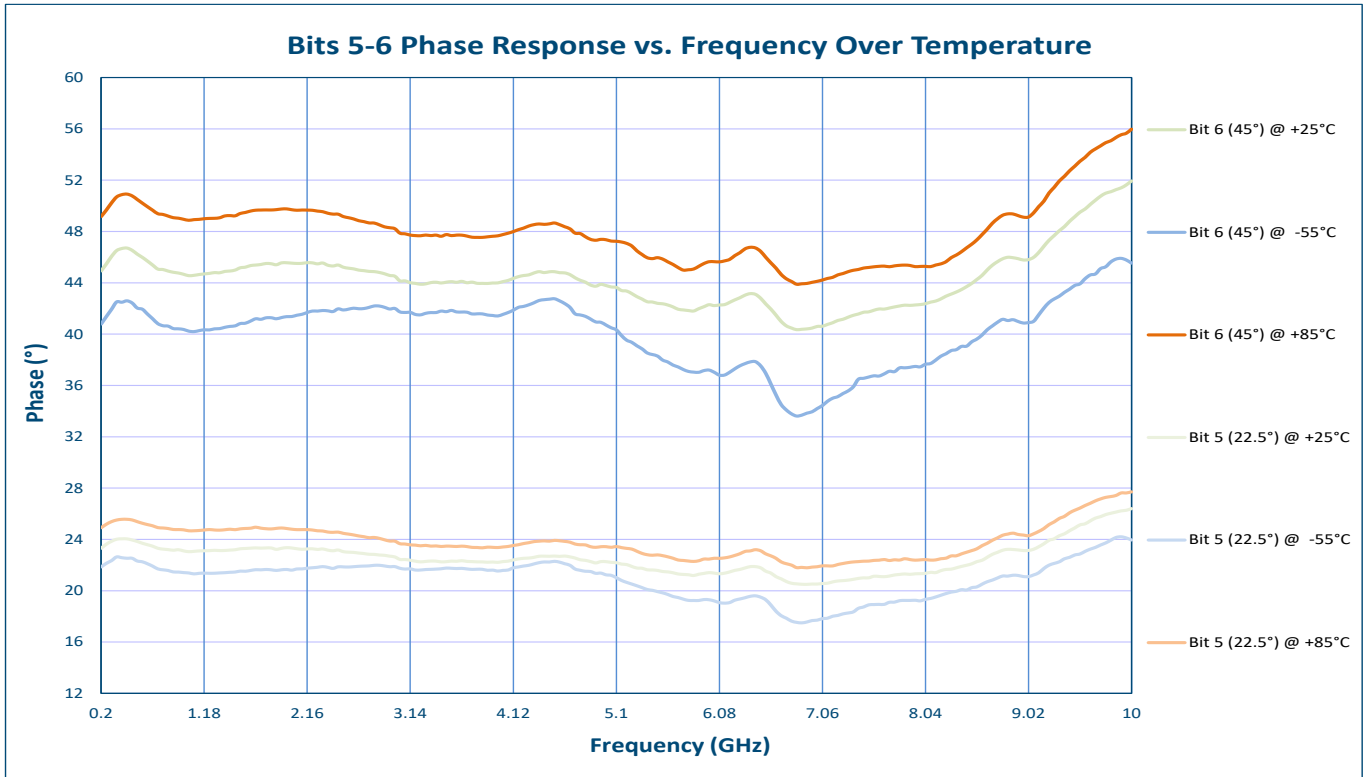
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