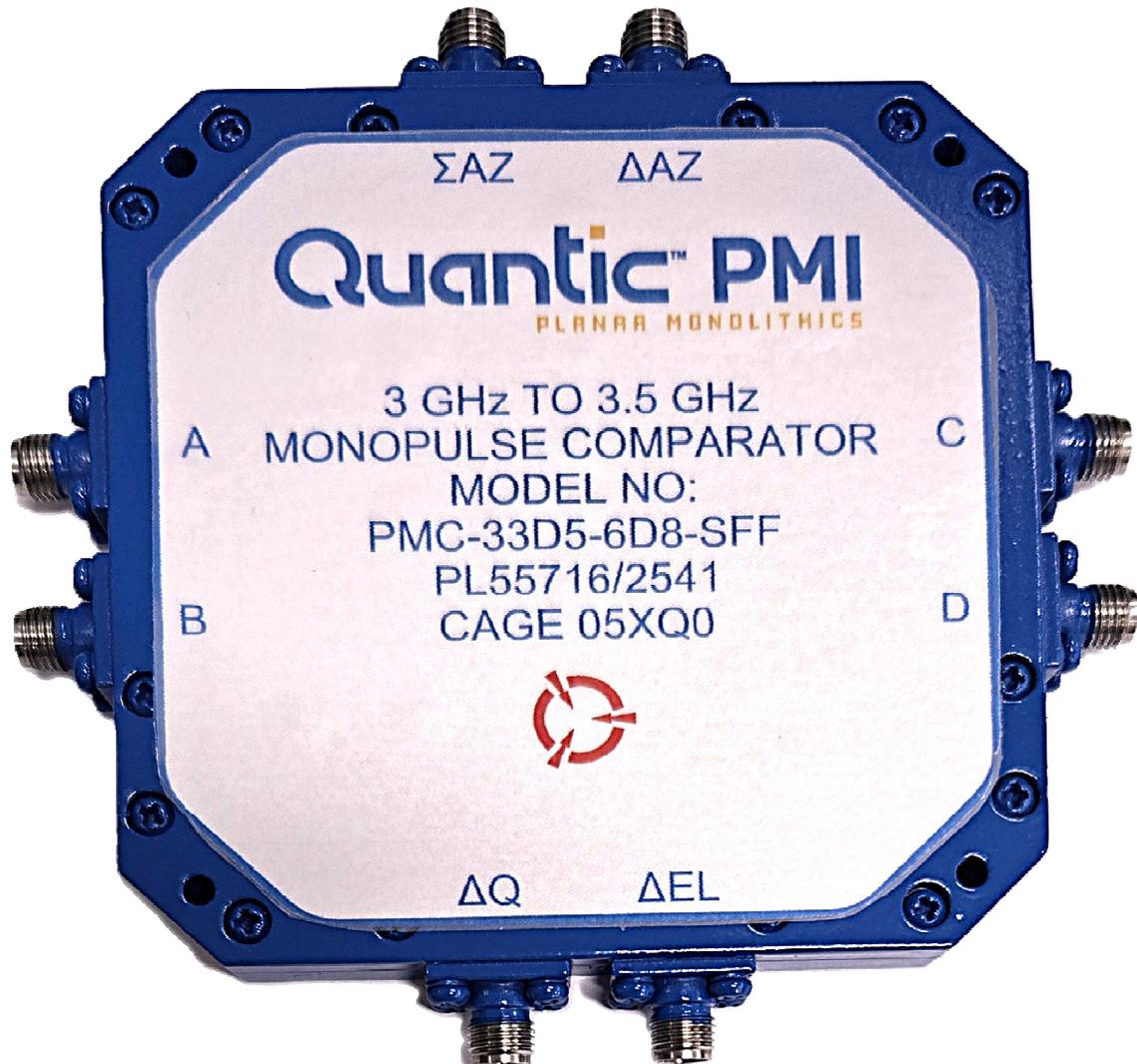


**TYPICAL CHARACTERISTICS
FOR
PMC-33D5-6D8-SFF**

QUANTIC PMI MODEL PMC-33D5-6D8-SFF IS A MONOPULSE COMPARATOR OPERATING OVER THE 3 TO 3.5 GHz FREQUENCY RANGE. THIS MODEL OFFERS A TYPICAL 0.8 dB INSERTION LOSS WHILE MAINTAINING A MAXIMUM AMPLITUDE BALANCE OF ± 0.4 dB, A MAXIMUM PHASE BALANCE OF $\pm 5^\circ$ AND A MAXIMUM VSWR OF 1.25:1. THIS UNIT HAS SMA FEMALE CONNECTORS, AND THE HOUSING SIZE IS 3.23" x 3.23" x 0.43".



TESTED AND REPORTED BY:

D. Hoschar

DATE:

Wednesday, October 8, 2025

TYPICAL CHARACTERISTICS FOR PMC-33D5-6D8-SFF

OUTLINE DRAWING

DESCRIPTION:

QUANTIC PMI MODEL PMC-33D5-6D8-SFF IS A MONOPULSE COMPARATOR OPERATING OVER THE 3 TO 3.5 GHz FREQUENCY RANGE. THIS MODEL OFFERS A TYPICAL 0.8 dB INSERTION LOSS WHILE MAINTAINING A MAXIMUM AMPLITUDE BALANCE OF ±0.4 dB, A MAXIMUM PHASE BALANCE OF ±5° AND A MAXIMUM VSWR OF 1.25:1. THE UNIT HAS SMA FEMALE CONNECTORS, AND THE HOUSING SIZE IS 3.23" x 3.23" x 0.43".

SPECIFICATIONS:

- FREQUENCY RANGE:..... 3 GHz TO 3.5 GHz
- INSERTION LOSS:..... 6.82 dB MAX
- INSERTION LOSS WITHOUT 6.02 dB NOMINAL SPLIT: 0.8 dB TYP.
- AMPLITUDE BALANCE:..... ±0.4 dB MAX
- PHASE BALANCE:..... ±5° MAX
- ISOLATION:..... 23 dB MIN
- VSWR:..... 1.25:1 MAX
- POWER HANDLING*:..... AVERAGE: 10 W MAX
 PEAK: 0.1 kW MAX

