



**TYPICAL CHARACTERISTICS
ON
PMC-9D5G10D5G-7D6-SFF**

PMI MODEL: PMC-9D5G10D5G-7D6-SFF IS A MONOPULSE COMPARATOR OPERATING OVER THE 9.5 TO 10.5 GHz FREQUENCY RANGE. THIS MODEL OFFERS A MAXIMUM 7.6 dB INSERTION LOSS WHILE MAINTAINING A MAXIMUM AMPLITUDE BALANCE OF ± 0.5 dB AND A MAXIMUM PHASE BALANCE OF $\pm 5^\circ$.



October 5, 2022

**Tested And Reported By:
E. Kretz**

7309-A Grove Road Frederick, MD 21740 USA Phone: (301)662-5019 Fax: (301)662-1731
Email: sales@pmi-rf.com



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OUTLINE DRAWING

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	8/10/01	
	A2	ECN # 22-0125	10/9/02	

DESCRIPTION

PMI MODEL: PMC-9D5G10D5G-7D6-SFF IS A MONOPULSE COMPARATOR OPERATING OVER THE 9.5 TO 10.5 GHz FREQUENCY RANGE. THIS MODEL OFFERS A MAXIMUM 7.6 dB INSERTION LOSS WHILE MAINTAINING A MAXIMUM AMPLITUDE BALANCE OF ± 0.5 dB AND A MAXIMUM PHASE BALANCE OF $\pm 5^\circ$.

SPECIFICATIONS

- FREQUENCY RANGE: 9.5 GHz TO 10.5 GHz
- INSERTION LOSS: 7.6 dB MAXIMUM
- AMPLITUDE BALANCE: ± 0.5 dB MAXIMUM
- PHASE BALANCE: $\pm 5^\circ$ MAXIMUM @ 25°C, $\pm 10^\circ$ MAXIMUM OVER TEMPERATURE
- ISOLATION: 20 dB MINIMUM
- VSWR: 1.5:1 MAXIMUM
- POWER HANDLING: AVERAGE: 10 WATT MAXIMUM (PORT A, B, C & D) PEAK: 0.1 kW MAXIMUM
- IMPEDANCE: 50 Ω
- CONNECTORS: SMA FEMALE
- SIZE: 88.49 mm x 88.49 mm x 11 mm
3.48" x 3.48" x 0.43"
EXCLUDING CONNECTORS
- FINISH: BLUE EPOXY POLYIMIDE COATING IAW MIL-C-22750, TYPE I OVER EPOXY POLYIMIDE PRIMER IAW MIL-P-23377, TYPE I, CLASS 1 OR 3.

ENVIRONMENTAL RATINGS

- TEMPERATURE: -55 °C TO +85 °C (OPERATING)
-55 °C TO +125 °C (STORAGE)
- HUMIDITY: MIL-STD-202, METHOD 103B COND. B
- 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 OPERATING TEMPERATURE
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

MECHANICAL OUTLINE

PLANAR MONOLITHICS INDUSTRIES, INC.
7311-F GROVE ROAD
FREDERICK, MARYLAND 21704 USA
TEL: (301)-662-5019, FAX: (301)-662-1731
WEB: www.pmi-rf.com, EMAIL: sales@pmi-rf.com
ISO 9001 CERTIFIED

APPROVALS		DATE		TITLE	
DRAWN	JPK	1/14/01		PRODUCT FEATURE	
REWORK	EMS	8/14/01		9.5 TO 10.5 GHz Monopulse Comparator	
ISSUED				PMC-9D5G10D5G-7D6-SFF	
SIZE	FROM NO.	DWG NO.	REV.		
A	05XQ0	27041580	A2		
SCALE	N:S	SHEET	1 OF 1		

ALL DIMENSIONS ARE IN MM (INCH) TOLERANCES: X.XXX ± 0.008 (0.0003) X.XXX ± 0.254 (0.010)