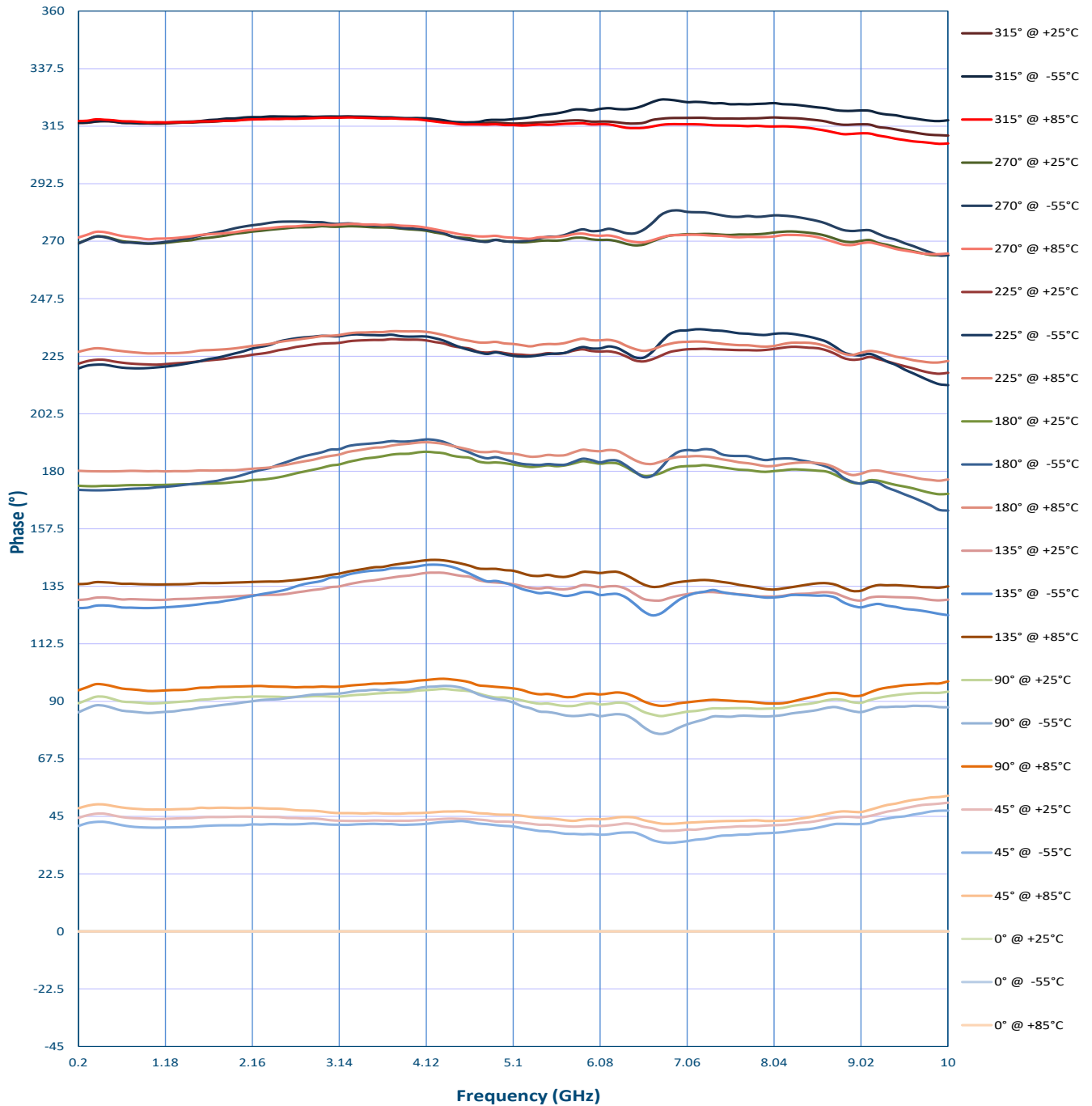