- IMPEDANCE:..... 50 Ω
- CONNECTORS:..... SMA FEMALE
- FINISH:..... PAINTED BLUE

*POWER HANDLING GUARANTEED WHEN LOAD'S VSWR WITHIN 1.50:1

TABLE 1: PHASE OFFSET FOR EACH PORT IN REFERENCE TO NORMALIZED A TO ΣAZ

INPUT	ΣAZ	ΔAZ	ΔQ	ΔEL
INPUT A	0°	-90°	0°	-90°
INPUT B	0°	-90°	180°	90°
INPUT C	0°	90°	180°	-90°
INPUT D	0°	90°	0°	90°

TABLE 2: OUTPUT MAGNITUDE WITH 4 IDENTICAL SIGNALS AT A, B, C AND D

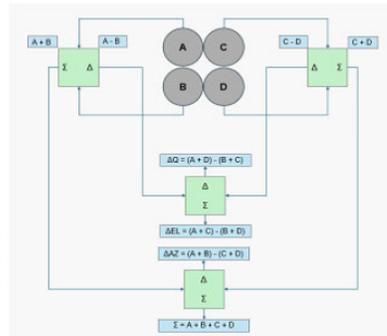
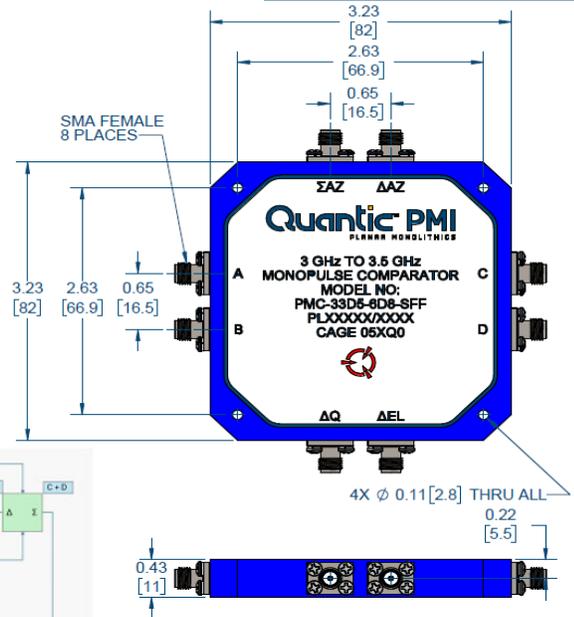
OUTPUT	VALUE	DESCRIPTION
ΣAZ	≤ 3 dB	A+B+C+D
ΔAZ	≥ 20 dB	(A+B) - (C+D)
ΔEL	≥ 20 dB	(A+C) - (B+D)
ΔQ	≥ 20 dB	(A+D) - (B+C)

ENVIRONMENTAL RATINGS:

- TEMPERATURE:..... -55°C TO +85°C (OPERATING)
- OPERATING HUMIDITY:..... UP TO 95%, NON-CONDENSING
- SHOCK:..... MIL-STD-202, METHOD 213B COND. B
- VIBRATION:..... MIL-STD-202, METHOD 204D COND. B
- ALTITUDE:..... MIL-STD-202, METHOD 105C COND. B
- TEMPERATURE CYCLE:..... MIL-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	8/29/2024	



PMI CONFIDENTIAL AND PROPRIETARY

APPROVALS		DATE	TITLE
DRAWN	D. HOSCHAR	8/29/2024	OUTLINE
REVIEWED			PMC-33D5-6D8-SFF
SIZE	B	FROM NO.	05XQ0
SCALE	1:1	PMI NO.	27052920
		REV.	A1
		SHEET	1 OF 1

TYPICAL CHARACTERISTICS FOR PMC-33D5-6D8-SFF

TEST DATA

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	Test Results		
			+25°C	+85°C	-55°C
1	Frequency Range:	3 TO 3.5 GHz	3 TO 3.5 GHz		
2	Insertion Loss: (Without 6.02 dB Nominal Split)	0.8 dB Typ.	0.6 dB	0.61 dB	0.51 dB
3	Amplitude Balance:	±0.4 dB Max.	±0.25 dB	±0.25 dB	±0.23 dB
4	Phase Balance:	±5° Max.	±2.19°	±2.16°	±2.97°
5	Isolation:	23 dB Min.	26 dB	27 dB	27 dB
6	VSWR:	1.25:1 Max.	1.2:1	1.19:1	1.22:1
7	Power Handling:	Average: 10 W Max. (Port A, B, C, & D) Peak: 0.1 kW Max.	Average: 10 W Max. (Port A, B, C, & D) Peak: 0.1 kW Max.		

Phase Data Relative to A-ΣAZ @ +25°C		A	B	C	D	ΣAZ	ΔAZ	ΔQ	ΔEL
	A	-	Isolation	Isolation	Isolation	0°	-90°	2°	-90°
	B	Isolation	-	Isolation	Isolation	-1°	-91°	181°	90°
	C	Isolation	Isolation	-	Isolation	3°	93°	-175°	-86°
	D	Isolation	Isolation	Isolation	-	2°	92°	4°	93°
	ΣAZ	0°	-1°	3°	2°	-	Isolation	Isolation	Isolation
	ΔAZ	-90°	-91°	93°	92°	Isolation	-	Isolation	Isolation
	ΔQ	2°	181°	-175°	4°	Isolation	Isolation	-	Isolation
	ΔEL	-90°	90°	-86°	93°	Isolation	Isolation	Isolation	-