PMI CONFIDENTIAL AND PROPRIETARY

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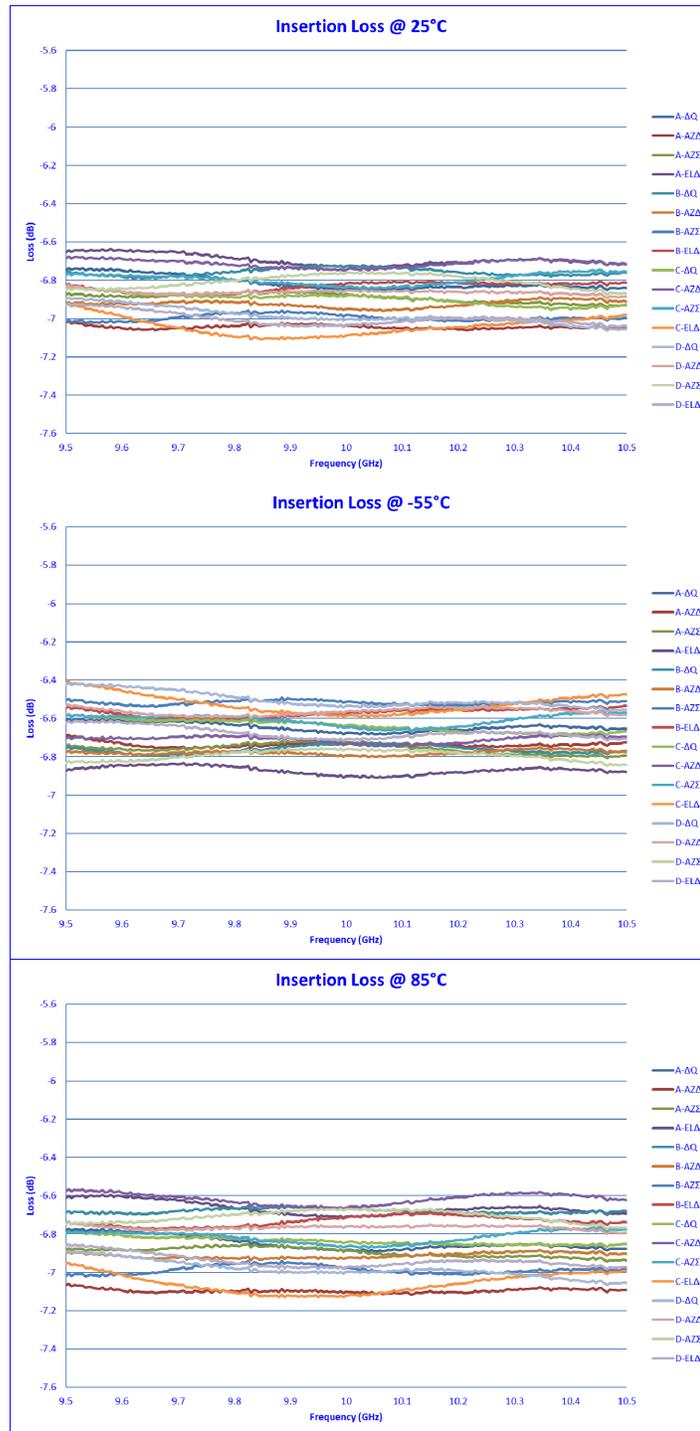
TEST DATA SUMMARY

Test Item No.	Parameters	Specified Value	+25°C	-55°C	+85°C
1	Frequency Range:	9.5 GHz to 10.5 GHz	9.5 GHz to 10.5 GHz	9.5 GHz to 10.5 GHz	9.5 GHz to 10.5 GHz
2	Insertion Loss:	7.6 dB Maximum	7.11 dB	6.91 dB	7.13 dB
3	Amplitude Balance:	±0.5 dB Maximum	+0.30 dB -0.25 dB	+0.41 dB -0.27 dB	+0.33 dB -0.33 dB
4	Phase Balance:	±5° Maximum @ 25°C ±10° Maximum over Temperature	±2°	±6°	+2°
5	Isolation:	20 dB Minimum	26 dB	26 dB	26 dB
6	VSWR:	1.5:1 Maximum	1.29:1	1.31:1	1.33:1
7	Power Handling:	Average: 10 Watt Maximum (Port A, B, C, & D) Peak: 1 kW Maximum	10 Watt MAX		