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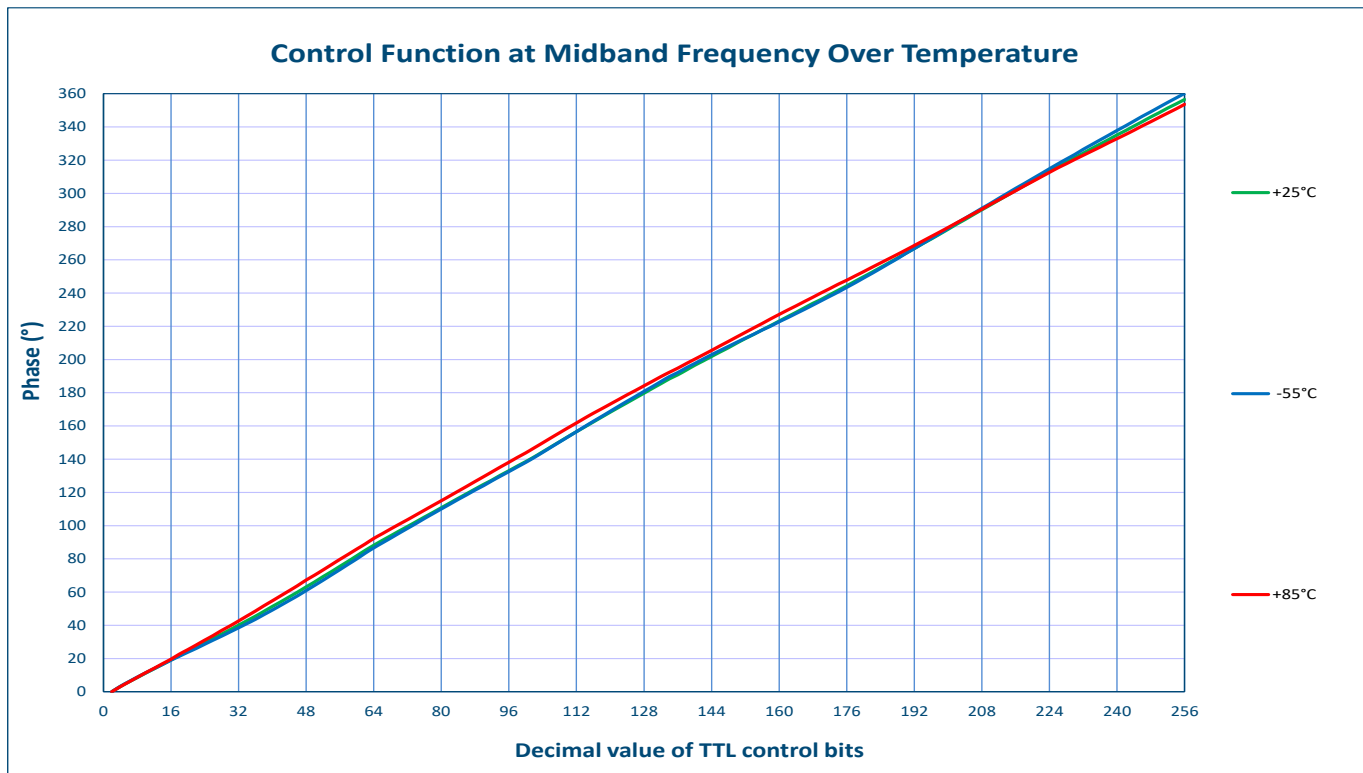
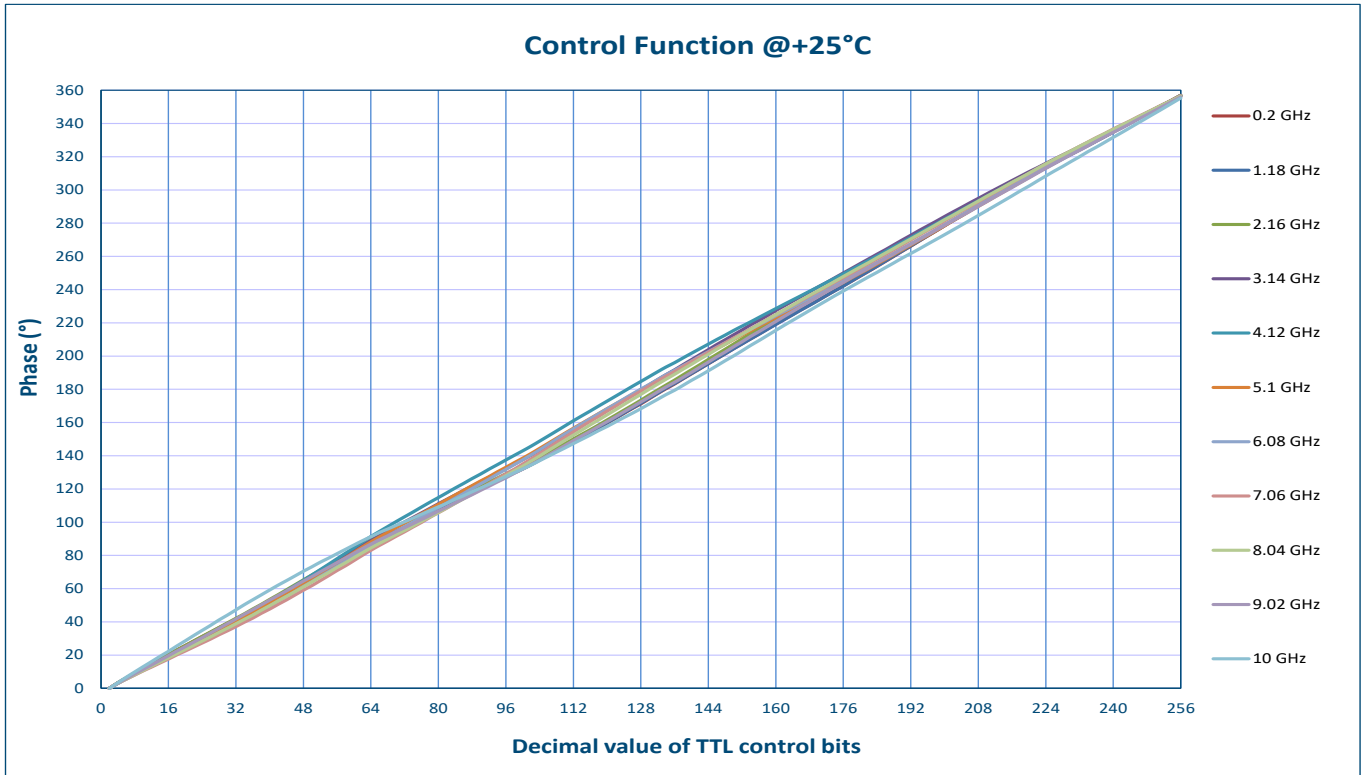


