

DESCRIPTION:

QUANTIC PMI MODEL PMC-14D5G15D5G-SMA IS A MONOPULSE COMPARATOR OPERATING OVER THE 14.5 TO 15.5 GHz FREQUENCY RANGE. THIS MODEL OFFERS A MAXIMUM 2.6 dB INSERTION LOSS WHILE MAINTAINING A MAXIMUM AMPLITUDE BALANCE OF ±0.8 dB, A MAXIMUM PHASE BALANCE OF ±10° AND A MAXIMUM VSWR OF 1.60:1. THE UNIT HAS SMA FEMALE CONNECTORS, AND THE HOUSING SIZE IS 3.12" x 3.12" x 0.43".

SPECIFICATIONS:

- FREQUENCY RANGE:..... 14.5 GHz TO 15.5 GHz
- INSERTION LOSS:..... 8.62 dB MAX
- INSERTION LOSS WITHOUT 6.02 dB NOMINAL SPLIT: 2.6 dB MAX
- AMPLITUDE BALANCE:..... ±0.8 dB MAX @ 25°C
±1.0 dB MAX @ -40°C TO +85°C
- PHASE BALANCE:..... ±10° MAX
- ISOLATION:..... 18 dB MIN.
- VSWR:..... 1.6:1 MAX
- POWER HANDLING*:..... AVERAGE: 30 W MAX
PEAK: 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

