

**TYPICAL CHARACTERISTICS
ON
PS-3R4G4R2G-10B-SFF**

PMI MODEL PS-3R4G4R2G-10B-SFF IS A 10-BIT DIGITAL PHASE SHIFTER THAT OPERATES OVER THE 3.4 TO 4.2 GHz FREQUENCY RANGE. THIS MODEL OFFERS 360 DEGREES OF PHASE SHIFT WITH THE LEAST SIGNIFICANT BIT OF 0.35 DEGREES.



REPORTED BY: ANTON L.
TESTED BY: ANTON L.
DATE: 12/4/2025

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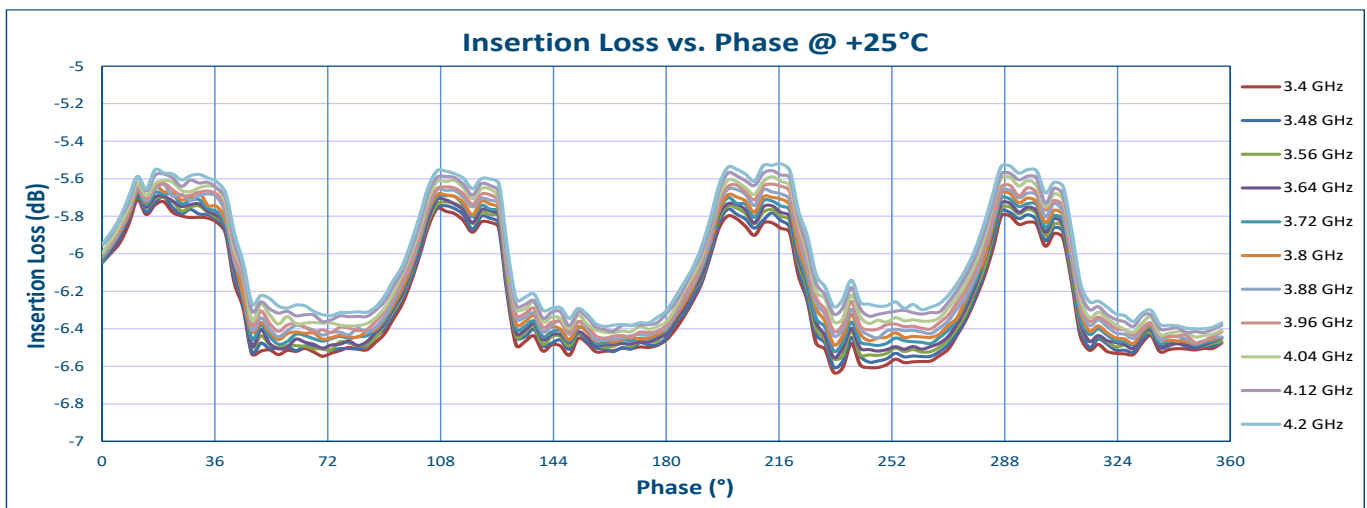
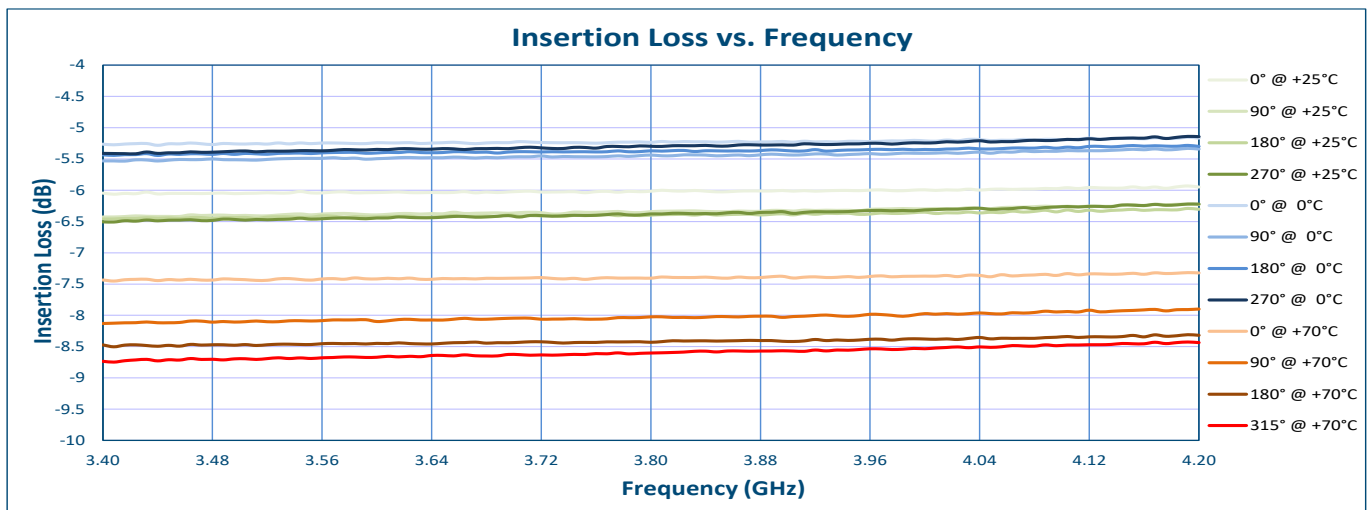
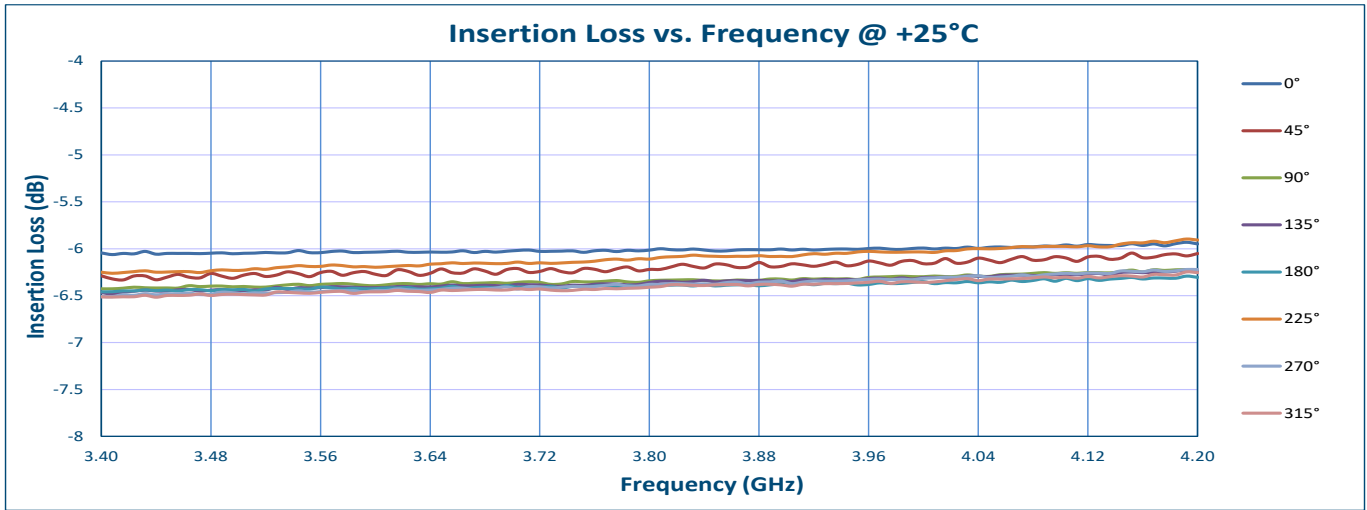
TECHNICAL SPECIFICATIONS