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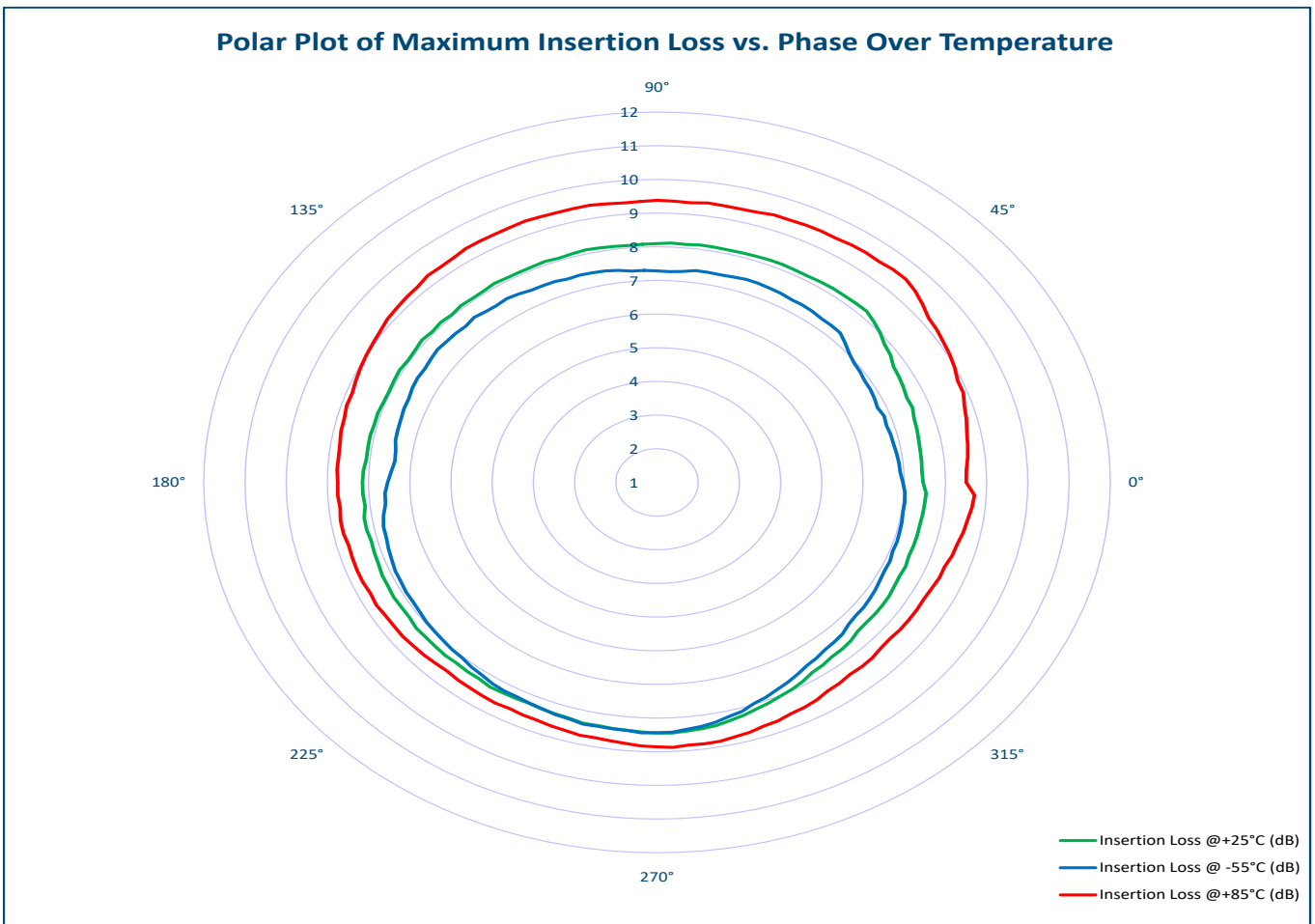
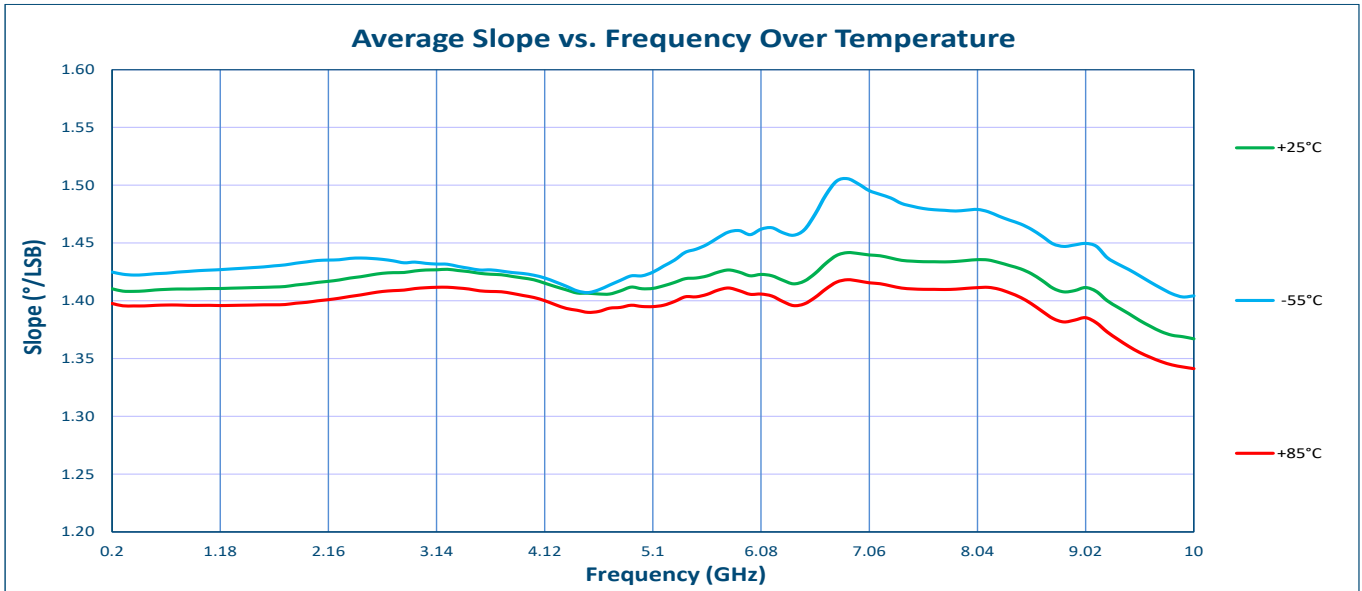
Phase Stability vs. Frequency at Selected Phase States Over Temperature