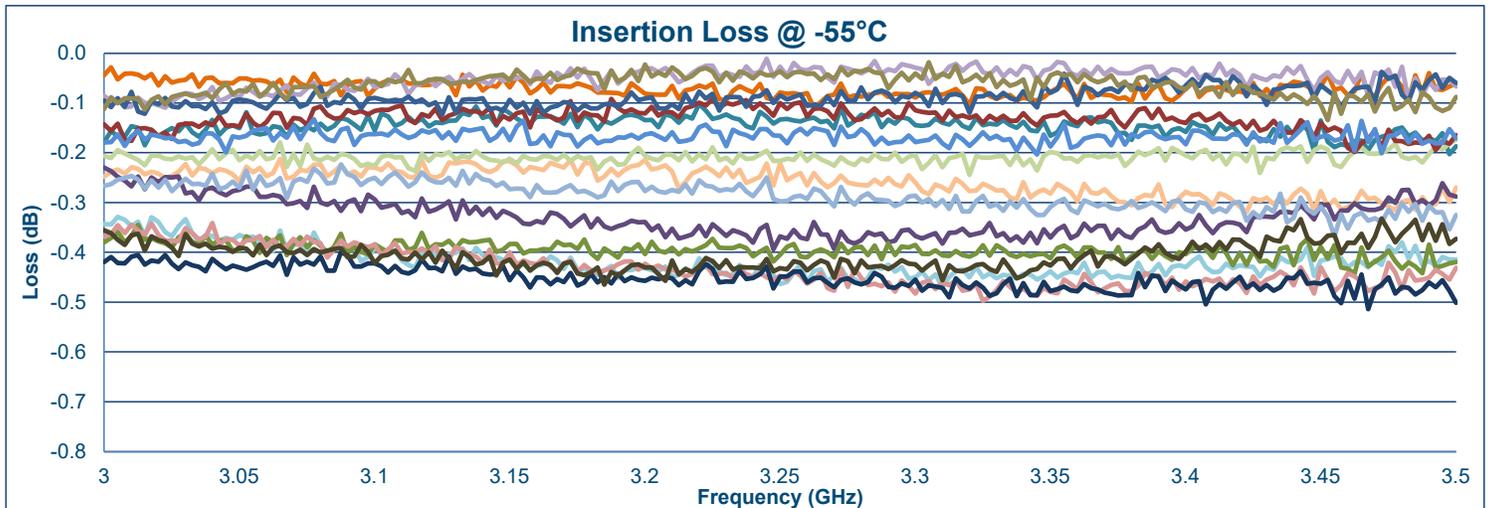
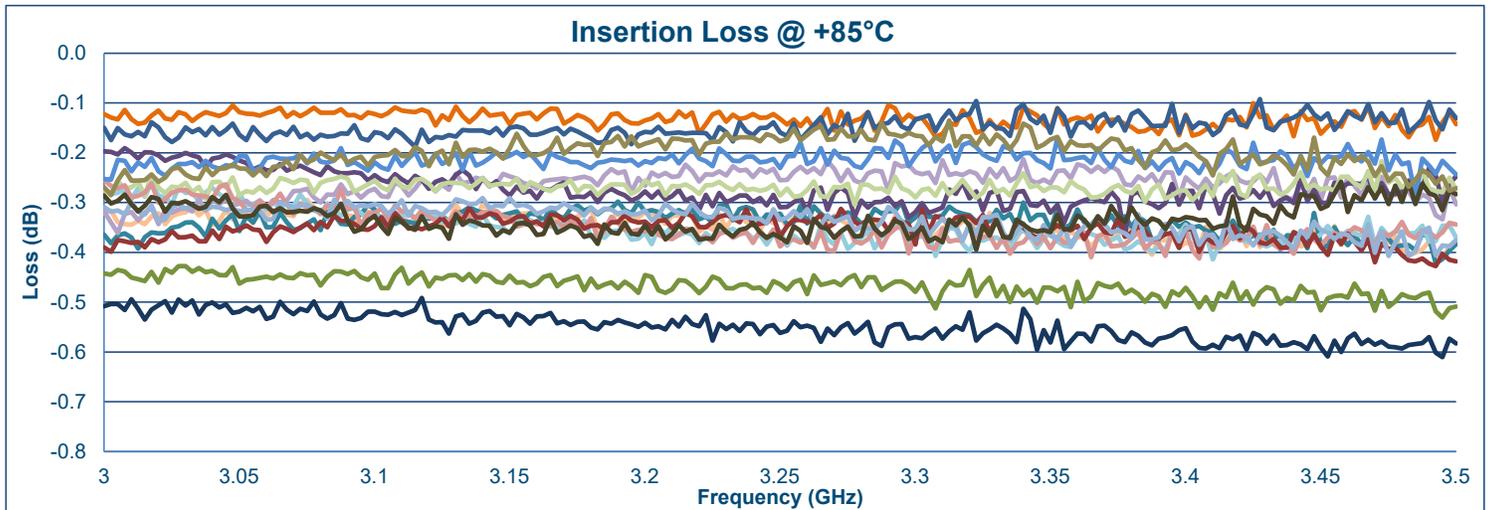
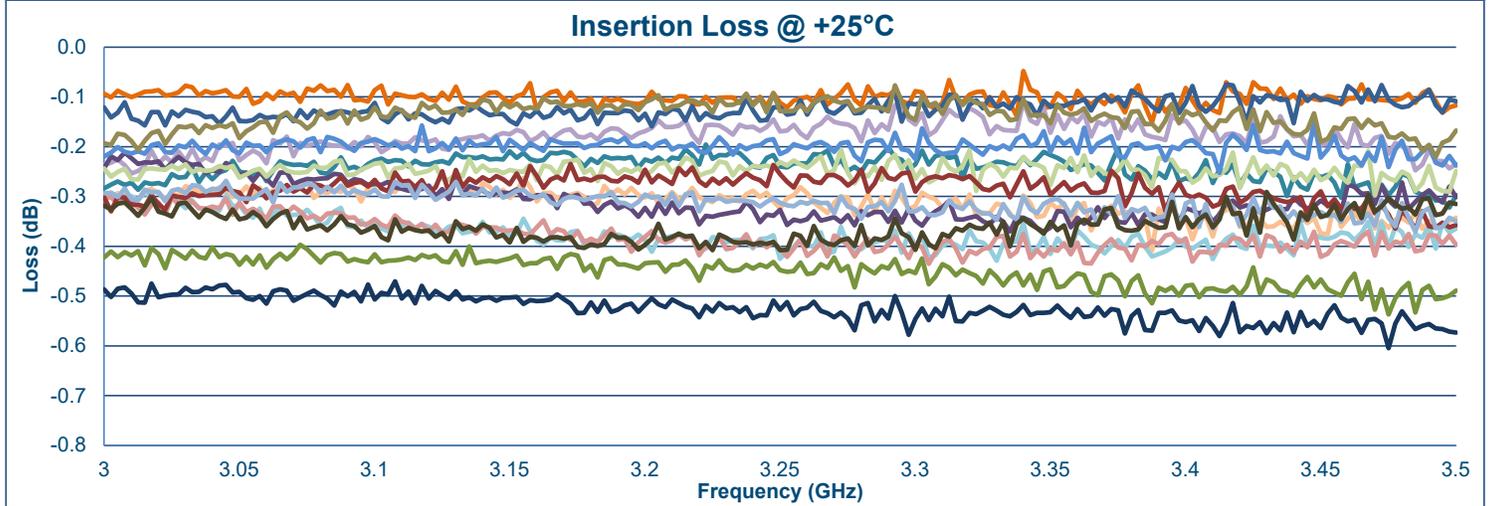
Phase Data Relative to A-ΣAZ @ +85°C		A	B	C	D	ΣAZ	ΔAZ	ΔQ	ΔEL
	A	-	Isolation	Isolation	Isolation	0°	-91°	1°	-90°
	B	Isolation	-	Isolation	Isolation	-1°	-92°	181°	89°
	C	Isolation	Isolation	-	Isolation	2°	92°	-176°	-87°
	D	Isolation	Isolation	Isolation	-	1°	91°	4°	92°
	ΣAZ	0°	-1°	2°	1°	-	Isolation	Isolation	Isolation
	ΔAZ	-91°	-92°	92°	91°	Isolation	-	Isolation	Isolation
	ΔQ	1°	181°	-176°	4°	Isolation	Isolation	-	Isolation
	ΔEL	-90°	89°	-87°	92°	Isolation	Isolation	Isolation	-

Phase Data Relative to A-ΣAZ @ -55°C		A	B	C	D	ΣAZ	ΔAZ	ΔQ	ΔEL
	A	-	Isolation	Isolation	Isolation	0°	-90°	2°	-89°
	B	Isolation	-	Isolation	Isolation	-1°	-92°	181°	90°
	C	Isolation	Isolation	-	Isolation	1°	91°	-177°	-89°
	D	Isolation	Isolation	Isolation	-	0°	90°	2°	87°
	ΣAZ	0°	-1°	1°	0°	-	Isolation	Isolation	Isolation
	ΔAZ	-90°	-92°	91°	90°	Isolation	-	Isolation	Isolation
	ΔQ	2°	181°	-177°	2°	Isolation	Isolation	-	Isolation
	ΔEL	-89°	90°	-89°	87°	Isolation	Isolation	Isolation	-