Data Taken at -10 dBm Input Power

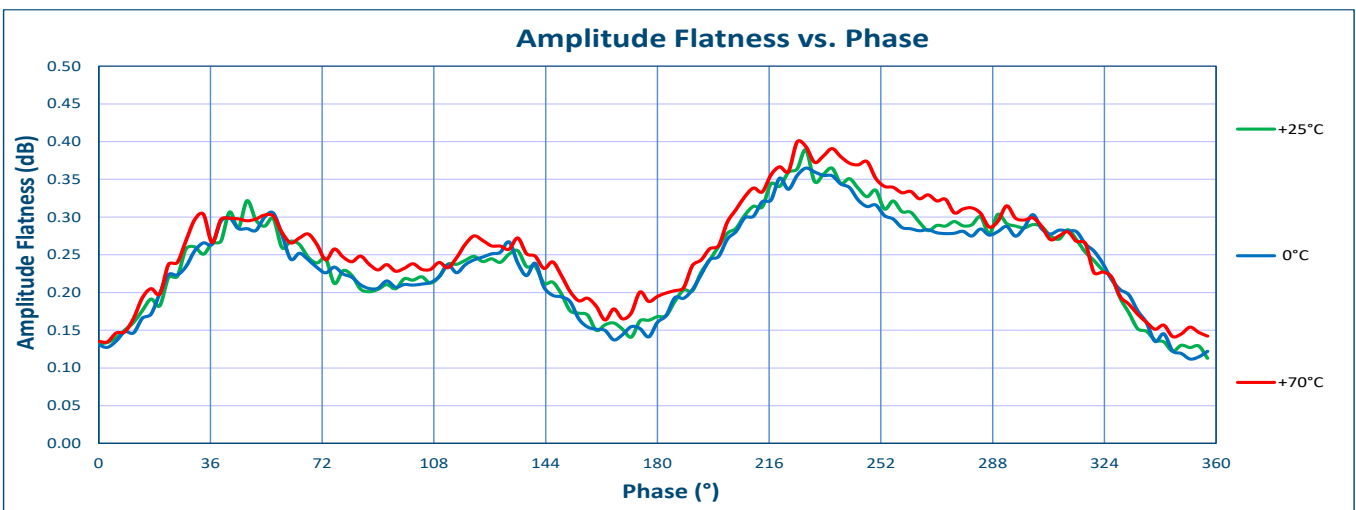
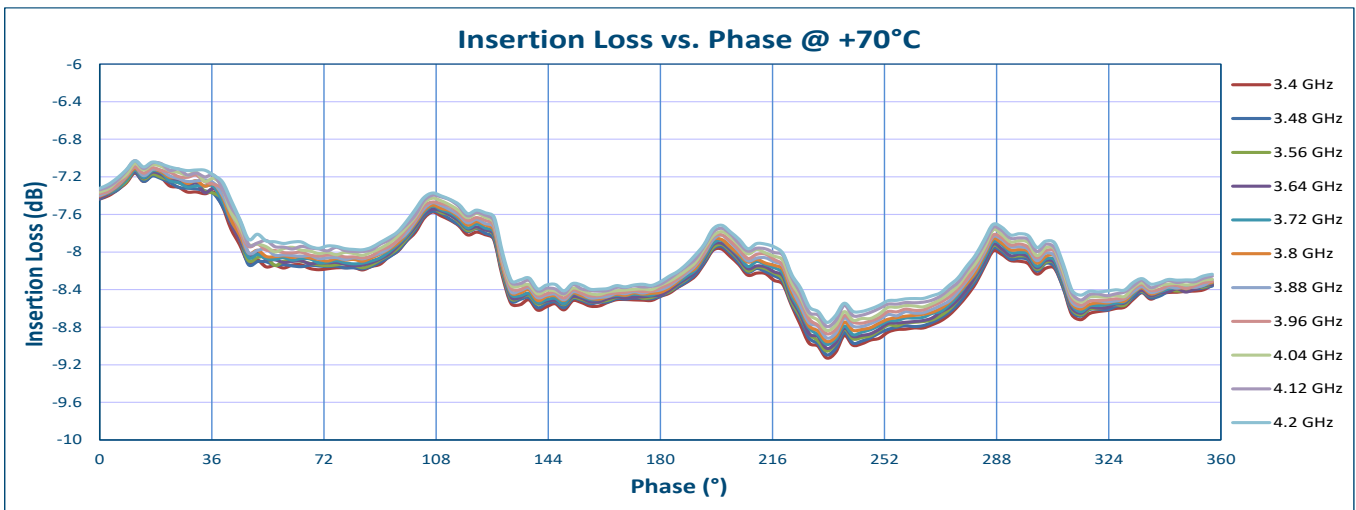
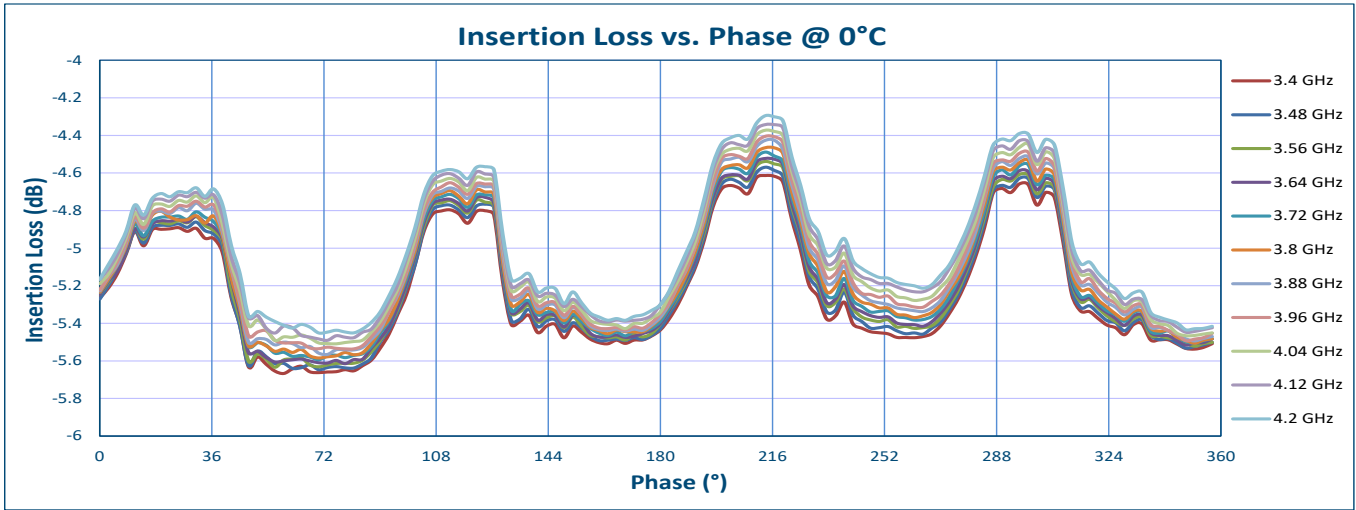
Test Item No.	Parameters	Specified Value	Measured Value		
			0°C	+25°C	+70°C
1	Frequency Range:	3.4 to 4.2 GHz	3.4 to 4.2 GHz		
2	Control:	10 Bit TTL	10 Bit TTL		
3	Insertion Loss:	7 dB TYP. 11 dB MAX.	5.7 dB	6.6 dB	9.1 dB
4	VSWR:	1.6:1 MAX.	Input: 1.16:1 Output: 1.37:1	Input: 1.15:1 Output: 1.38:1	Input: 1.14:1 Output: 1.38:1
5	Phase Shift Error:	±5° MAX.	±1.73° See Plot	±0.92° See Plot	±3.4° See Plot
6	Phase Flatness:	10° MAX.	1.49° See Plot	1.64° See Plot	1.45° See Plot
7	Phase Shift:	360°	359.62°	359.59°	359.18°
8	Harmonic:	-30 dBc MIN.	-30.5 dBc	-30.6 dBc	-32.9 dBc
9	Spurious Suppression:	-35 dBc MIN.	-38.2 dBc	-39.1 dBc	-39 dBc
10	DC Supply:	+15 V @ 200 mA MAX. -15 V @ 50 mA MAX.	+15 V @ 190 mA -15 V @ 45 mA		

0°C			+25°C			+70°C		
Programed Phase Shift	Average Phase Shift	Average Signed Phase Error	Programed Phase Shift	Average Phase Shift	Average Signed Phase Error	Programed Phase Shift	Average Phase Shift	Average Signed Phase Error
DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG
0.35	0.27	-0.08	0.35	0.27	-0.08	0.35	0.23	-0.12
0.70	0.53	-0.17	0.70	0.52	-0.18	0.70	0.47	-0.23
1.41	1.23	-0.18	1.41	1.21	-0.20	1.41	1.14	-0.27
2.81	2.87	0.06	2.81	2.81	0.00	2.81	2.66	-0.15
5.62	5.60	-0.02	5.62	5.47	-0.15	5.62	5.17	-0.45
11.25	11.43	0.18	11.25	11.18	-0.07	11.25	10.65	-0.60
22.50	22.42	-0.08	22.50	22.26	-0.24	22.50	21.67	-0.83
45.00	44.77	-0.23	45.00	44.96	-0.04	45.00	44.57	-0.43
90.00	90.55	0.55	90.00	89.87	-0.13	90.00	88.60	-1.40
180.00	180.61	0.61	180.00	179.74	-0.26	180.00	178.22	-1.78