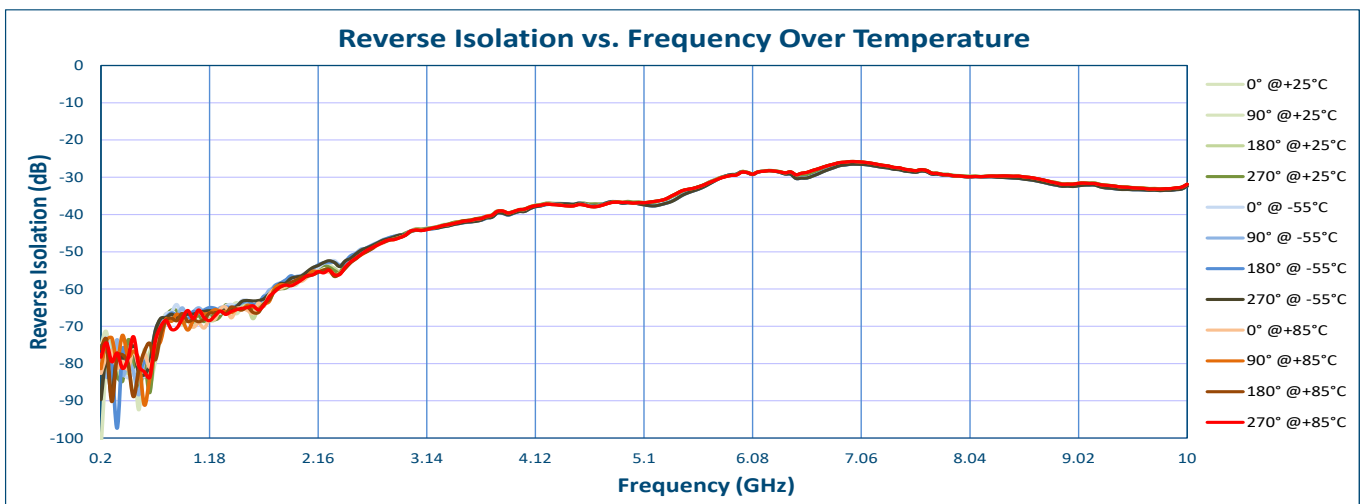
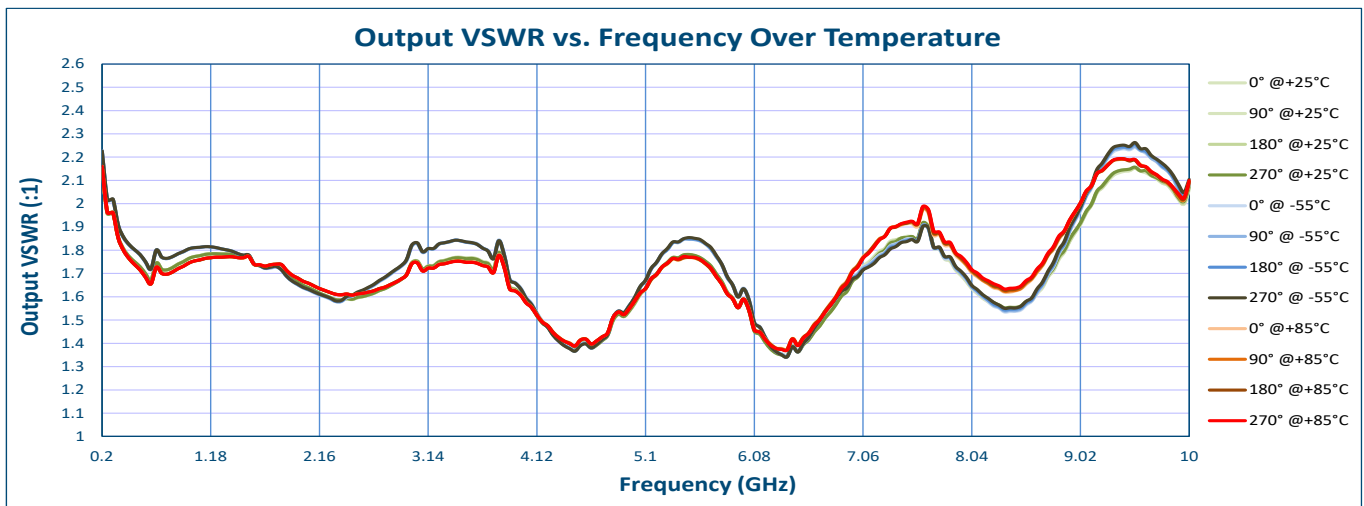