**TYPICAL CHARACTERISTICS
 FOR
 PMC-33D5-6D8-SFF**

Legend

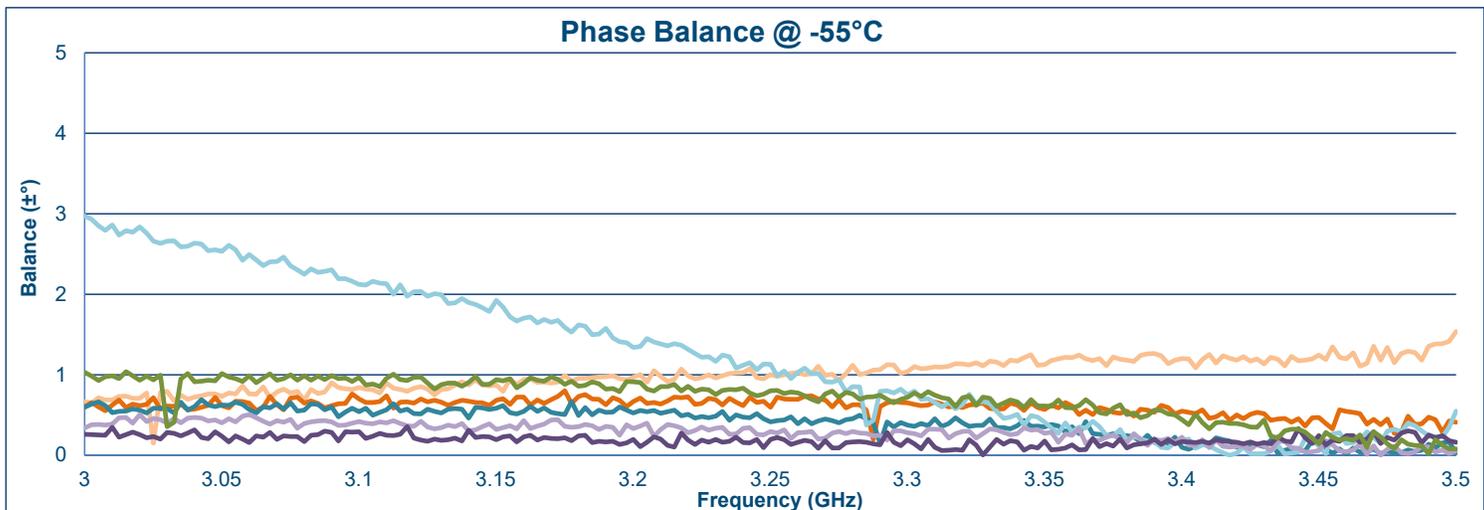
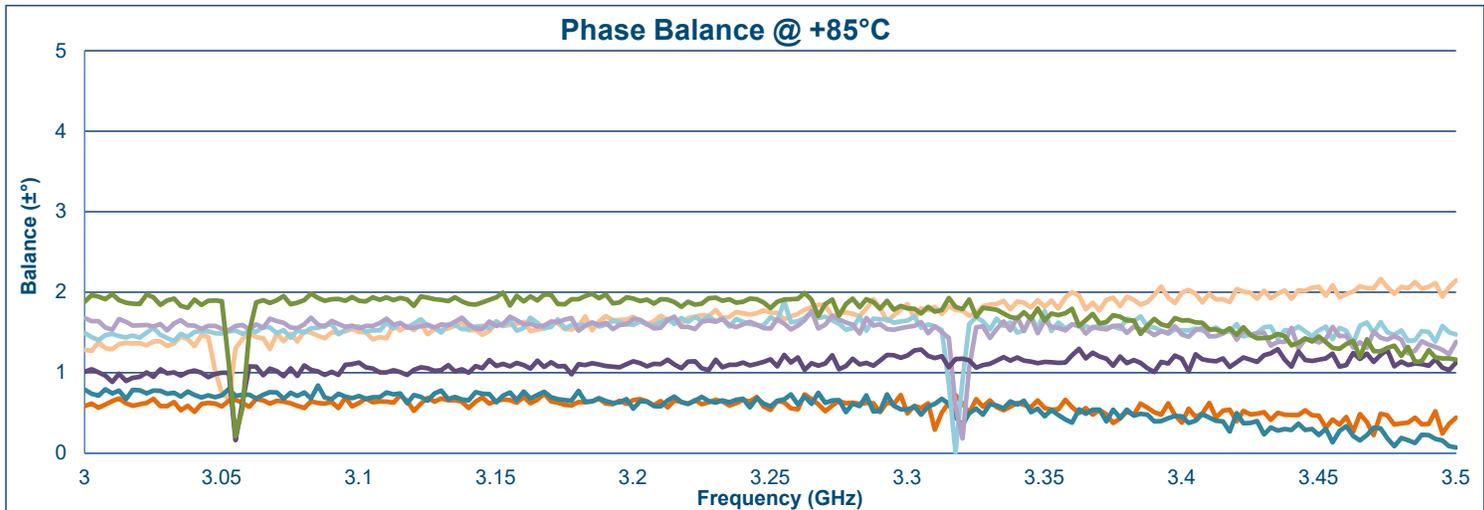
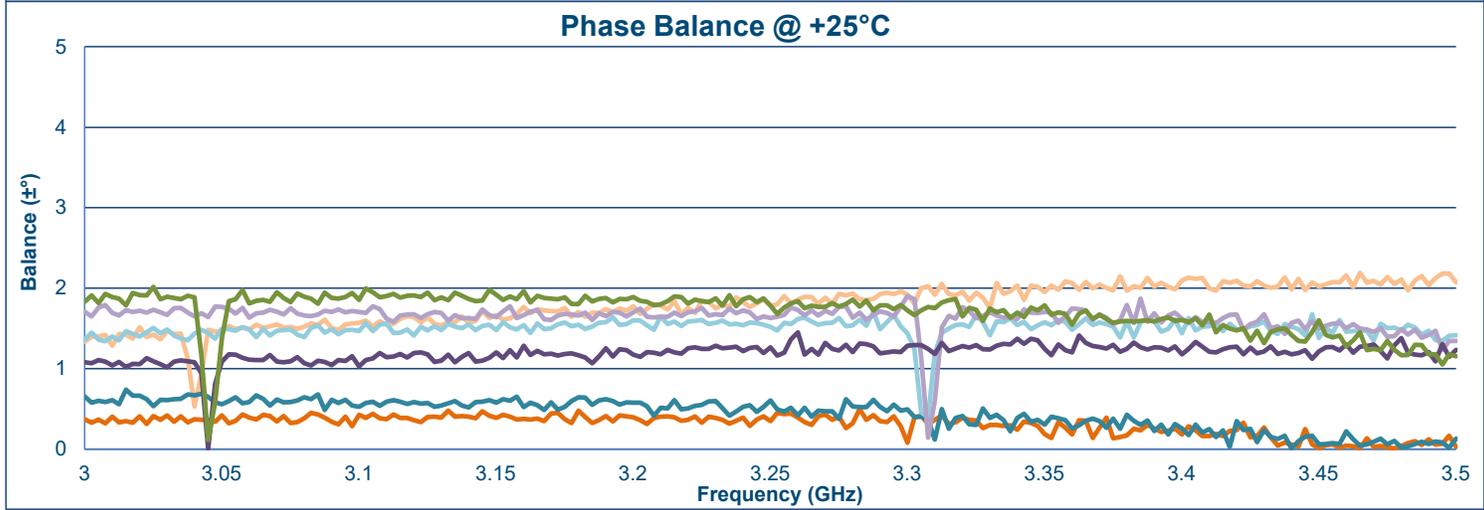
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|--------|---------|---------|---------|--------|---------|---------|---------|
| — A-ΔQ | — A-ΔAZ | — A-ΣAZ | — A-ΔEL | — B-ΔQ | — B-ΔAZ | — B-ΣAZ | — B-ΔEL |
| — C-ΔQ | — C-ΔAZ | — C-ΣAZ | — C-ΔEL | — D-ΔQ | — D-ΔAZ | — D-ΣAZ | — D-ΔEL |