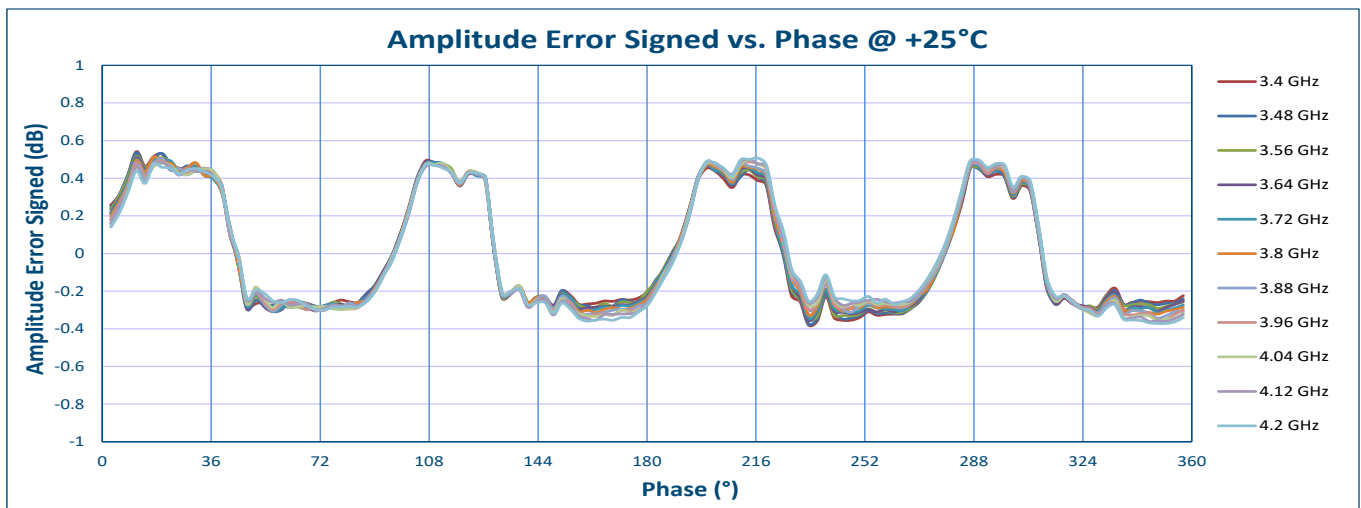
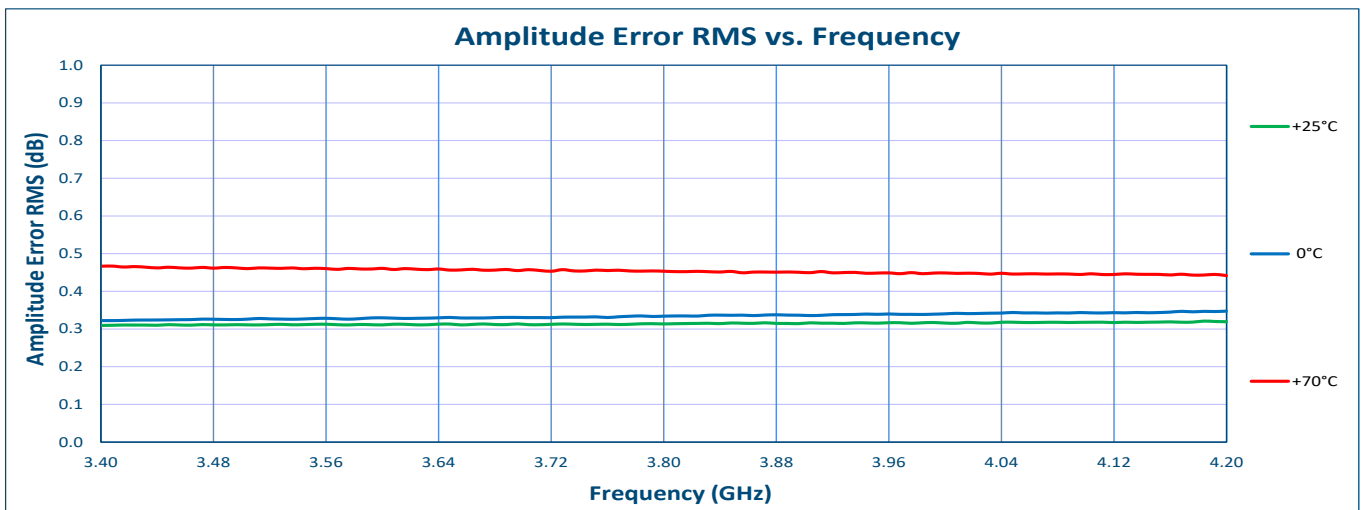
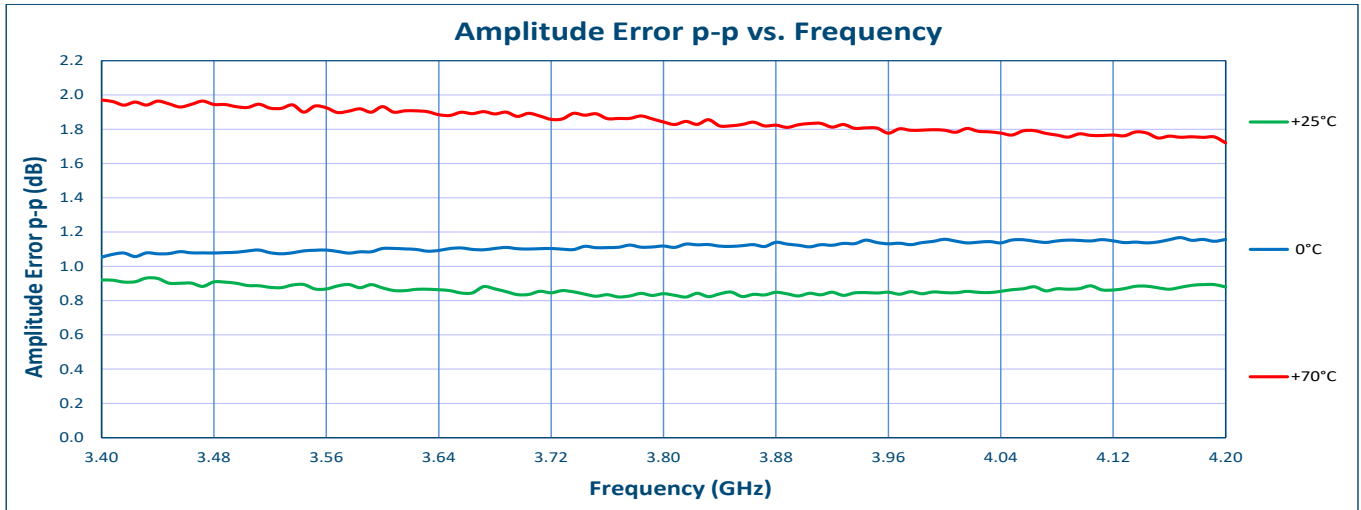
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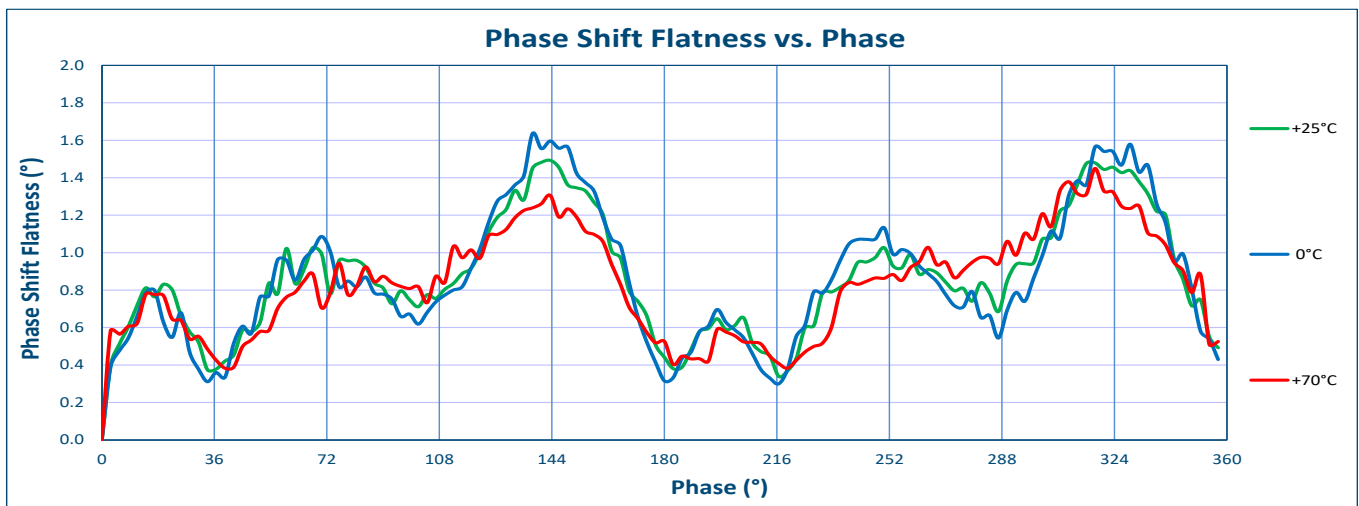
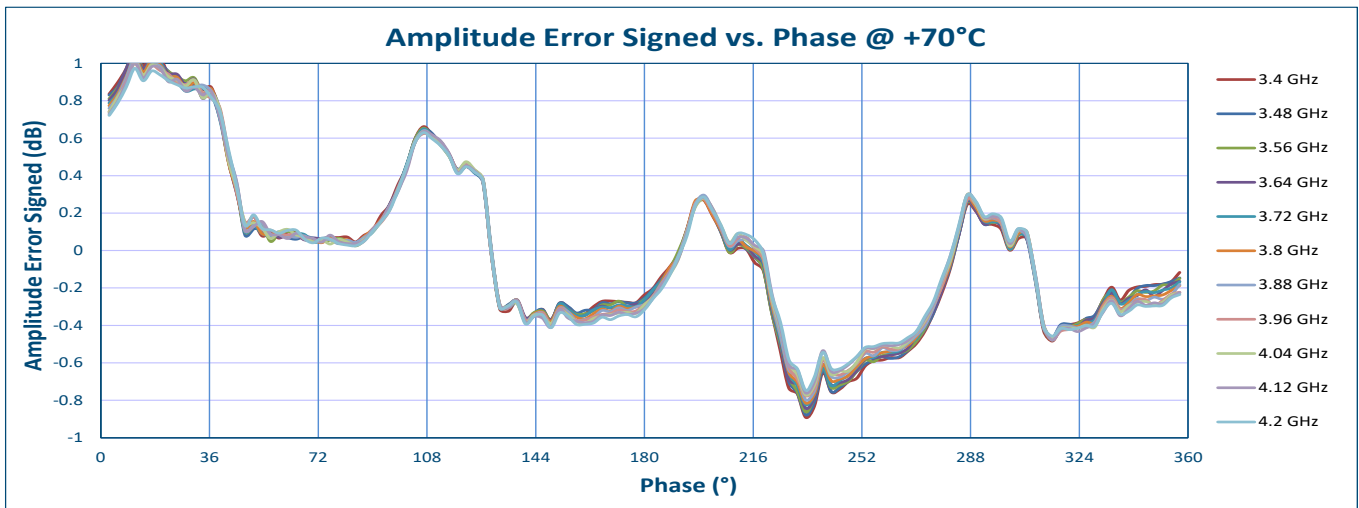
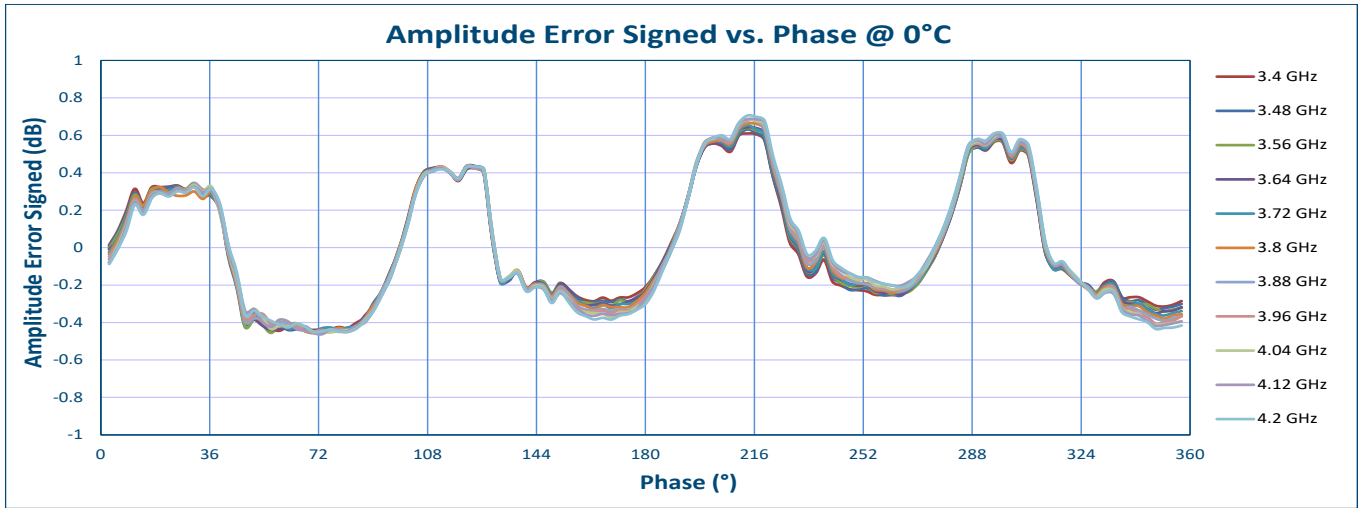
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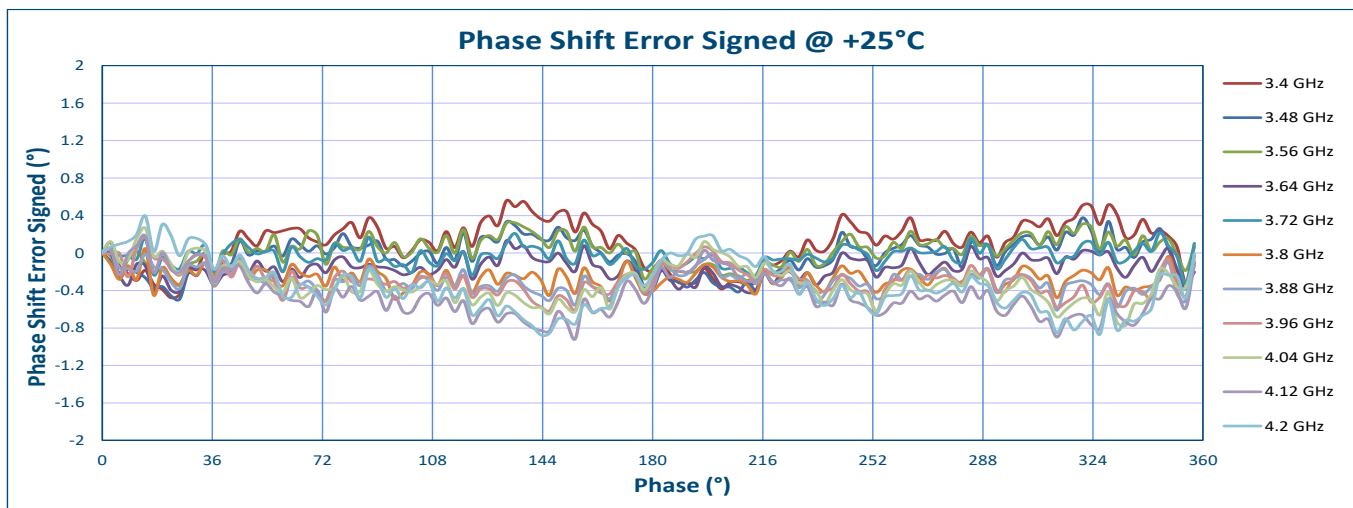
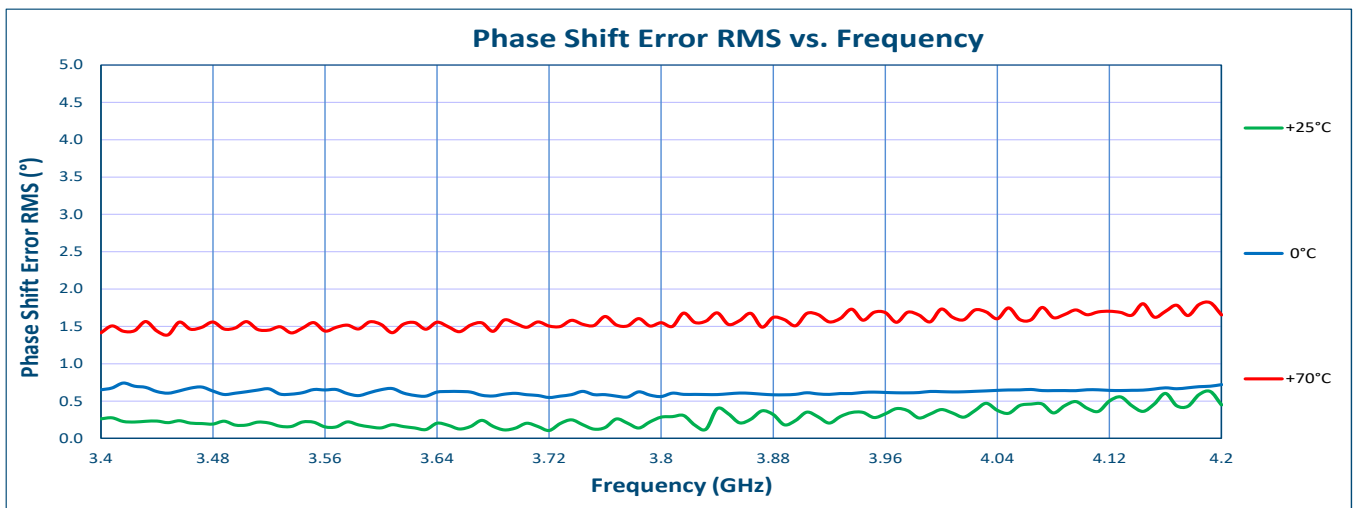
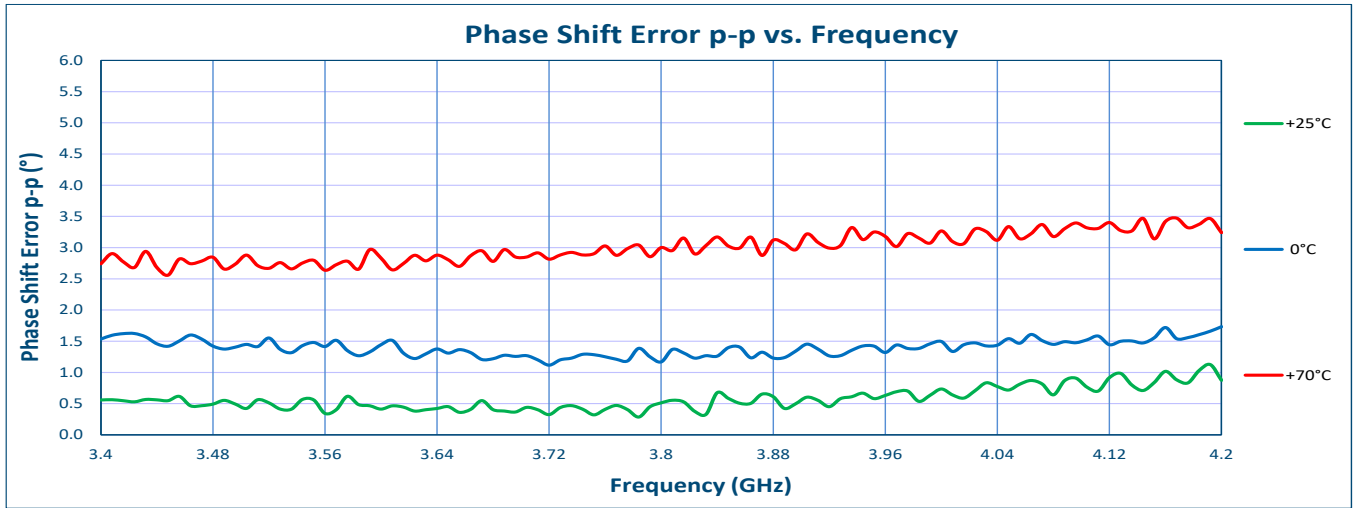