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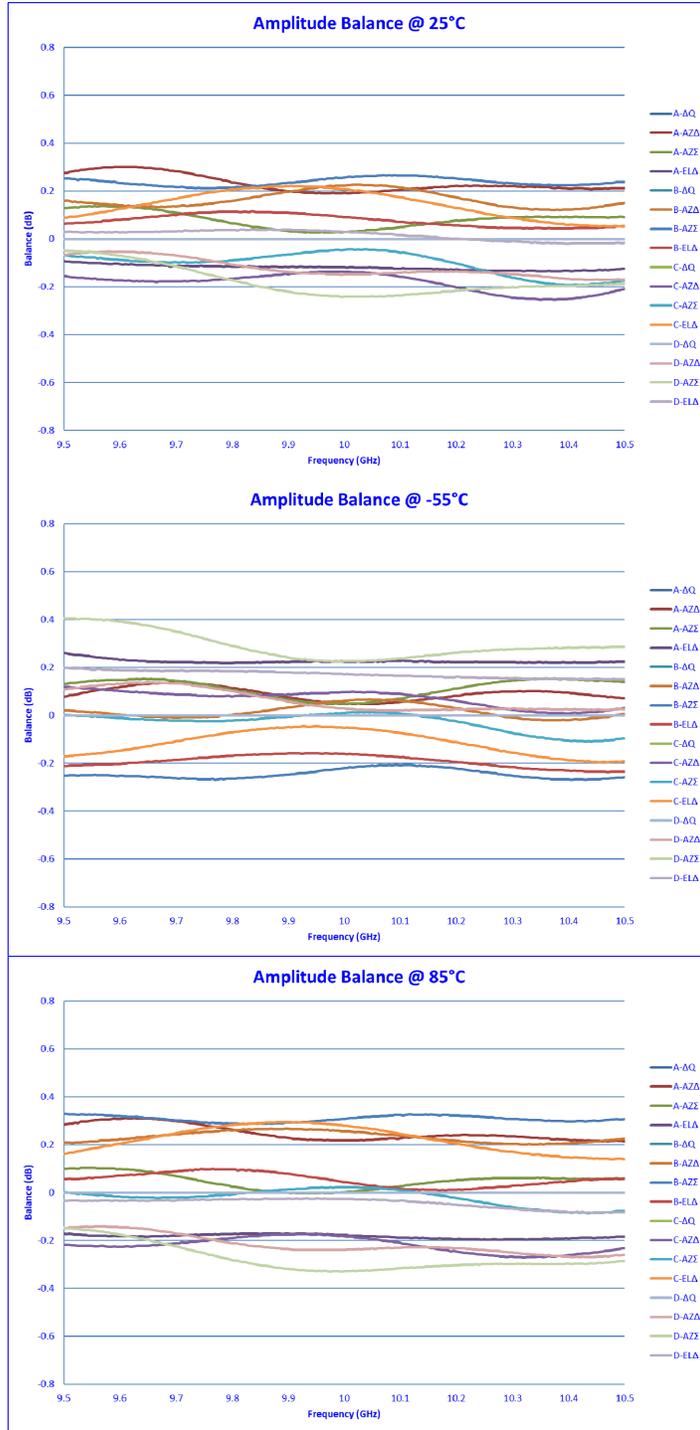
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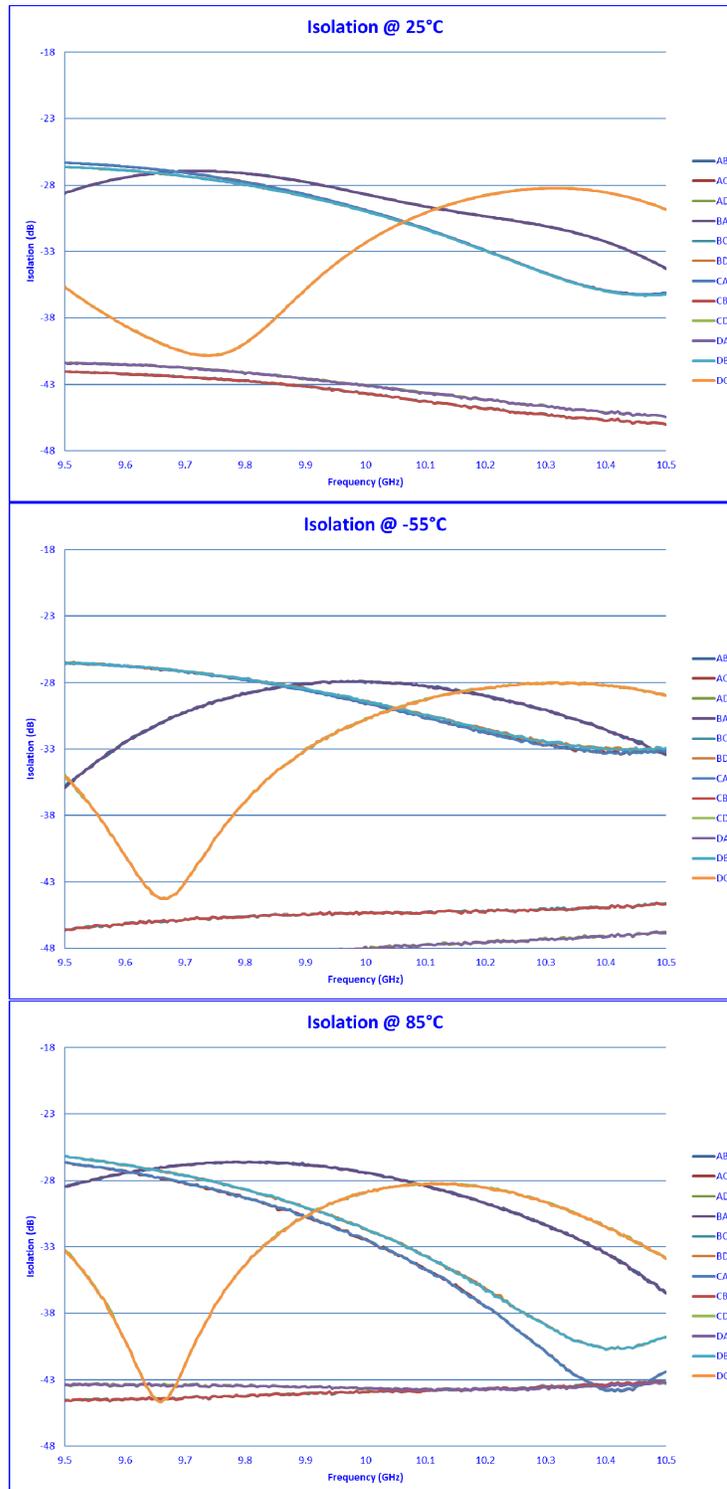