**TYPICAL CHARACTERISTICS
 FOR
 PMC-33D5-6D8-SFF**

Legend

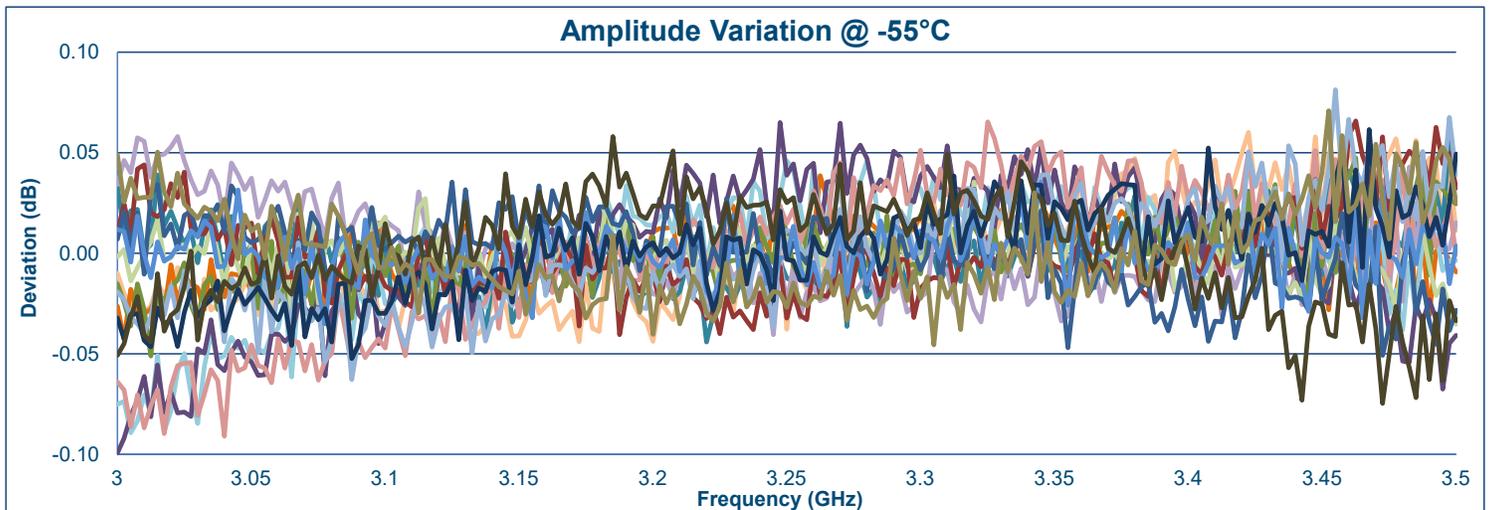
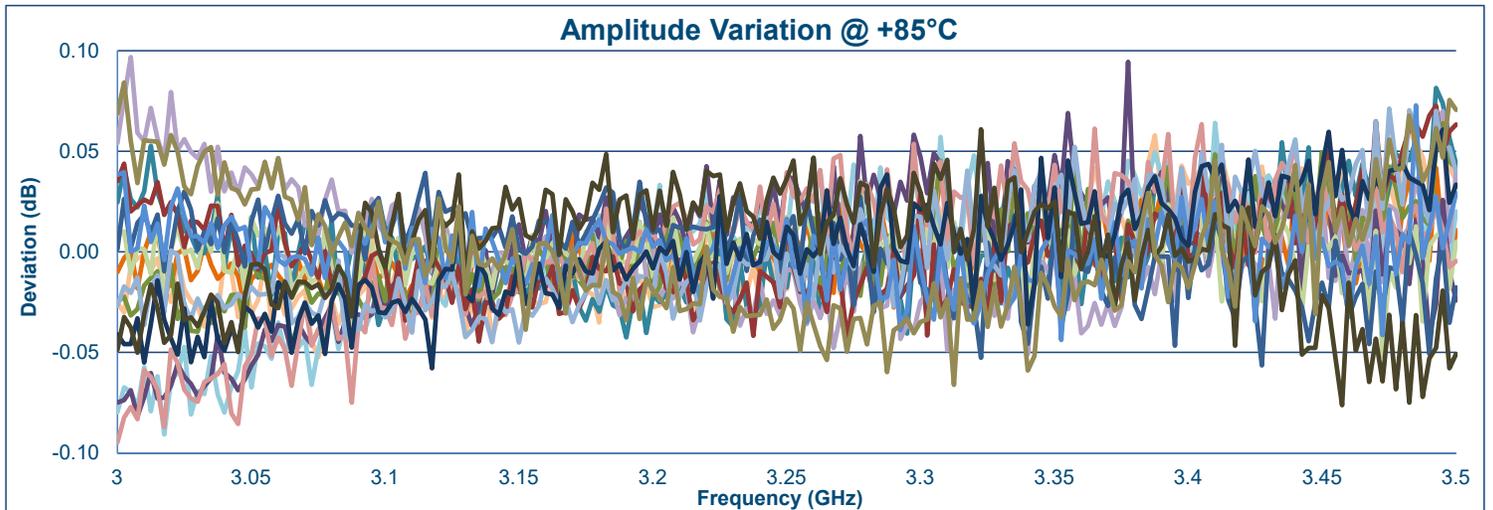
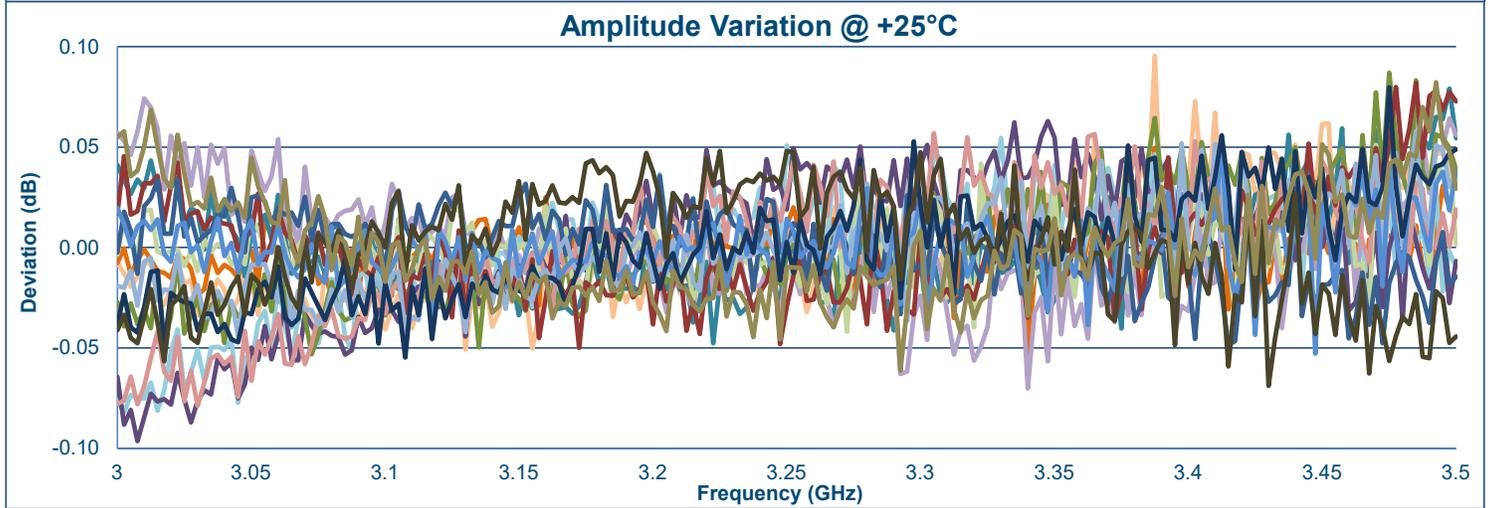
- ΣAZ
- Left
- Right
- Bottom
- Top
- / Diagonal
- \ Diagonal