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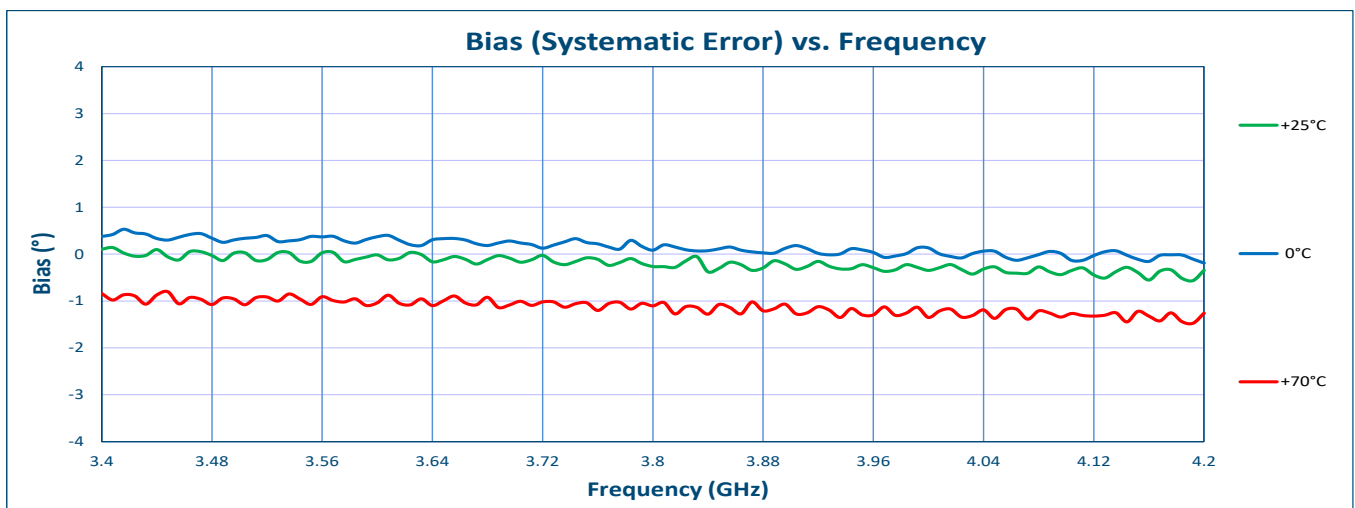
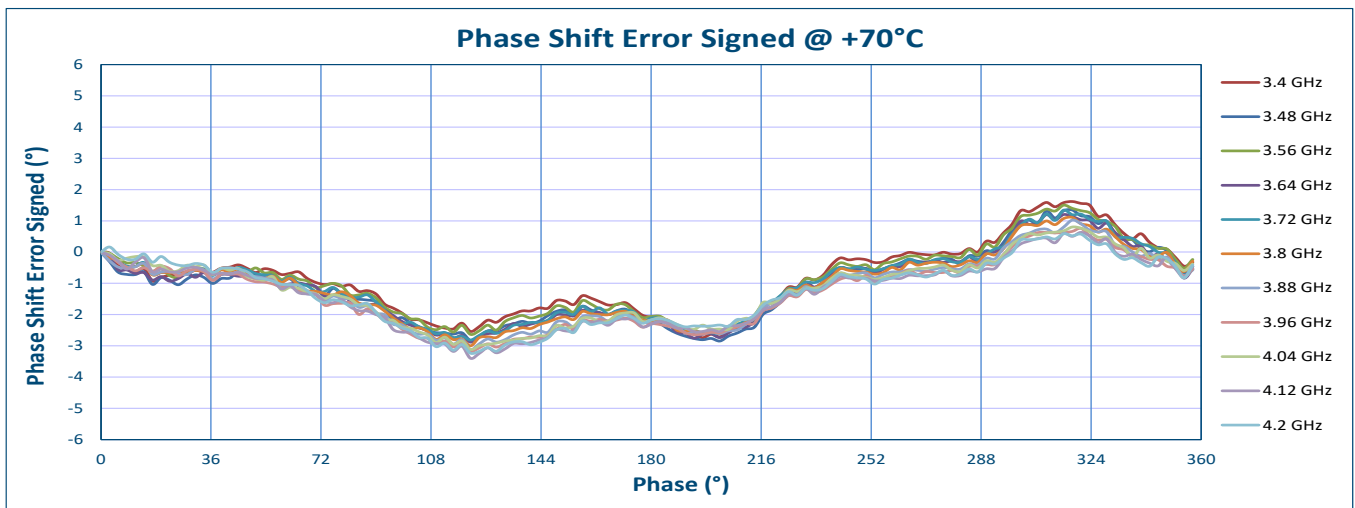
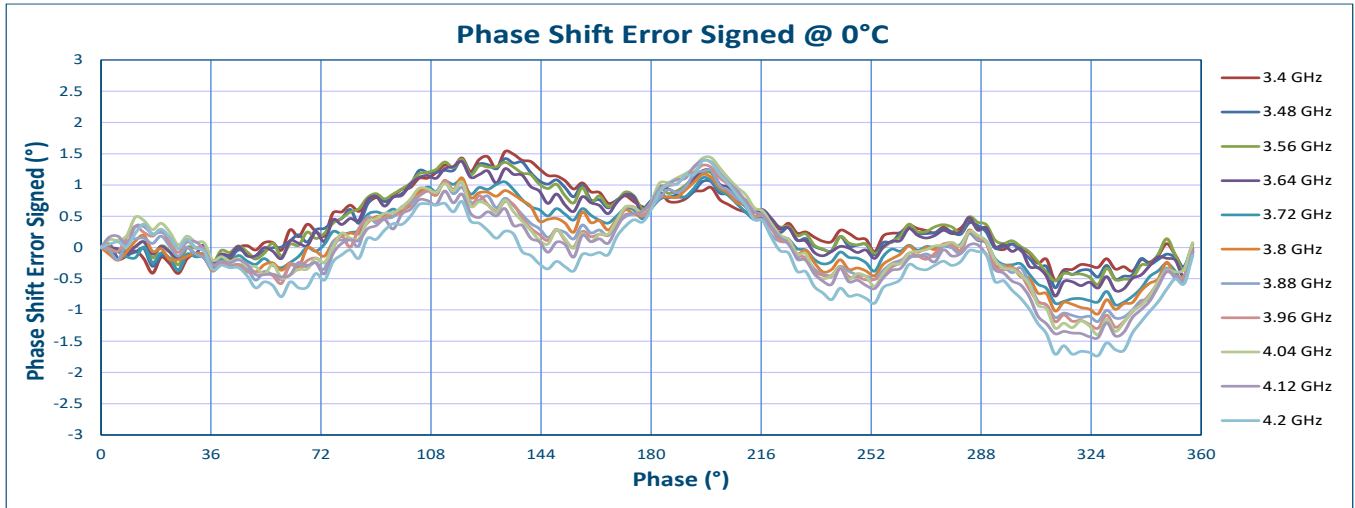
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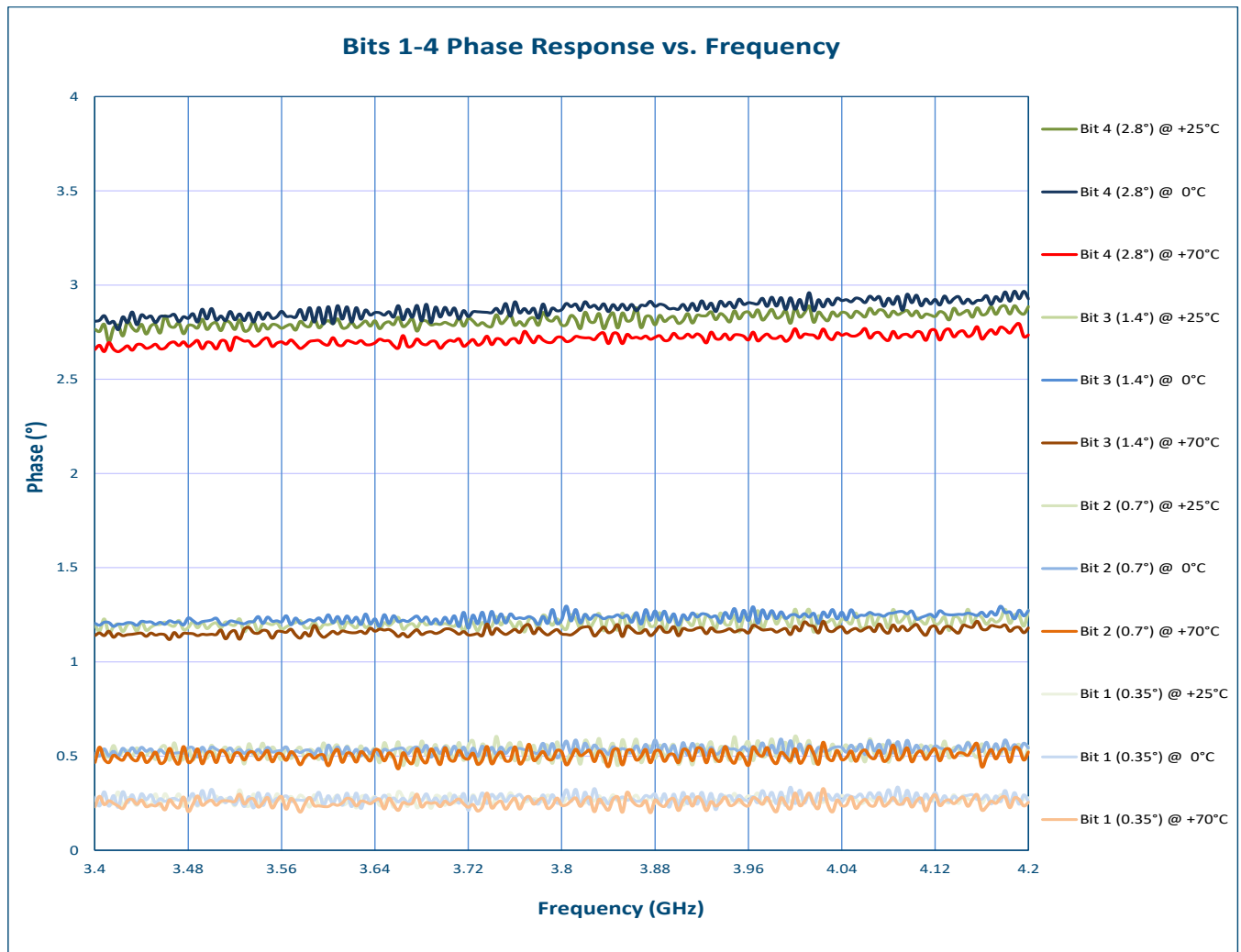
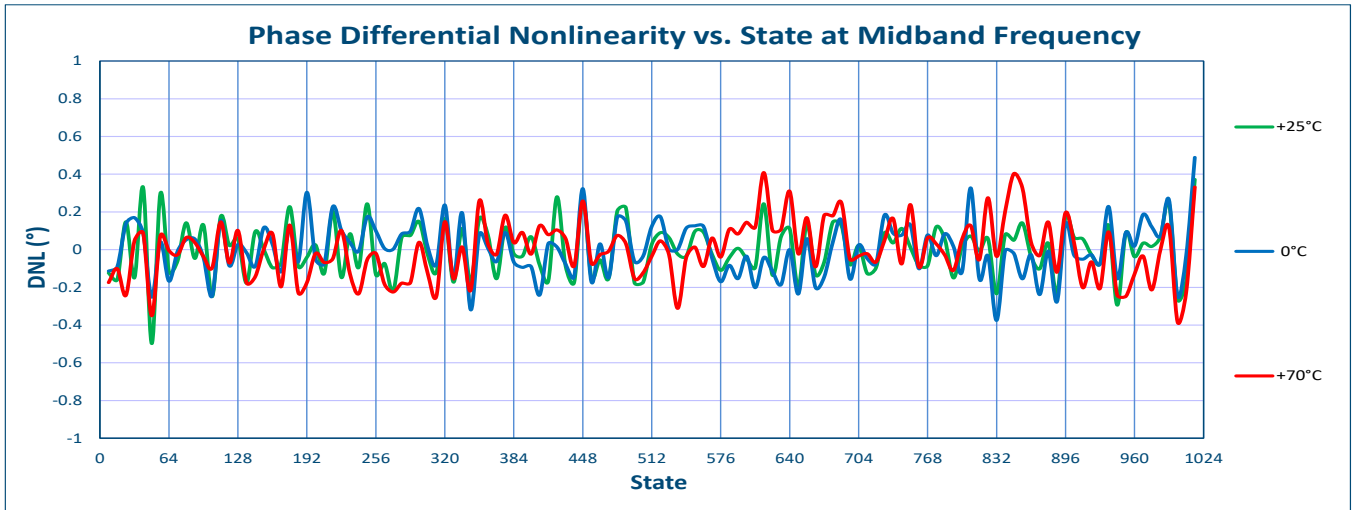
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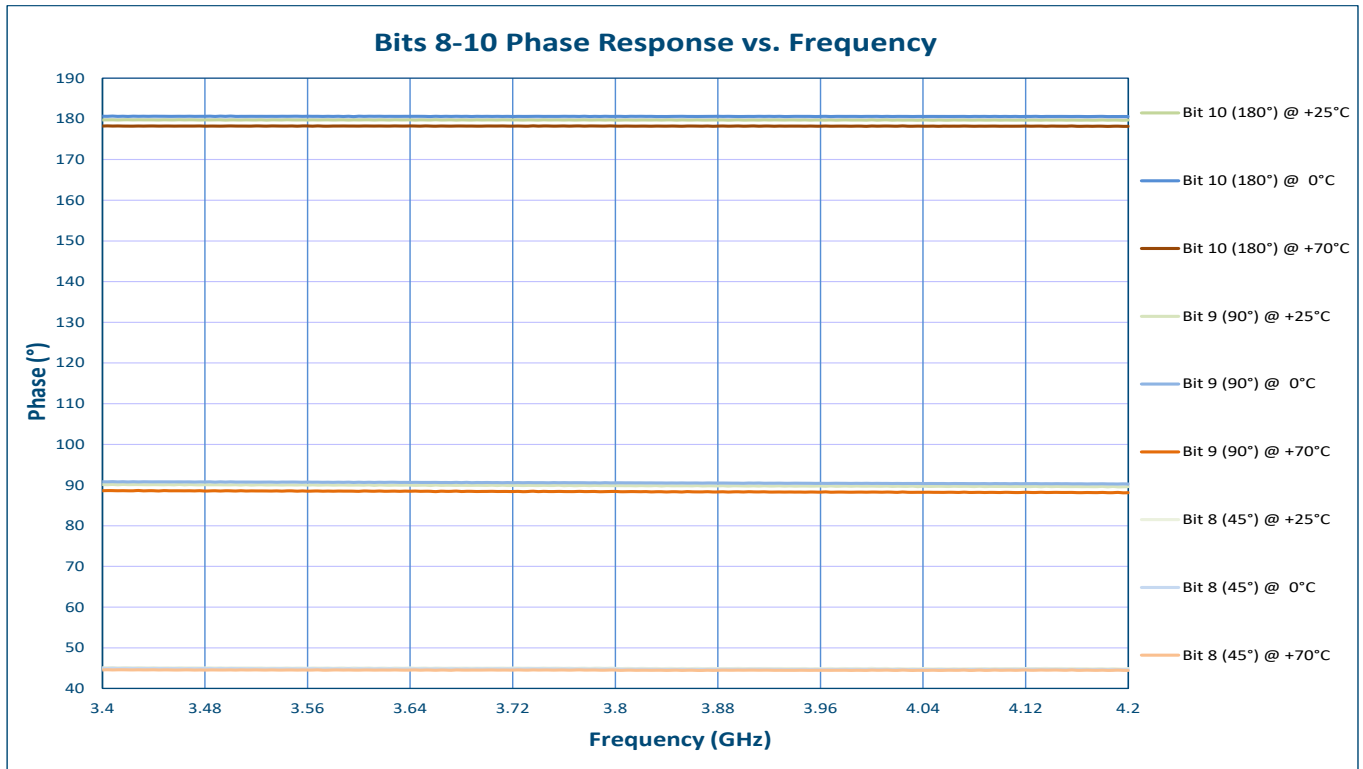
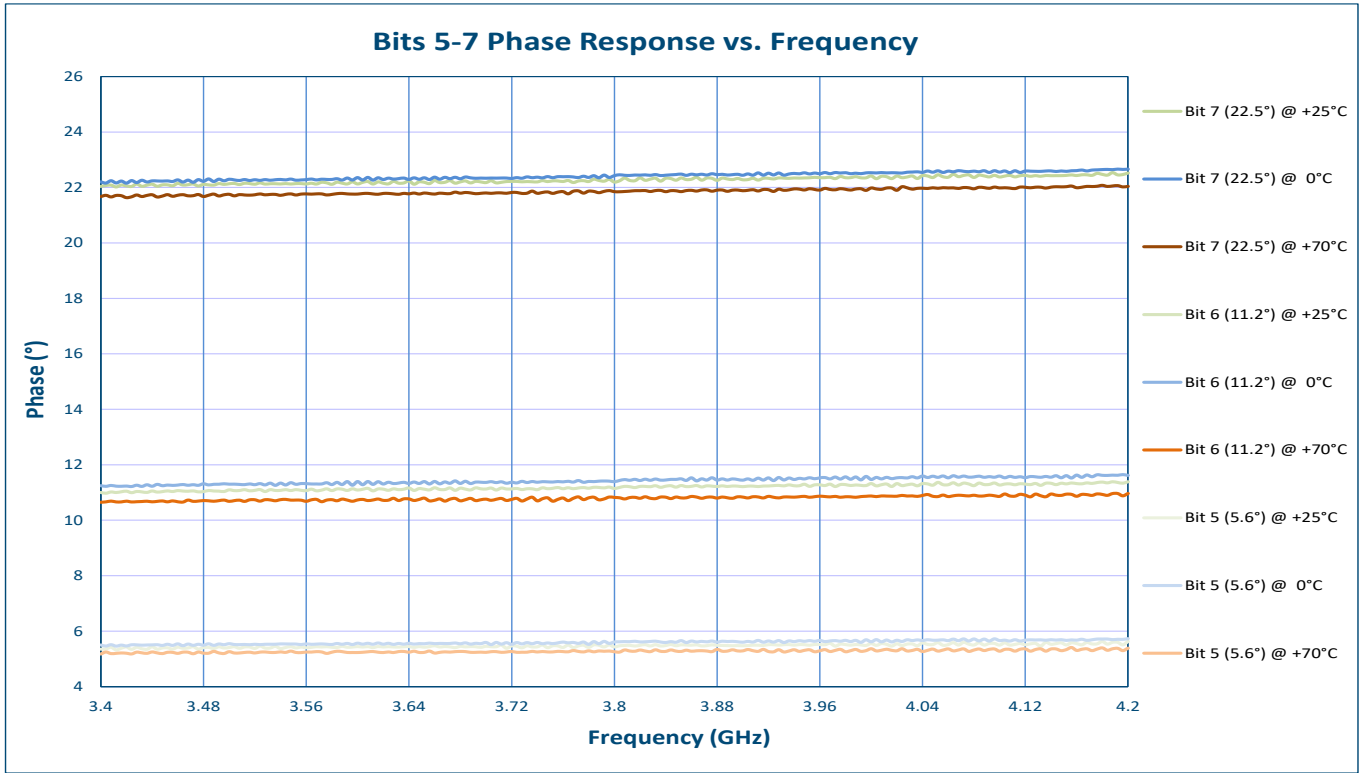
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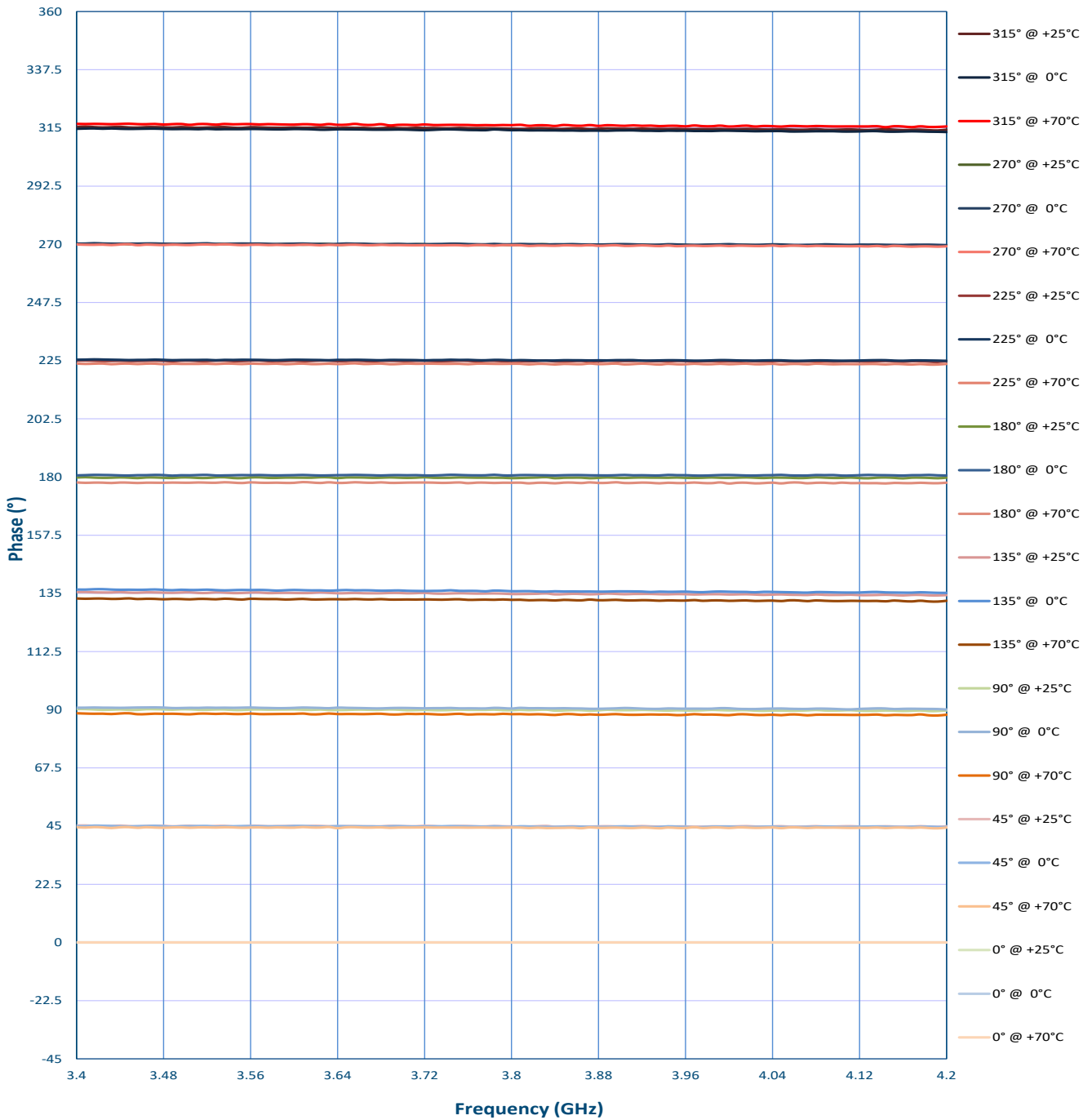