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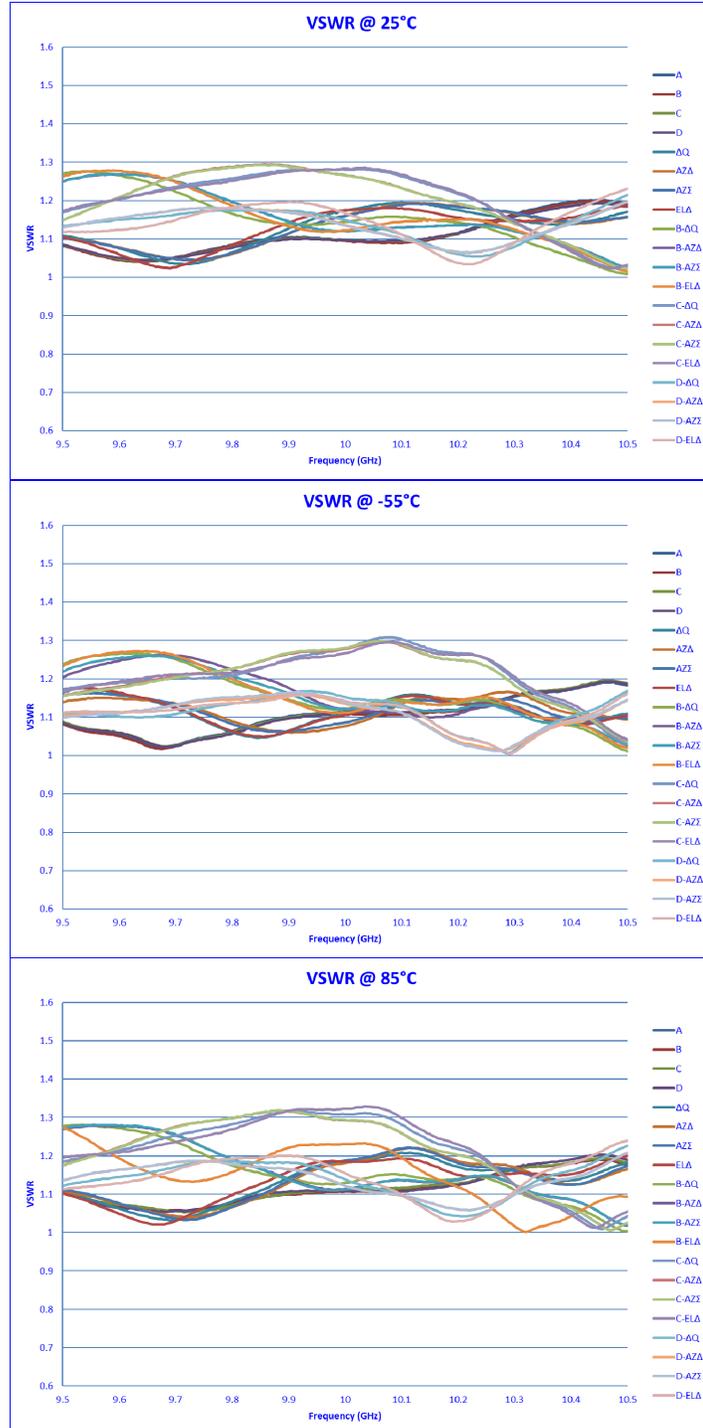
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Phase Data Relative to AZΣ +25°C, -55°C and +85°C