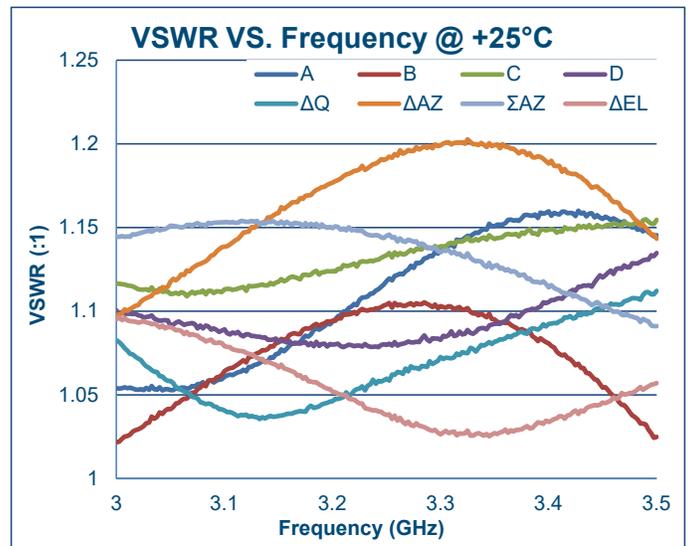
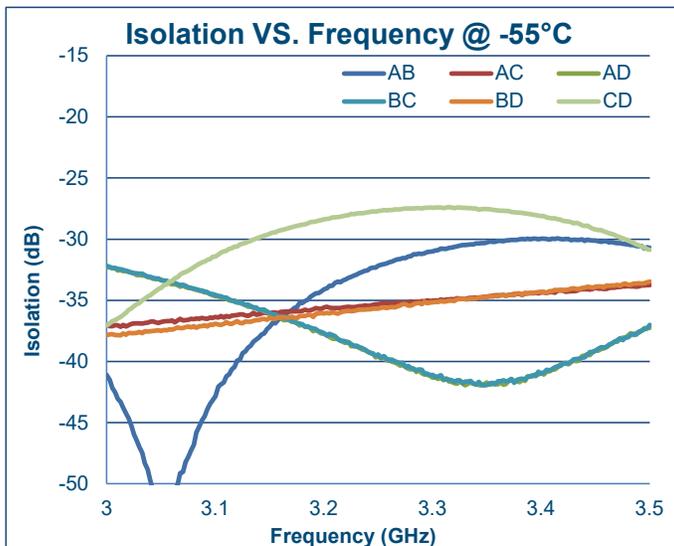
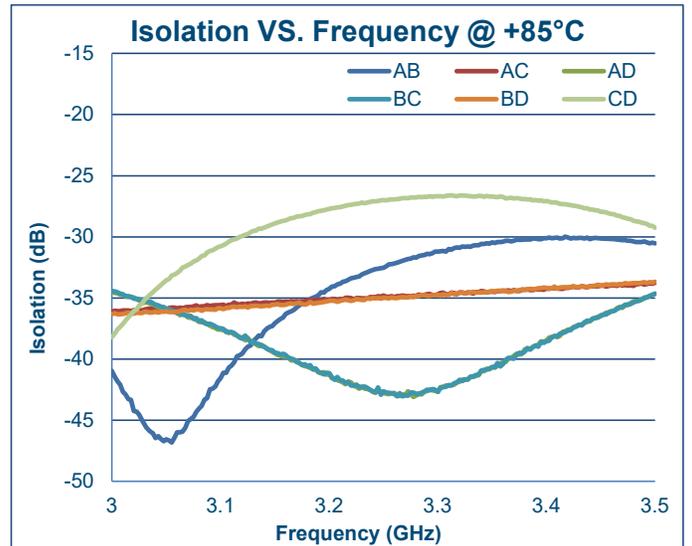
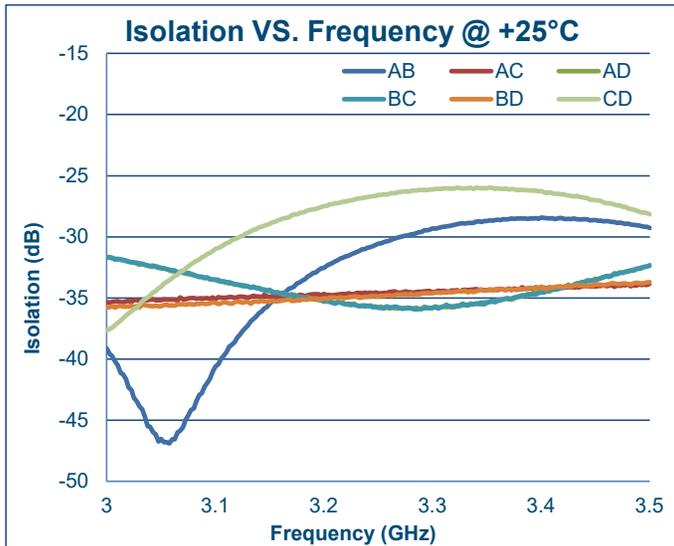
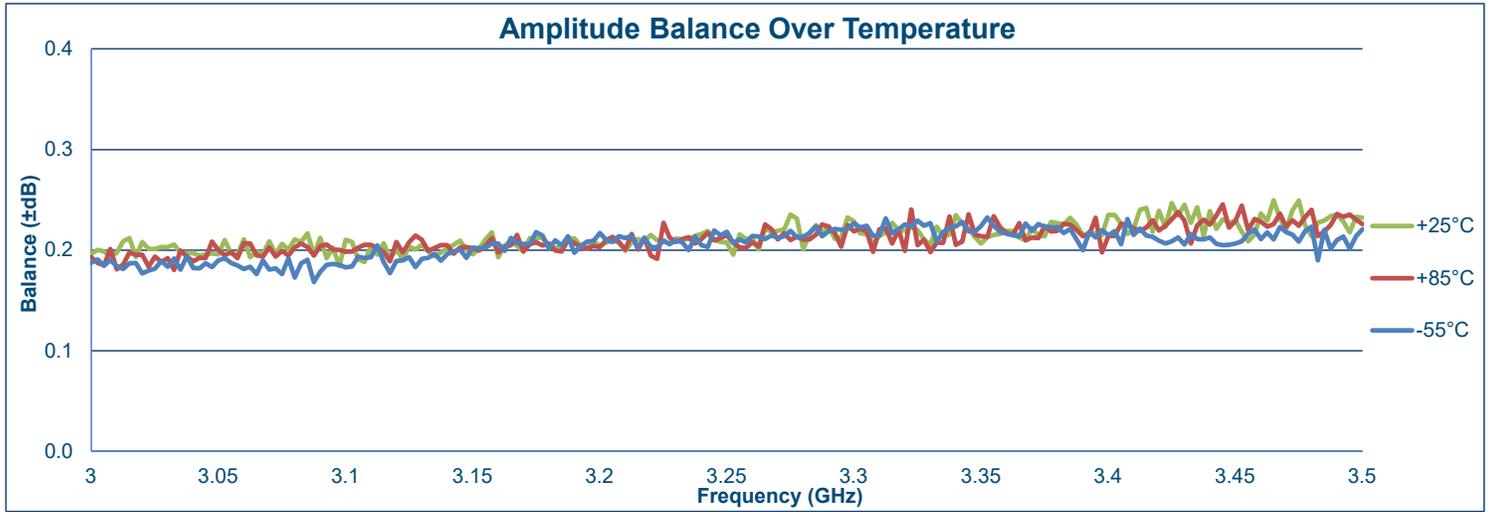
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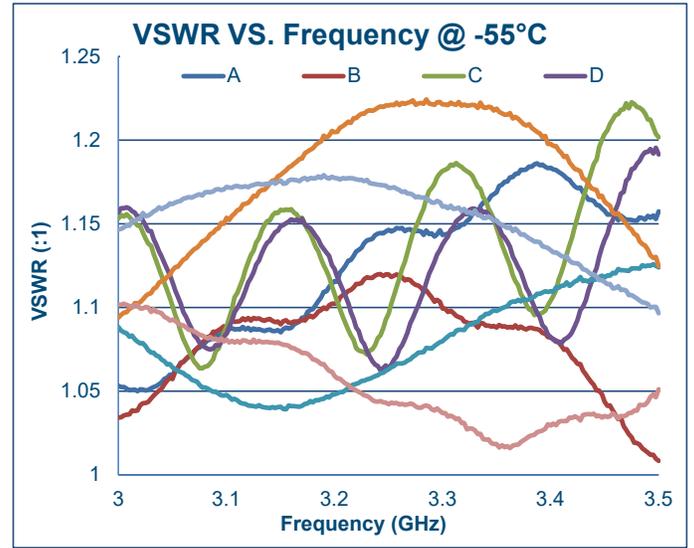
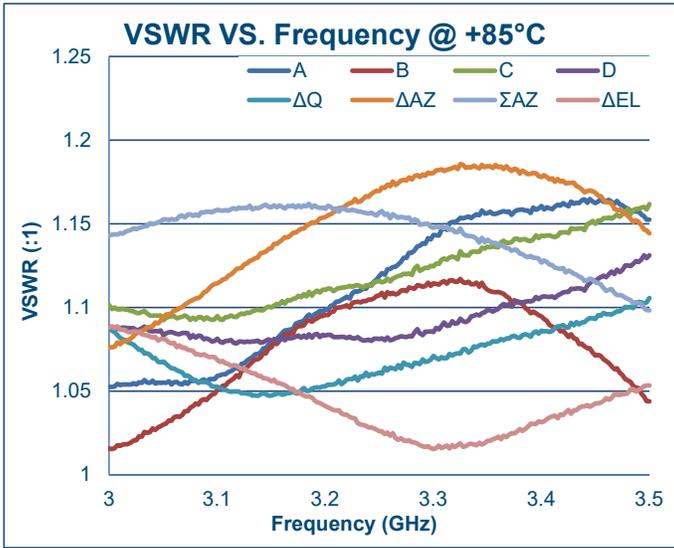
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|--------|---------|---------|---------|--------|---------|---------|---------|
| — A-ΔQ | — A-ΔAZ | — A-ΣAZ | — A-ΔEL | — B-ΔQ | — B-ΔAZ | — B-ΣAZ | — B-ΔEL |
| — C-ΔQ | — C-ΔAZ | — C-ΣAZ | — C-ΔEL | — D-ΔQ | — D-ΔAZ | — D-ΣAZ | — D-ΔEL |