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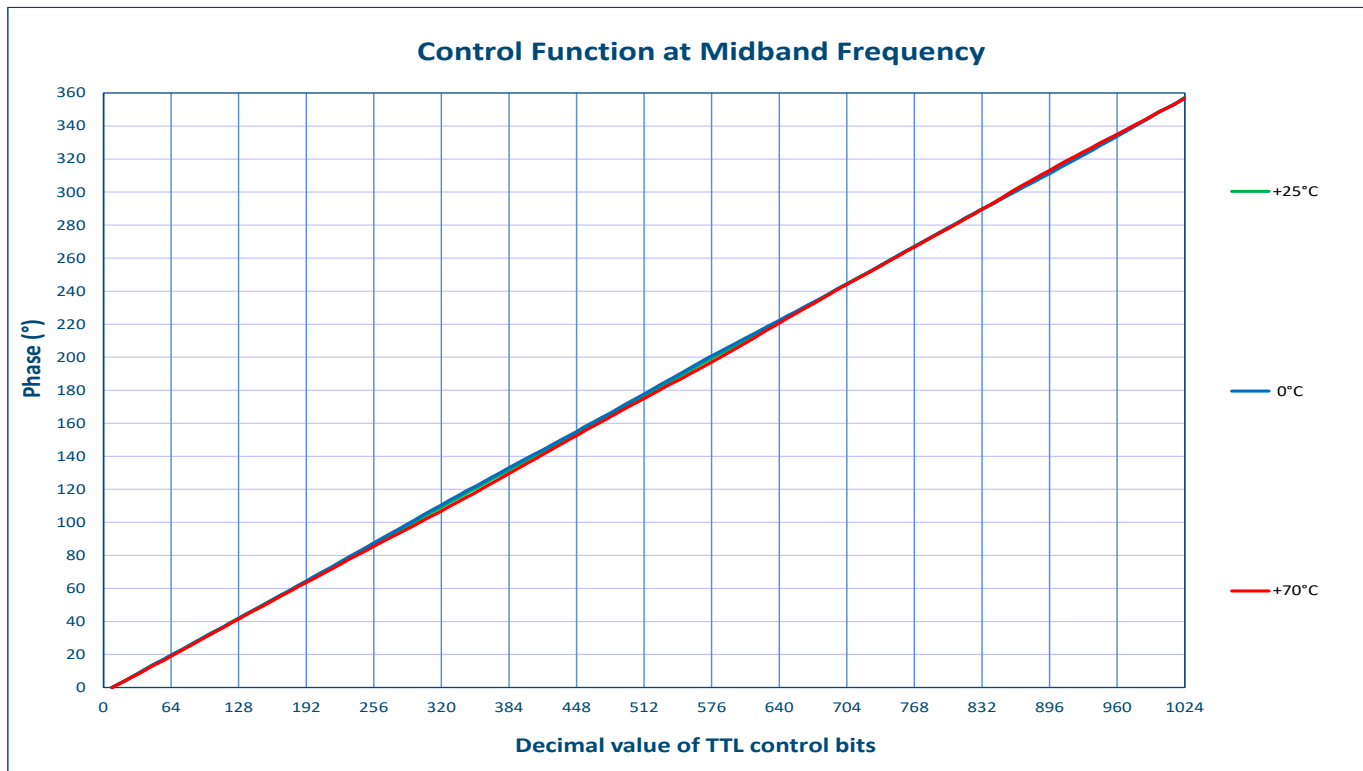
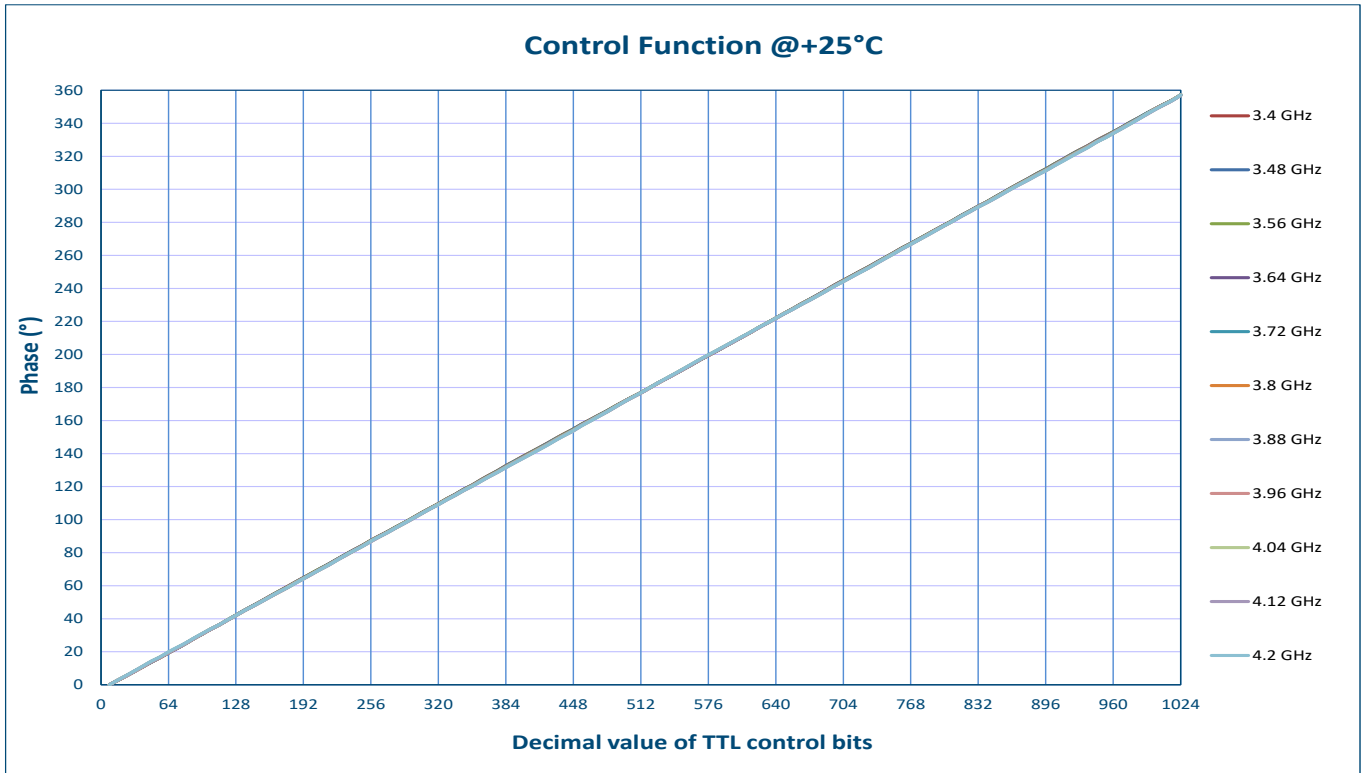