Phase Data Relative to AZΣ @ 25°C		A	B	C	D	AZΣ	ELΔ	AZΔ	ΔQ
	A	-	Isolation	Isolation	Isolation	0°	-90°	181°	92°
	B	Isolation	-	Isolation	Isolation	0°	-90°	1°	-89°
	C	Isolation	Isolation	-	Isolation	0°	90°	178°	-92°
	D	Isolation	Isolation	Isolation	-	0°	90°	-2°	89°
	AZΣ	0°	0°	0°	0°	-	Isolation	Isolation	Isolation
	ELΔ	-90°	-90°	90°	90°	Isolation	-	Isolation	Isolation
	AZΔ	181°	1°	178°	-2°	Isolation	Isolation	-	Isolation
	ΔQ	92°	-89°	-92°	89°	Isolation	Isolation	Isolation	-

Phase Data Relative to AZΣ @ -55°C		A	B	C	D	AZΣ	ELΔ	AZΔ	ΔQ
	A	-	Isolation	Isolation	Isolation	0°	-88°	179°	90°
	B	Isolation	-	Isolation	Isolation	0°	-88°	0°	-90°
	C	Isolation	Isolation	-	Isolation	0°	92°	174°	-95°
	D	Isolation	Isolation	Isolation	-	0°	92°	-5°	85°
	AZΣ	0°	0°	0°	0°	-	Isolation	Isolation	Isolation
	ELΔ	-88°	-88°	92°	92°	Isolation	-	Isolation	Isolation
	AZΔ	179°	0°	174°	-5°	Isolation	Isolation	-	Isolation
	ΔQ	90°	-90°	-95°	85°	Isolation	Isolation	Isolation	-

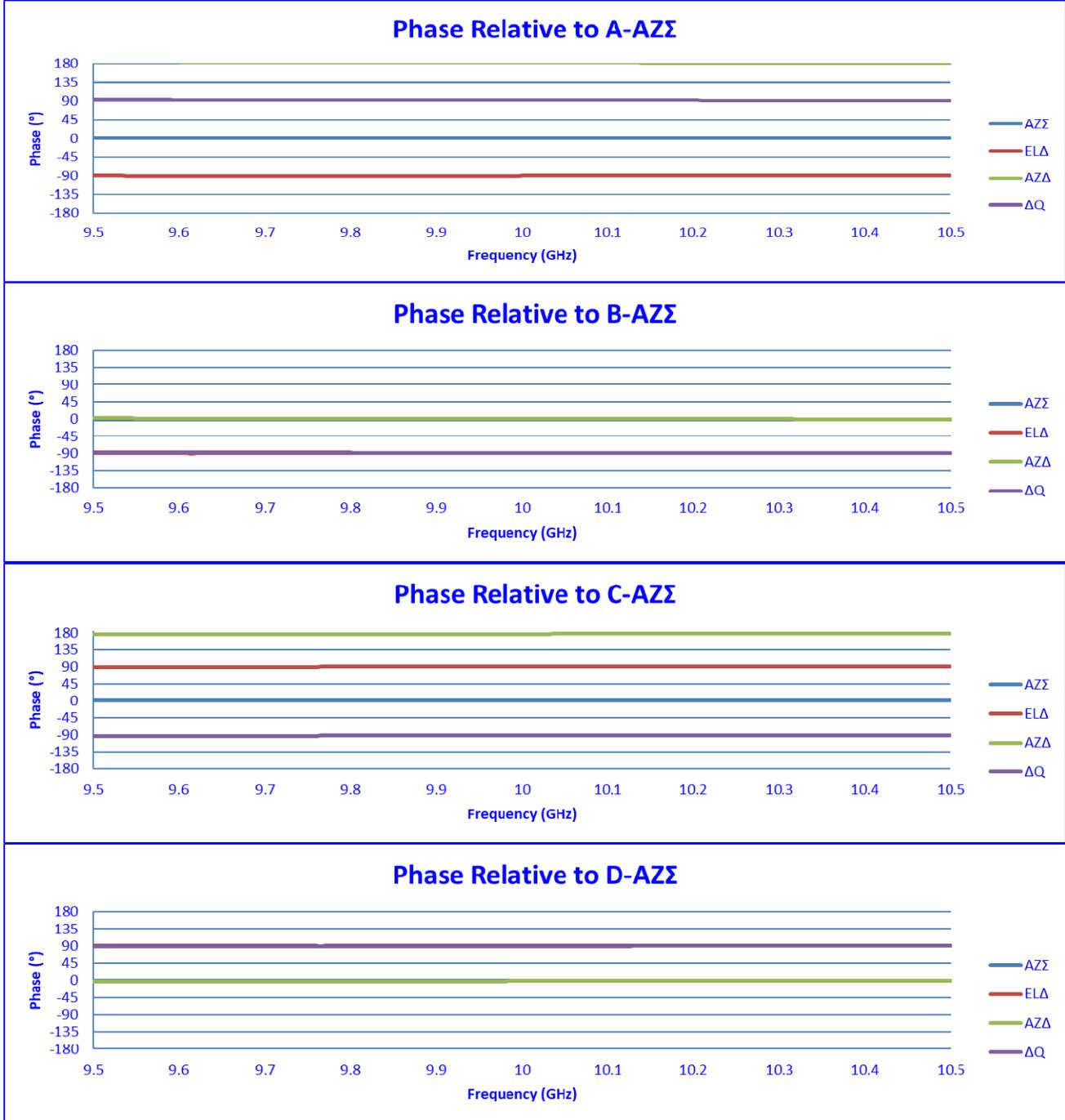
Phase Data Relative to AZΣ @ 85°C		A	B	C	D	AZΣ	ELΔ	AZΔ	ΔQ
	A	-	Isolation	Isolation	Isolation	0°	-91°	181°	92°
	B	Isolation	-	Isolation	Isolation	0°	-90°	0°	-89°
	C	Isolation	Isolation	-	Isolation	0°	90°	180°	-89°
	D	Isolation	Isolation	Isolation	-	0°	90°	1°	91°
	AZΣ	0°	0°	0°	0°	-	Isolation	Isolation	Isolation
	ELΔ	-91°	-90°	90°	90°	Isolation	-	Isolation	Isolation
	AZΔ	181°	0°	180°	1°	Isolation	Isolation	-	Isolation
	ΔQ	92°	-89°	-89°	91°	Isolation	Isolation	Isolation	-

