

**TYPICAL CHARACTERISTICS
ON
PDC-7G12D4G-20-3KW-SMF**

PMI MODEL NO: PDC-7G12D4G-20-3KW-SMF IS A 7 GHz TO 12.4 GHz DIRECTIONAL COUPLER. IT HAS A MINIMUM DIRECTIVITY OF 17 dB, AND A MAXIMUM INSERTION LOSS OF 0.4 dB. IT IS OUTFITTED WITH AN SMA MALE CONNECTOR FOR THE INPUT PORT, AND SMA FEMALE CONNECTORS FOR THE OUTPUT AND COUPLED PORT.



**TESTED AND REPORTED BY: V. PRATAP
DATE: 9/10/2025**

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PRODUCT FEATURE

DESCRIPTION:

PMI MODEL NO. PDC-7G12D4G-20-3KW-SMF IS A 7 GHz TO 12.4 GHz DIRECTIONAL COUPLER. IT HAS A MINIMUM DIRECTIVITY OF 17 dB, AND A MAXIMUM INSERTION LOSS OF 0.4 dB. IT IS OUTFITTED WITH AN SMA MALE CONNECTOR FOR THE INPUT PORT, AND SMA FEMALE CONNECTORS FOR OUTPUT AND COUPLED PORT.

SPECIFICATIONS:

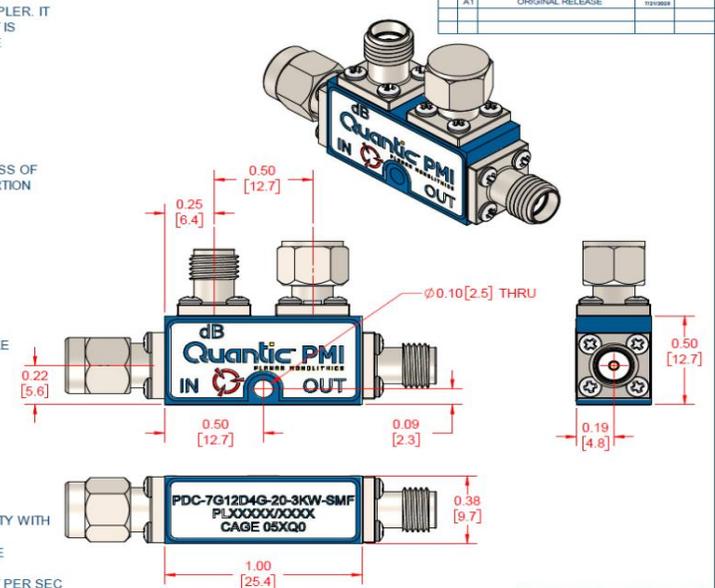
- FREQUENCY RANGE:..... 7.0 TO 12.4 GHz
- COUPLING INCLUDING FREQUENCY SENSITIVITY:..... 20±1.25 dB
- DIRECTIVITY:..... 17 dB MINIMUM
- INSERTION LOSS:..... 0.4 dB MAXIMUM
(THEORETICAL COUPLING LOSS OF 0.044 REMOVED FROM INSERTION)
- VSWR (PRIMARY LINE):..... 1.30:1 MAXIMUM
- VSWR (SECONDARY LINE):..... 1.30:1 MAXIMUM
- POWER INPUT:..... AVERAGE: 50 W
PEAK: 3 kW MAXIMUM
1 μsec PULSE WIDTH
0.1% DUTY CYCLE
AVERAGE REF: 50 W
- CONNECTORS:..... INPUT: SMA MALE
OUTPUT: SMA FEMALE
COUPLED PORT: SMA FEMALE
- SIZE:..... 1.00" X 0.5" X 0.38"
- FINISH:..... PAINTED BLUE

ENVIRONMENTAL RATINGS:

- TEMPERATURE:..... 0°C TO +65°C (OPERATING)
-40°C TO +70°C (STORAGE)
- HUMIDITY:..... UP TO 95% RELATIVE HUMIDITY WITH CONDENSATION
- SHOCK:..... 50 G'S PEAK HALF-SINEWAVE
6 mSEC DURATION
VELOCITY CHANGE OF 9.2 FT PER SEC
- VIBRATION:..... 4-15 Hz @ 0.110 ± 0.006 in. AMPLITUDE (1.26 G's PEAK)*
16-33 Hz @ 0.080 ± 0.004 in. AMPLITUDE (4.4 G's PEAK)*
34-40 Hz @ 0.005 ± 0.001 in. AMPLITUDE (0.8 G's PEAK)*
41-50 Hz @ 0.003 +0.000/-0.001 in. AMPLITUDE (0.75 G's PEAK)*
*IN THREE MUTUALLY PERPENDICULAR DIRECTIONS OVER A MINIMUM OF TWO HOURS