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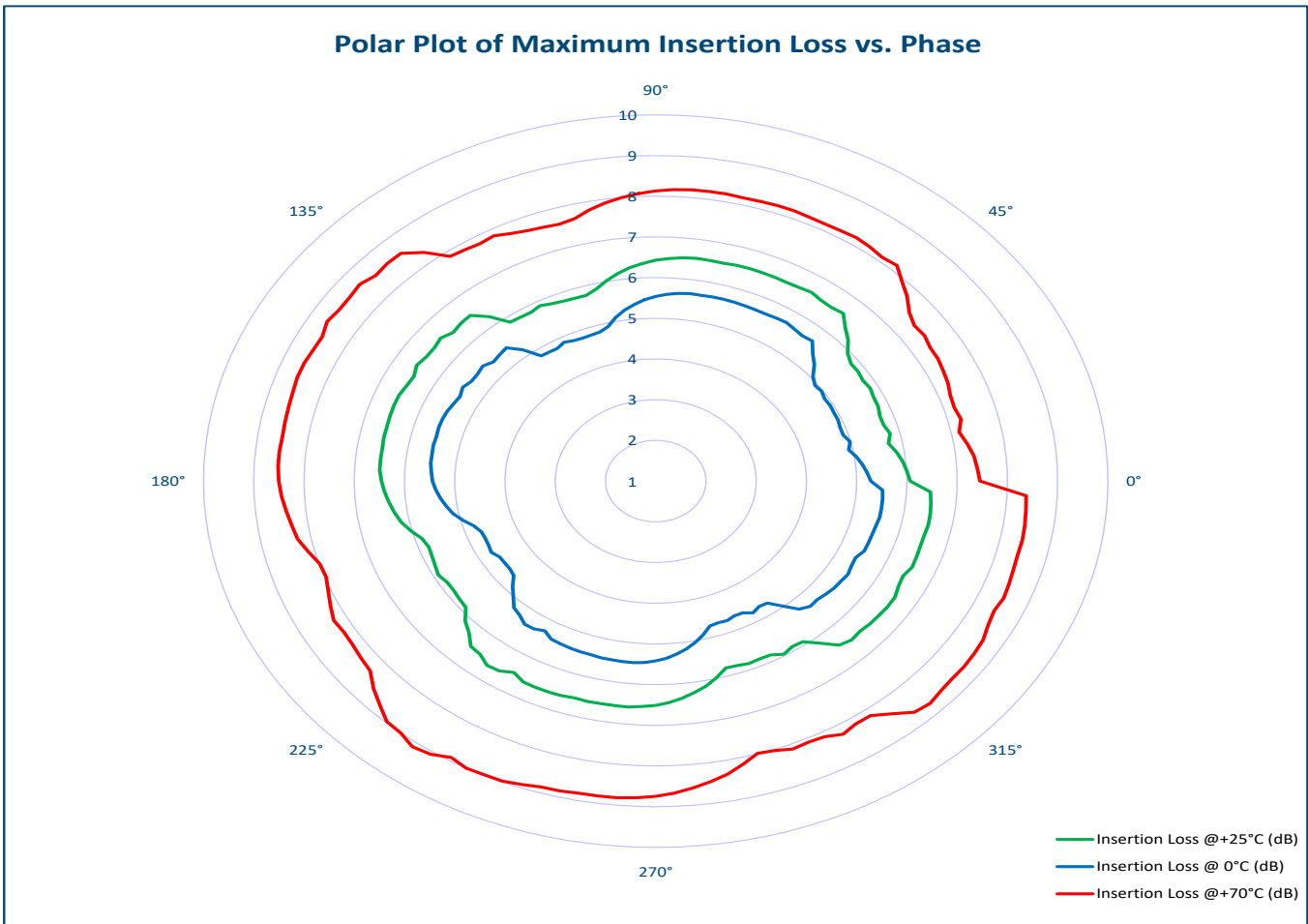
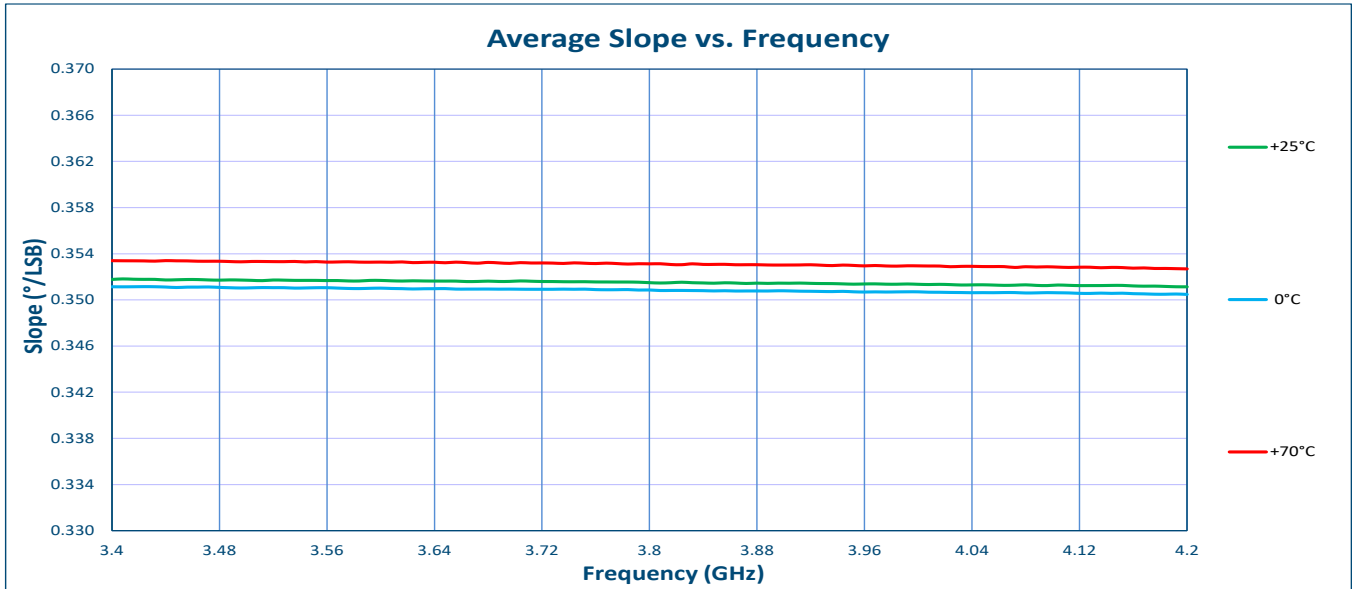
Phase Stability vs. Frequency at Selected Phase States