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Phase Data Relative to AZΣ +25°C

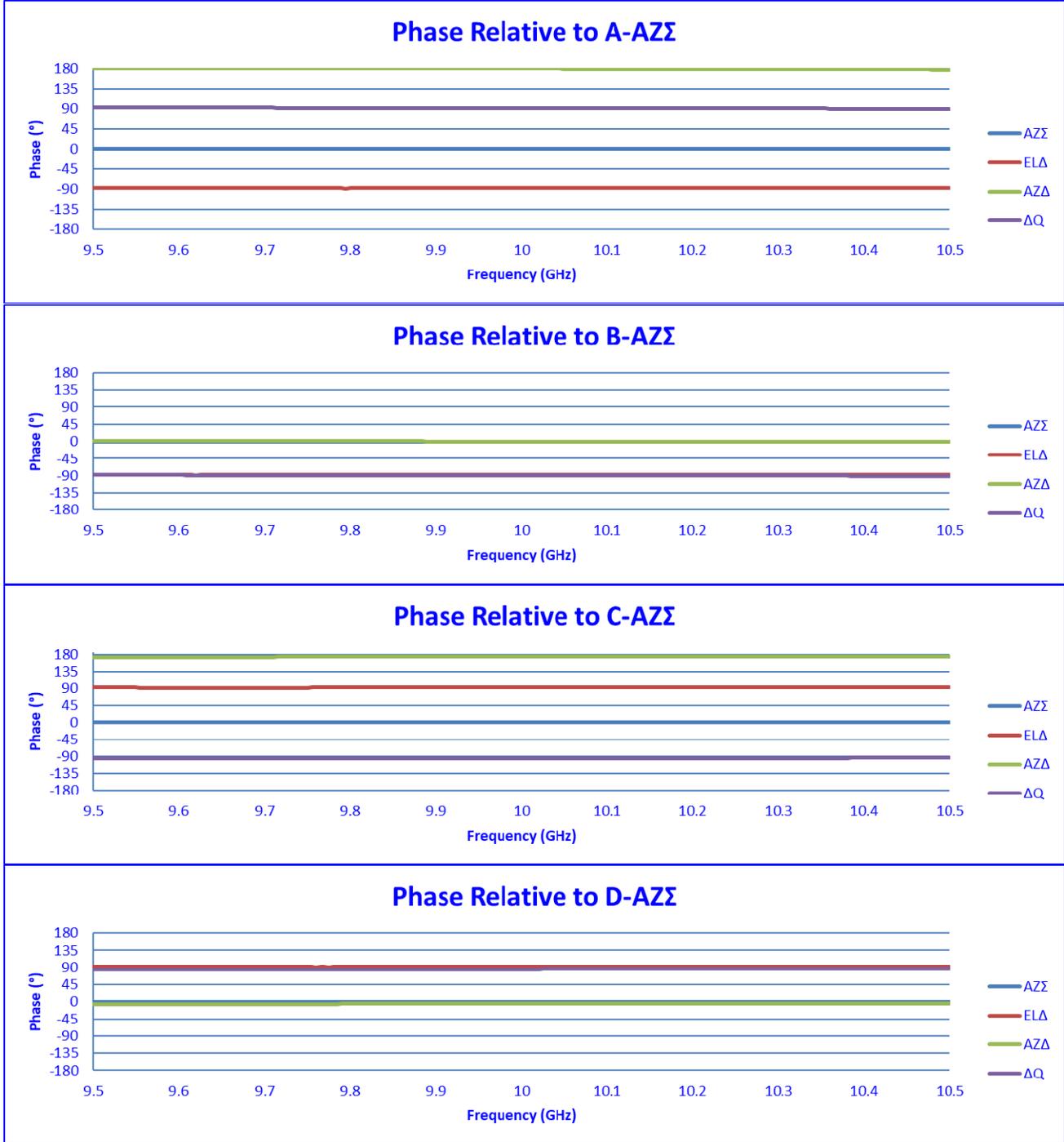


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Phase Data Relative to AZΣ, -55°C