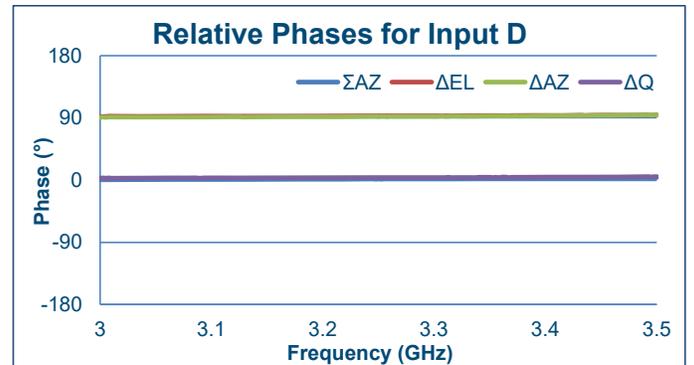
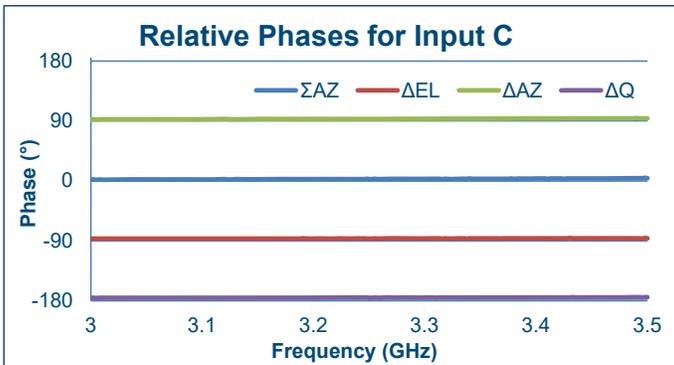
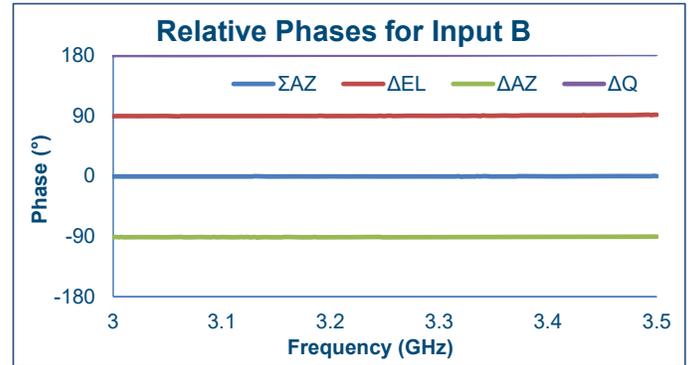
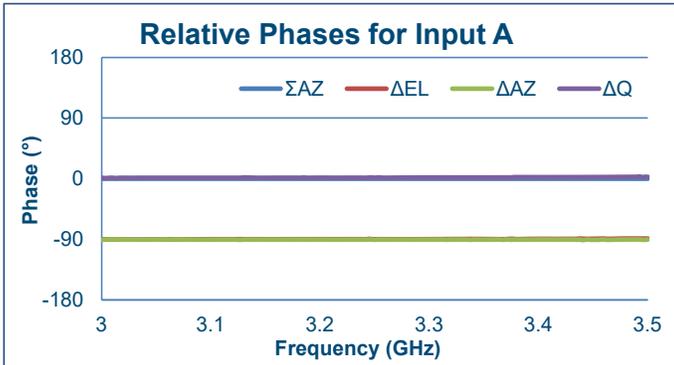
**TYPICAL CHARACTERISTICS
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**TYPICAL CHARACTERISTICS
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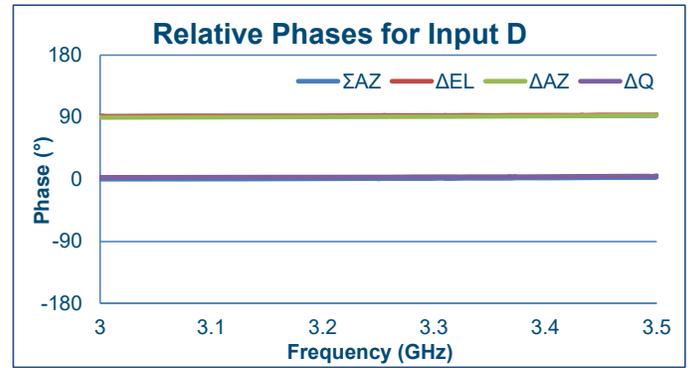
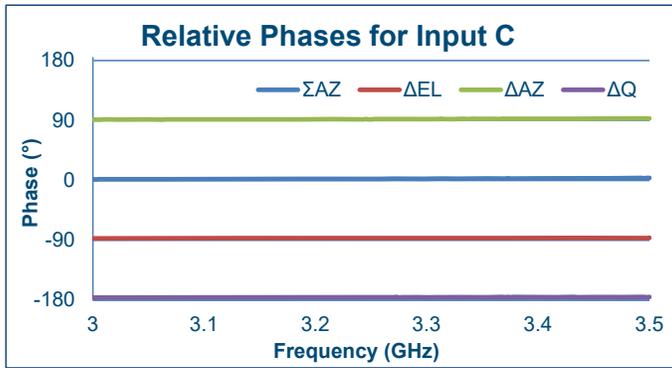
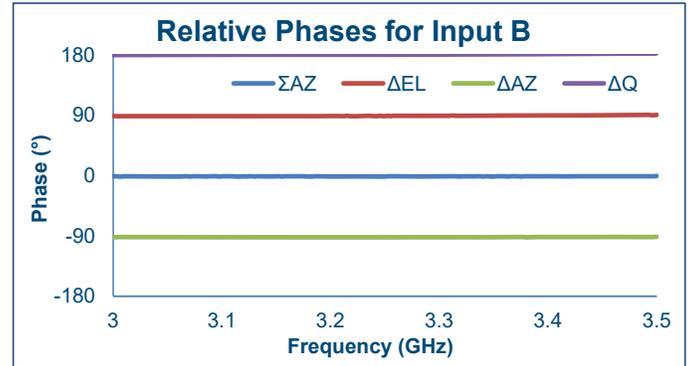
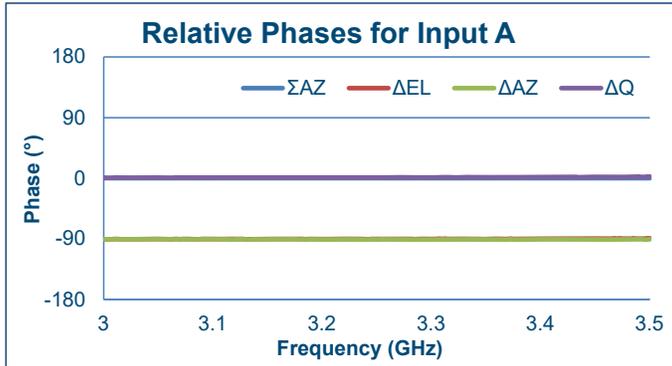