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

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	7/20/98	



PMI CONFIDENTIAL AND PROPRIETARY

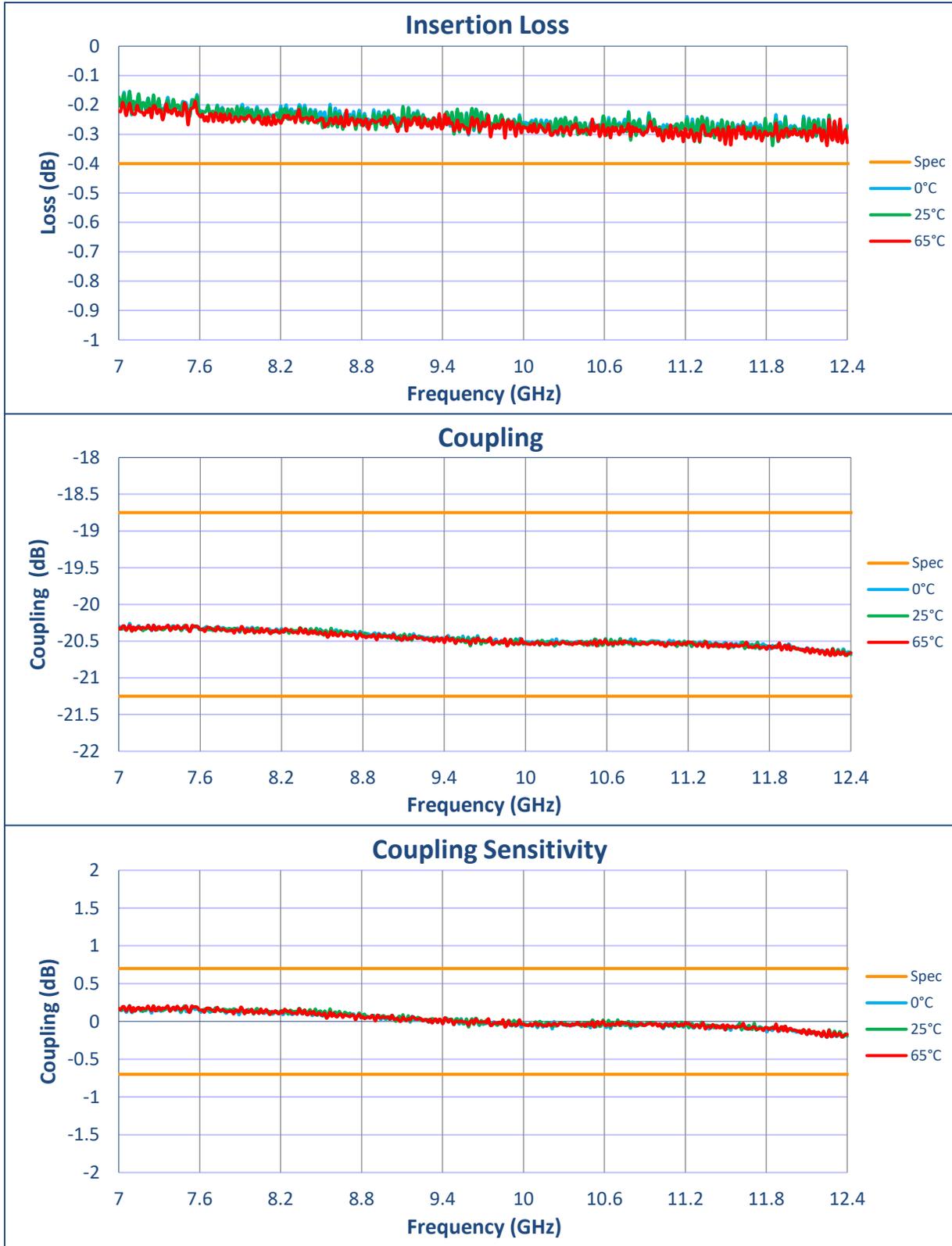
APPROVALS		DATE	7309-A GROVE ROAD, FREDERICK, MARYLAND 21704 USA TEL: (301) 662-5019 FAX: (301) 662-1731 WWW.QUANTICPMI.COM	
DESIGN	VP	7/20/98	TITLE	OUTLINE
DESIGNED			ITEM	PDC-7G12D4G-20-3KW-SMF
			REV	B
			QTY	27051940
			SCALE	5:2
				SHEET 1 OF 1