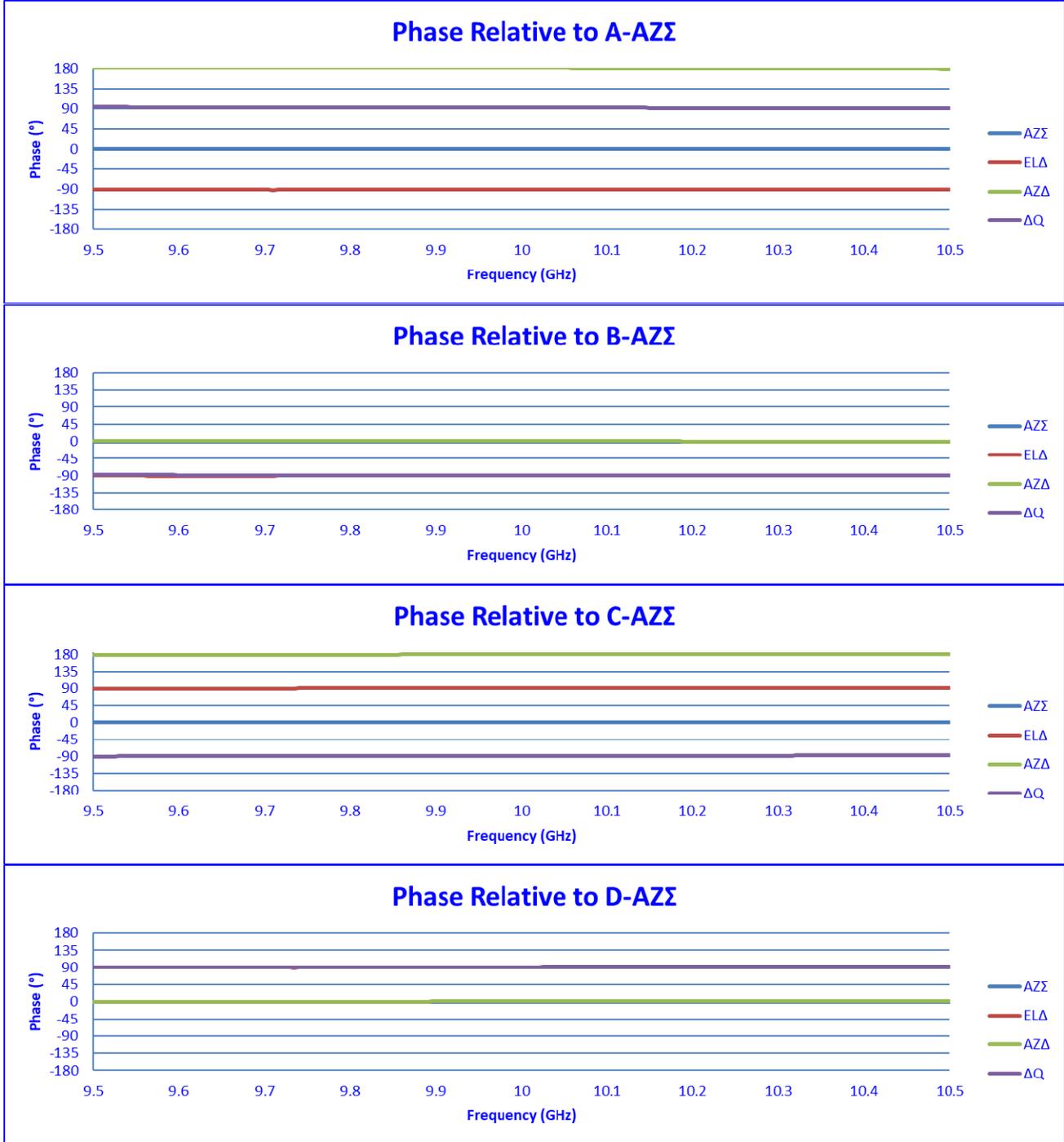


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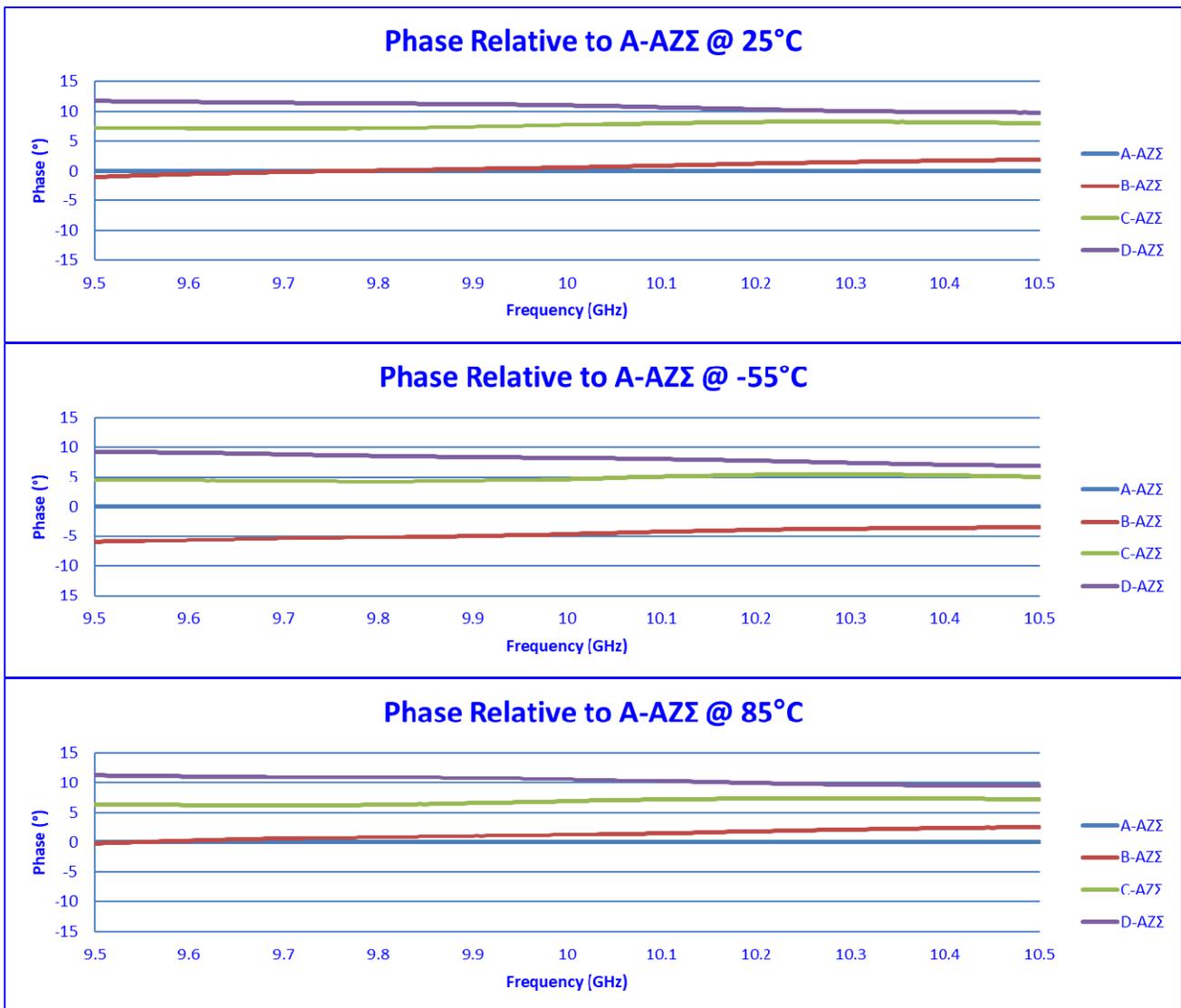
Phase Data Relative to AZΣ +85°C