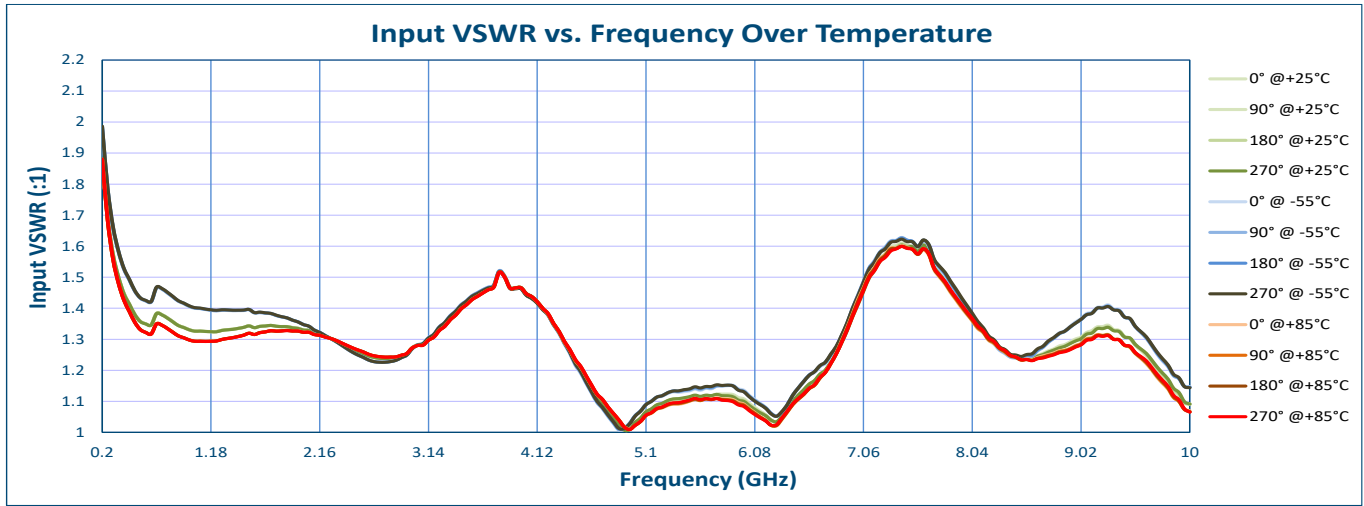
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## Switching Speed