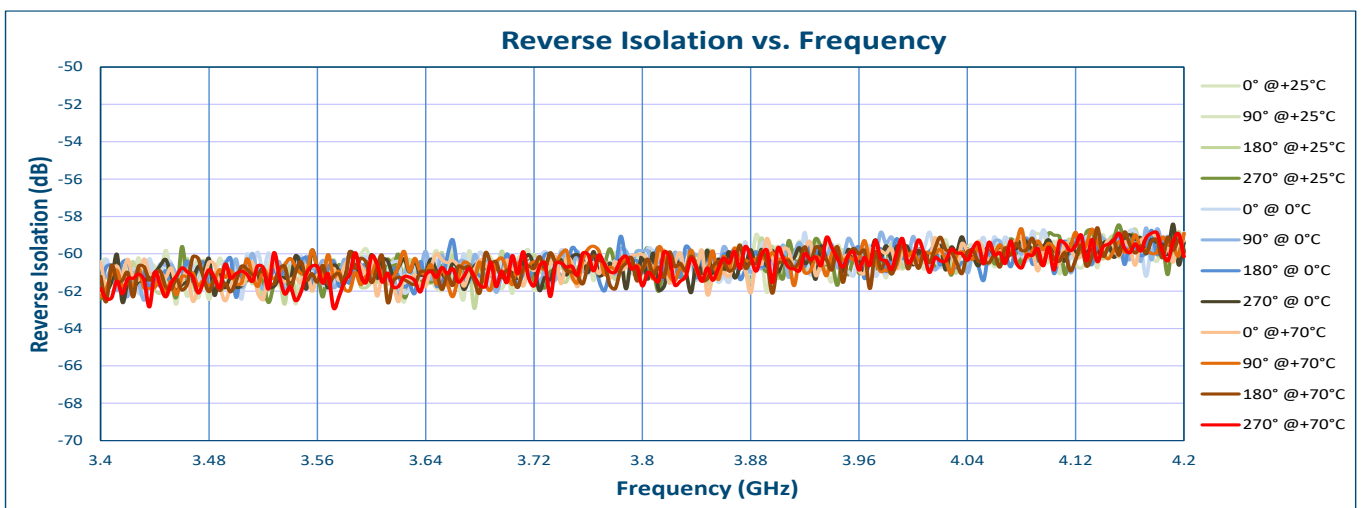
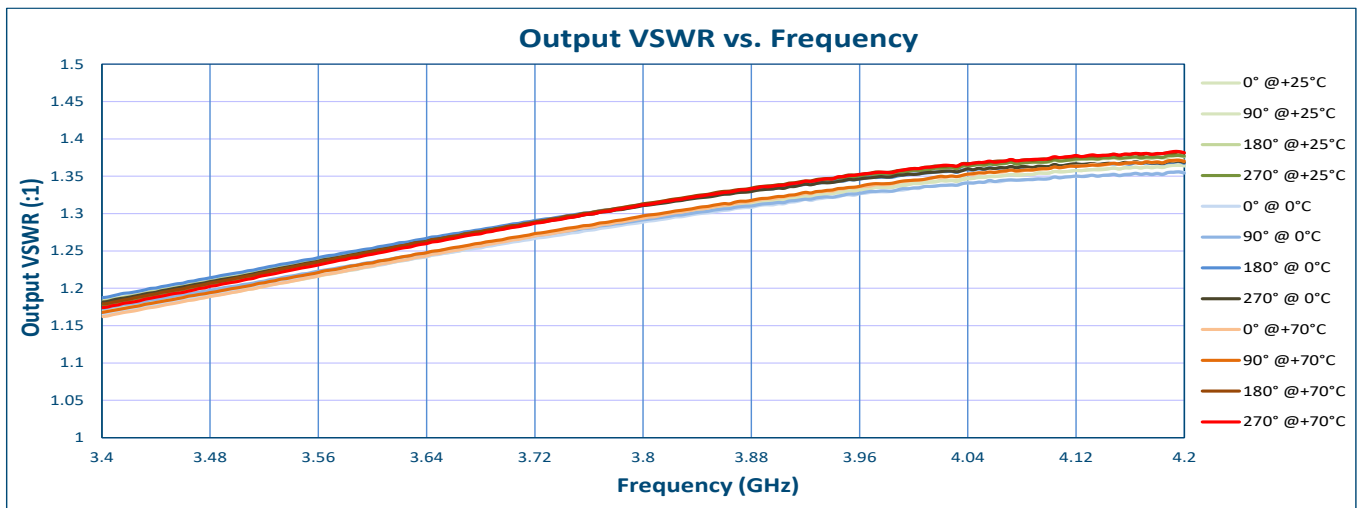
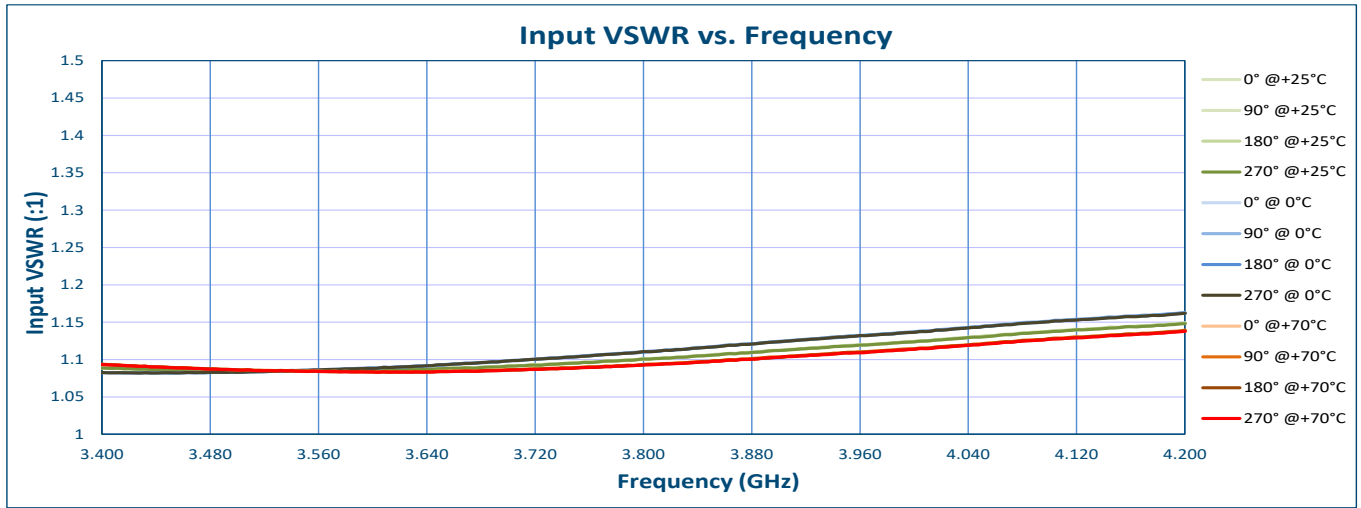
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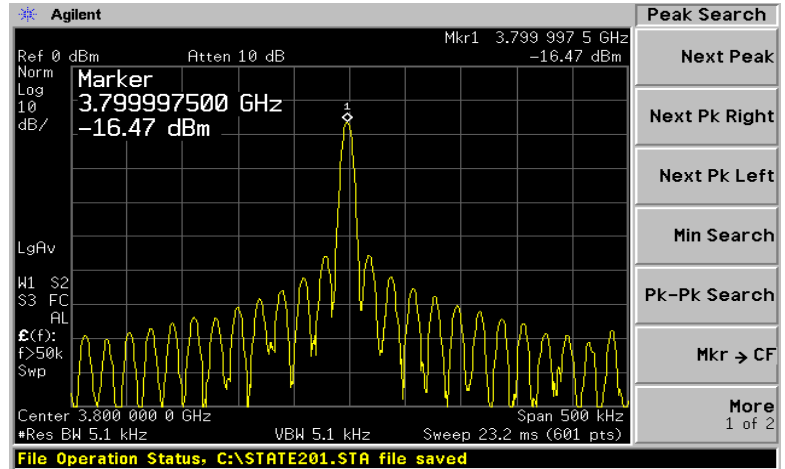
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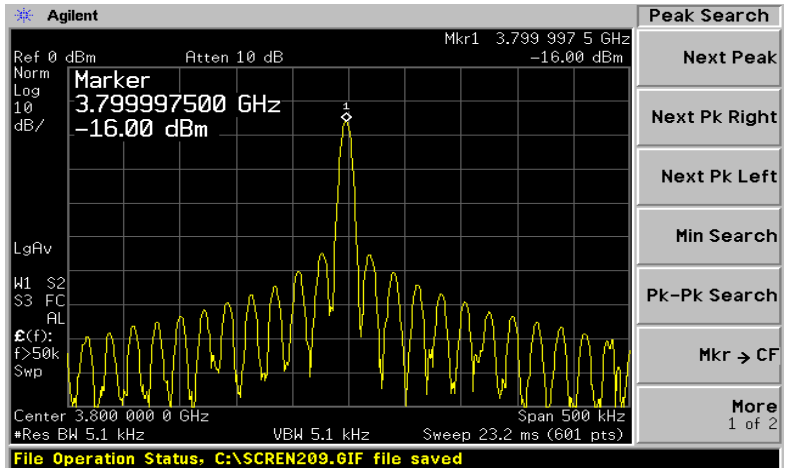
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Spurious (narrow range)