	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°

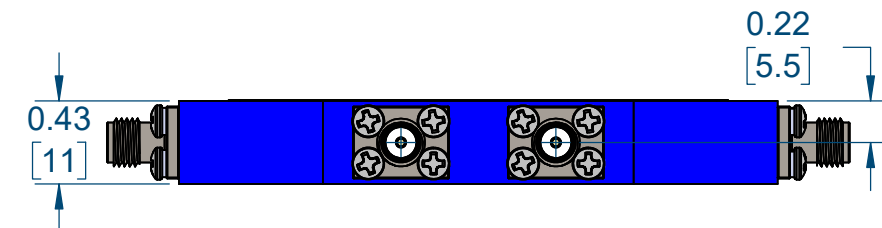
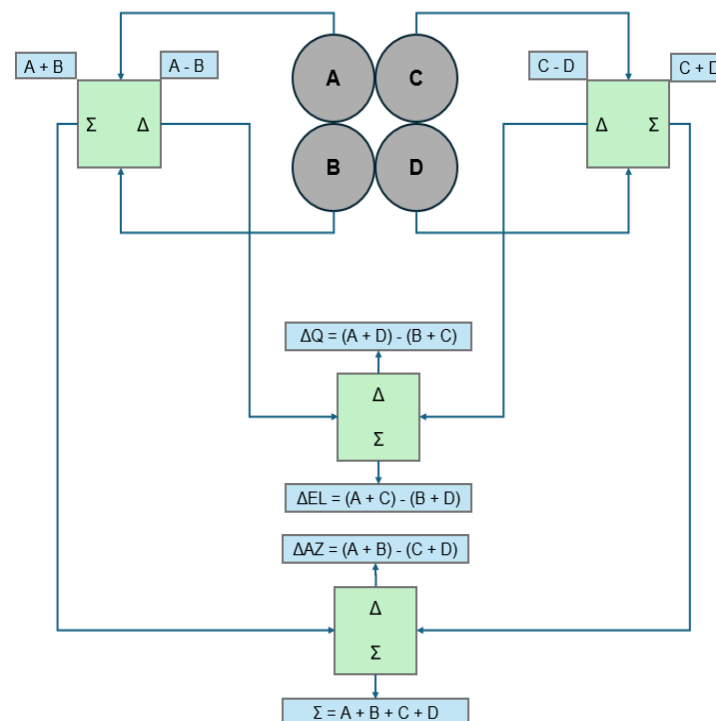
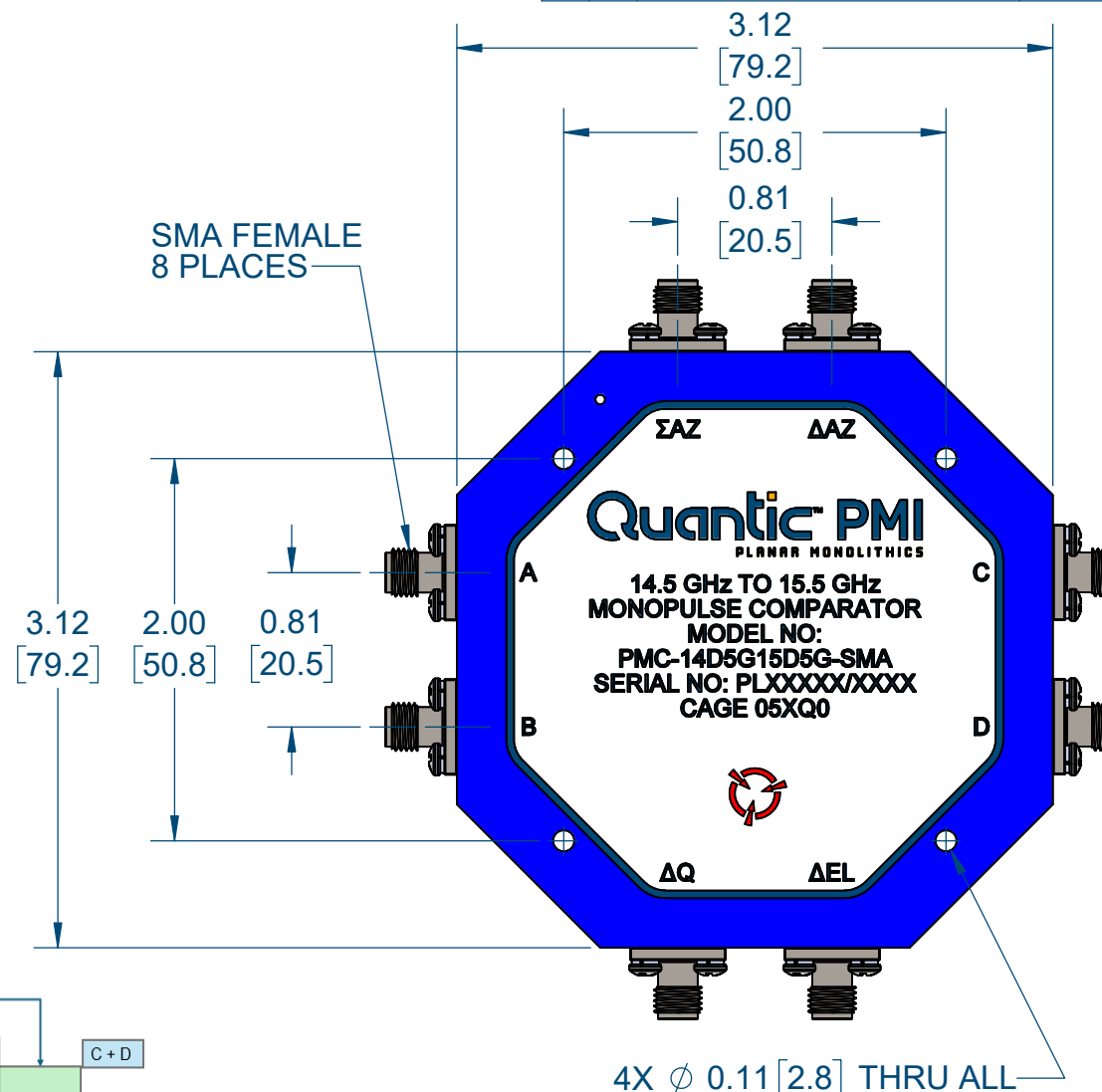
TABLE 2: OUTPUT MAGNITUDE WITH 4 IDENTICAL SIGNALS AT A, B, C AND D

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:..... -40°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

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	6/26/2025	
	B1	ECN # 25-0264	11/10/2025	



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

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UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS DECIMALS ANGLES
± .XX ± 0.02 ±
XXX ± 0.01

PMI CONFIDENTIAL AND PROPRIETARY

APPROVALS	DATE	TITLE
DRAWN D. HOSCHAR REDRAWN	6/26/2025	OUTLINE PMC-14D5G15D5G-SMA
ISSUED		SIZE B FSCM NO. 05XQ0 DWG NO. 27052360
		SCALE 1:1 SHEET 1 OF 1