+25°C: 292 ns



-55°C: 284 ns



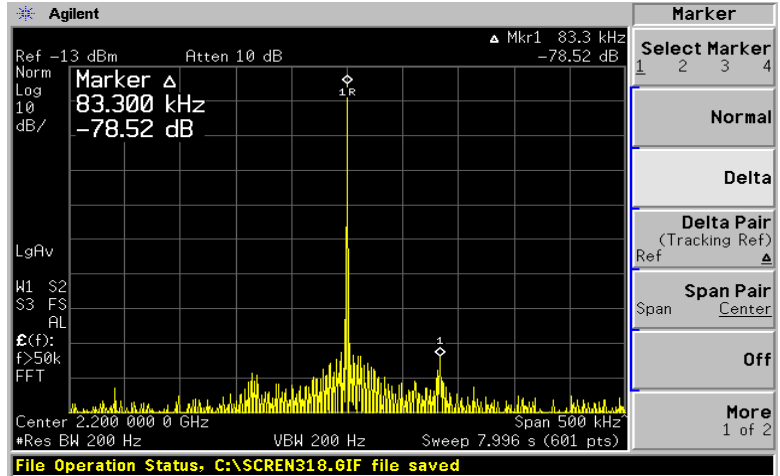
+85°C: 308 ns



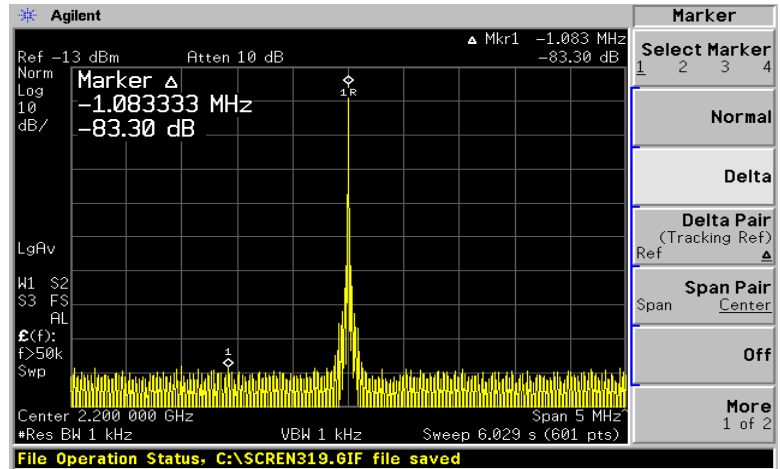
# TYPICAL CHARACTERISTICS ON PS-200M10G-8B-STRB-SFF

## Spurious @+25°C

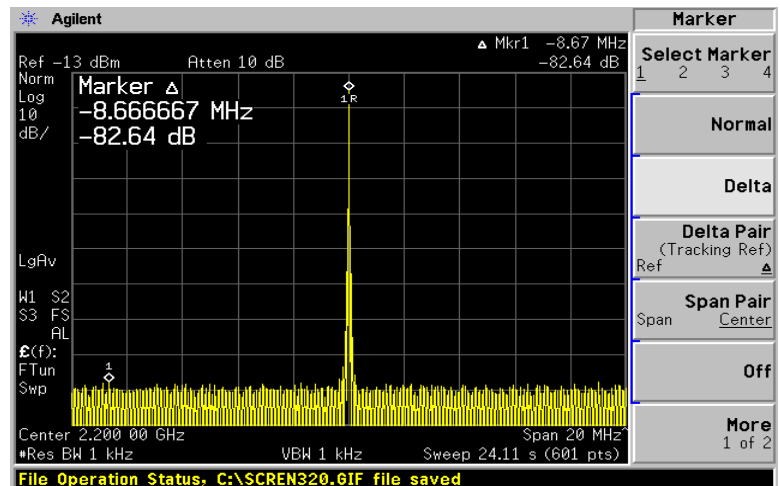
500 kHz Span: -78.5 dBc



5 MHz Span: -83.3 dBc



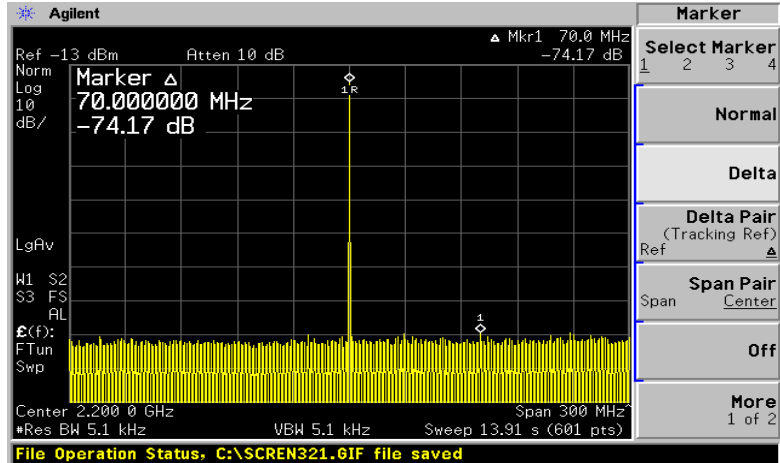
20 MHz Span: -82.6 dBc



# TYPICAL CHARACTERISTICS ON PS-200M10G-8B-STRB-SFF

## Spurious @+25°C

300 MHz Span: -74.1 dBc



## Harmonics @+25°C

2nd Harmonic: -17 dBc