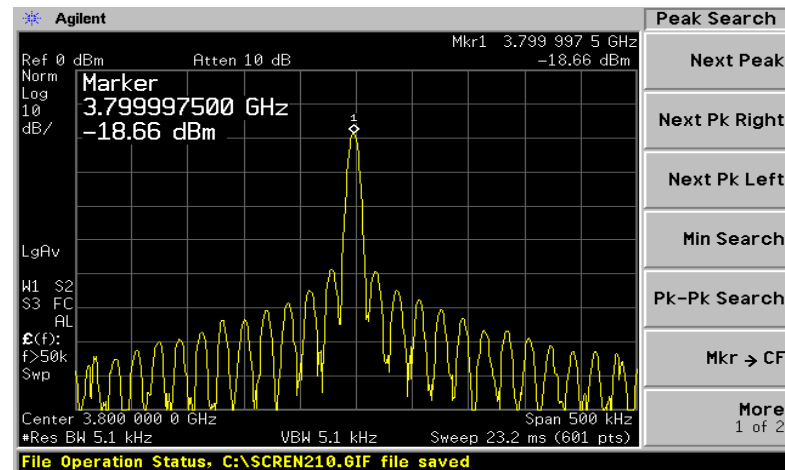
+25°C: -39.1 dBc



0°C: -38.2 dBc



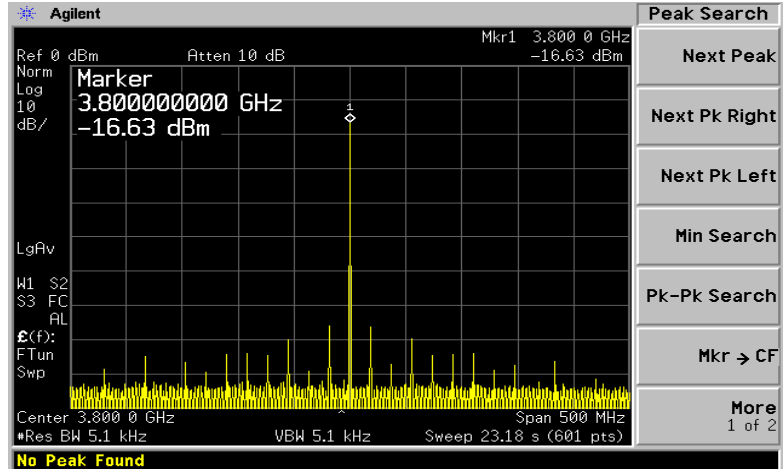
+70°C: -39 dBc



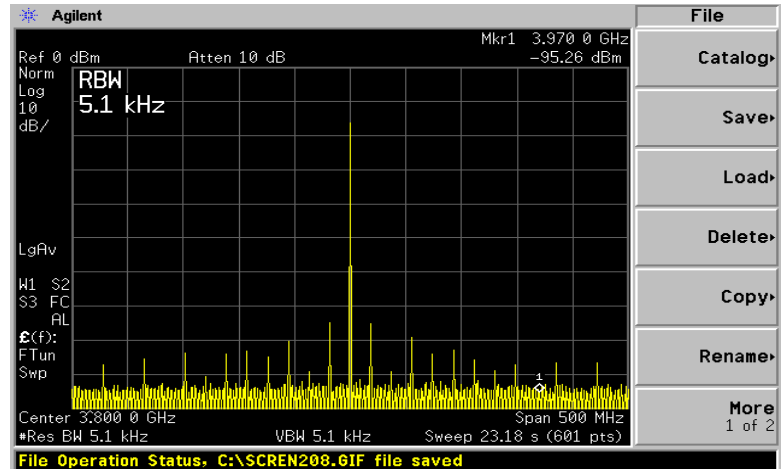
TYPICAL CHARACTERISTICS ON PS-3R4G4R2G-10B-SFF

Spurious (broad range)

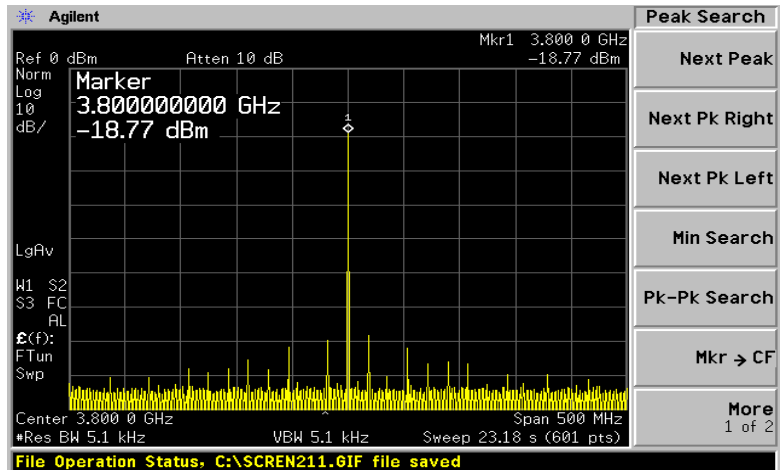
+25°C: -58.6 dBc



0°C: -57.6 dBc



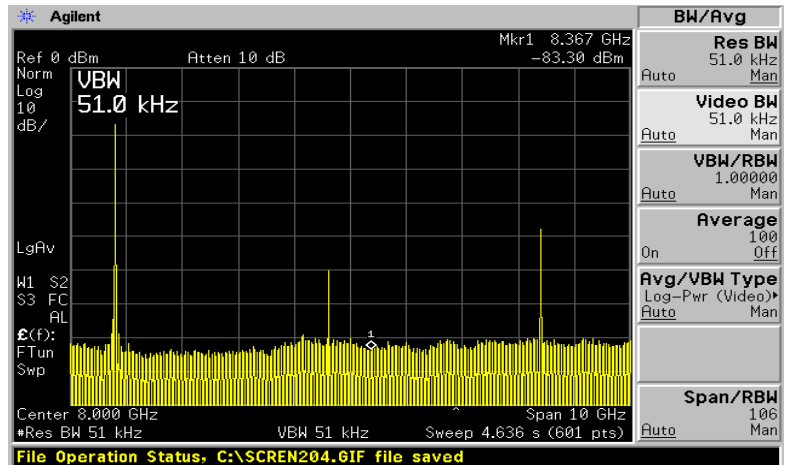
+70°C: -59.9 dBc



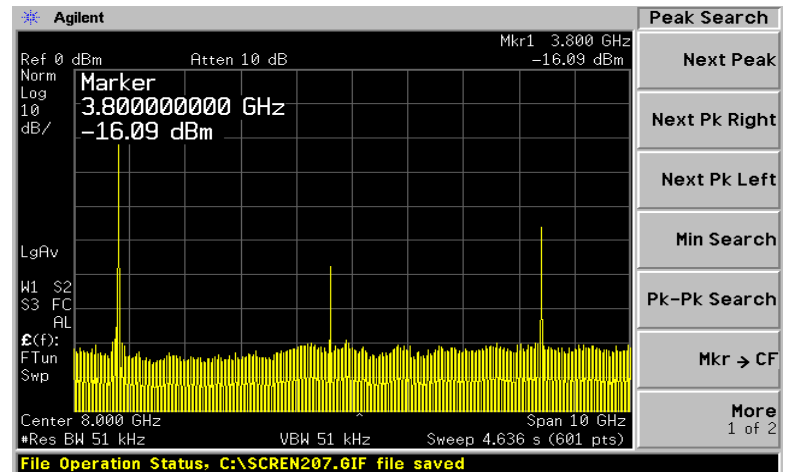
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Harmonics

+25°C: -30.6 dBc



0°C: -30.5 dBc



+70°C: -32.9 dBc