Phase Relative to A-ΣAZ @ 25°C

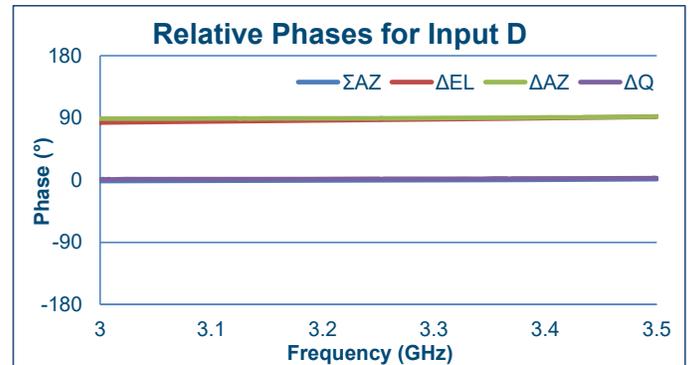
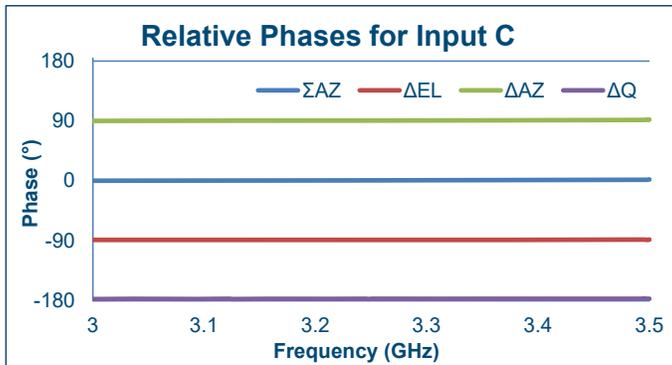
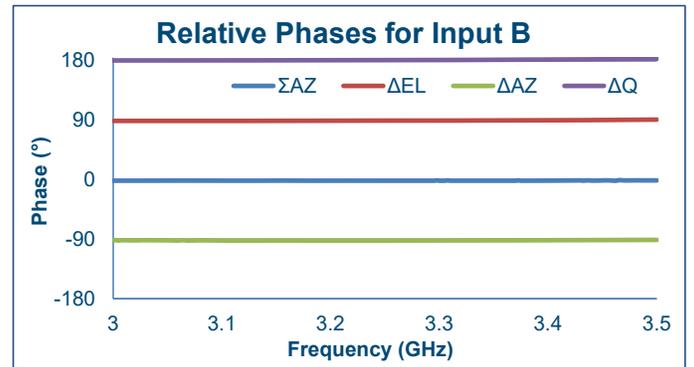
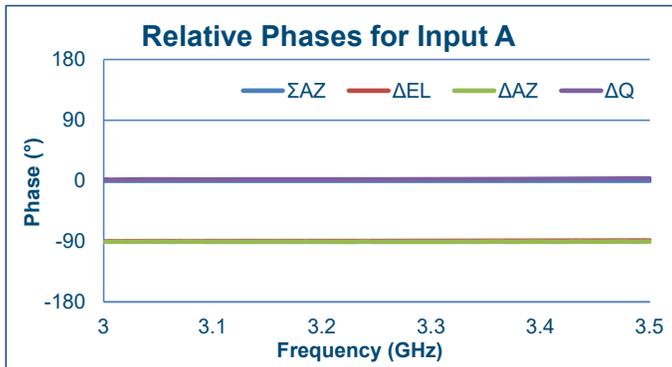


**TYPICAL CHARACTERISTICS
 FOR
 PMC-33D5-6D8-SFF**

Phase Relative to A-ΣAZ @ +85°C



Phase Relative to A-ΣAZ @ -55°C



TYPICAL CHARACTERISTICS FOR PMC-33D5-6D8-SFF