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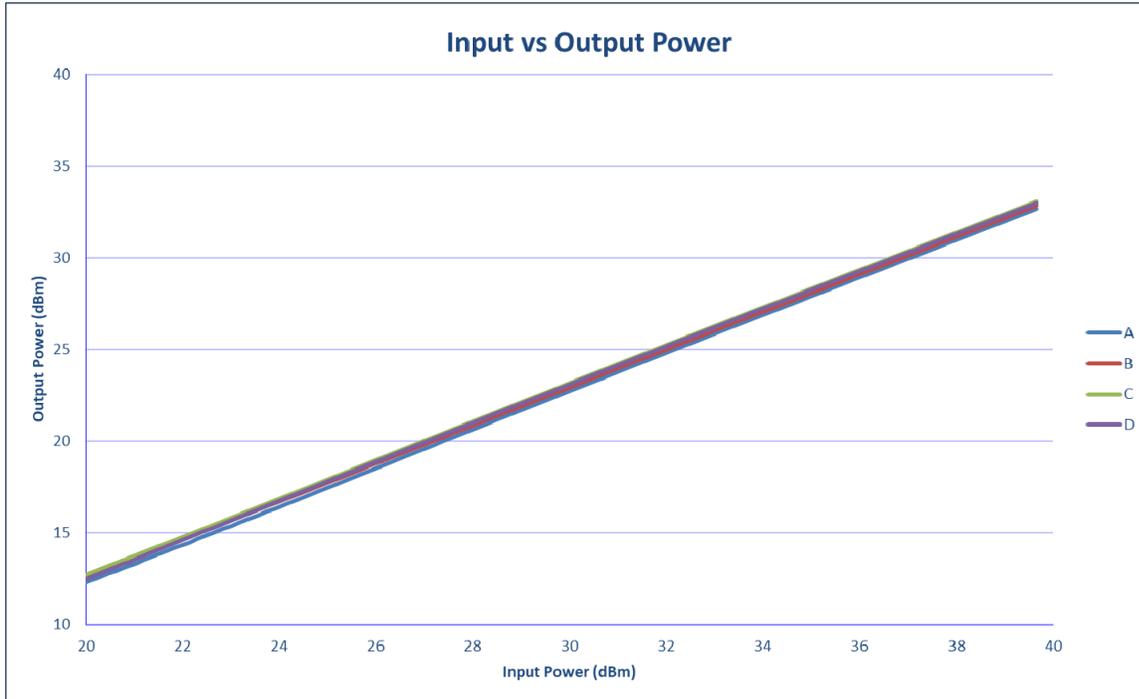
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