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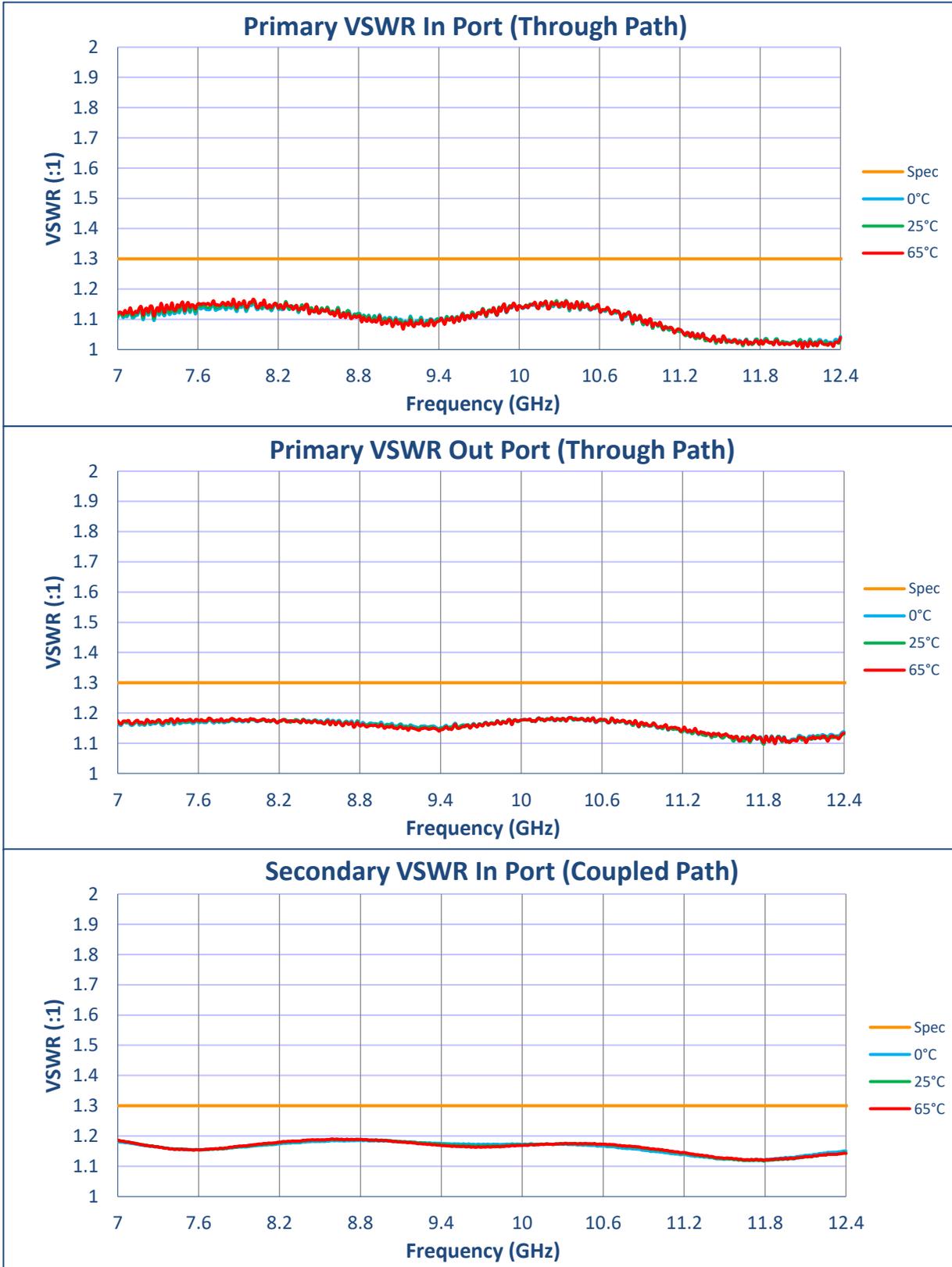
TECHNICAL SPECIFICATIONS

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE		
			0°C	+25°C	65°C
1	Frequency Range	7 GHz To 12.4 GHz	7 GHz To 12.4 GHz		
2	Coupling (Including Frequency Sensitivity)	20 ±1.25 dB	20.26 dB to 20.68 dB	20.28 dB to 20.7 dB	20.28 dB to 20.7 dB
3	Directivity	17 dB Min	20.2 dB	20.2 dB	20.4 dB
4	Insertion Loss (Theoretical Coupling Loss of 0.044 Removed from Insertion Loss)	0.4 dB Max	0.3 dB	0.3 dB	0.3 dB
5	VSWR	Primary 1.30:1 Max Secondary 1.30:1 Max	1.18:1 Primary 1.24:1 Secondary	1.18:1 Primary 1.24:1 Secondary	1.18:1 Primary 1.24:1 Secondary
6	Power Input	Average: 50 W Peak: 3 kW Max 1 µsec Pulse Width 0.1% Duty Cycle Average Ref: 10 W	Tested: 50 W CW By Design: 3 kW Peak	Tested: 50 W CW By Design: 3 kW Peak	Tested: 50 W CW By Design: 3 kW Peak

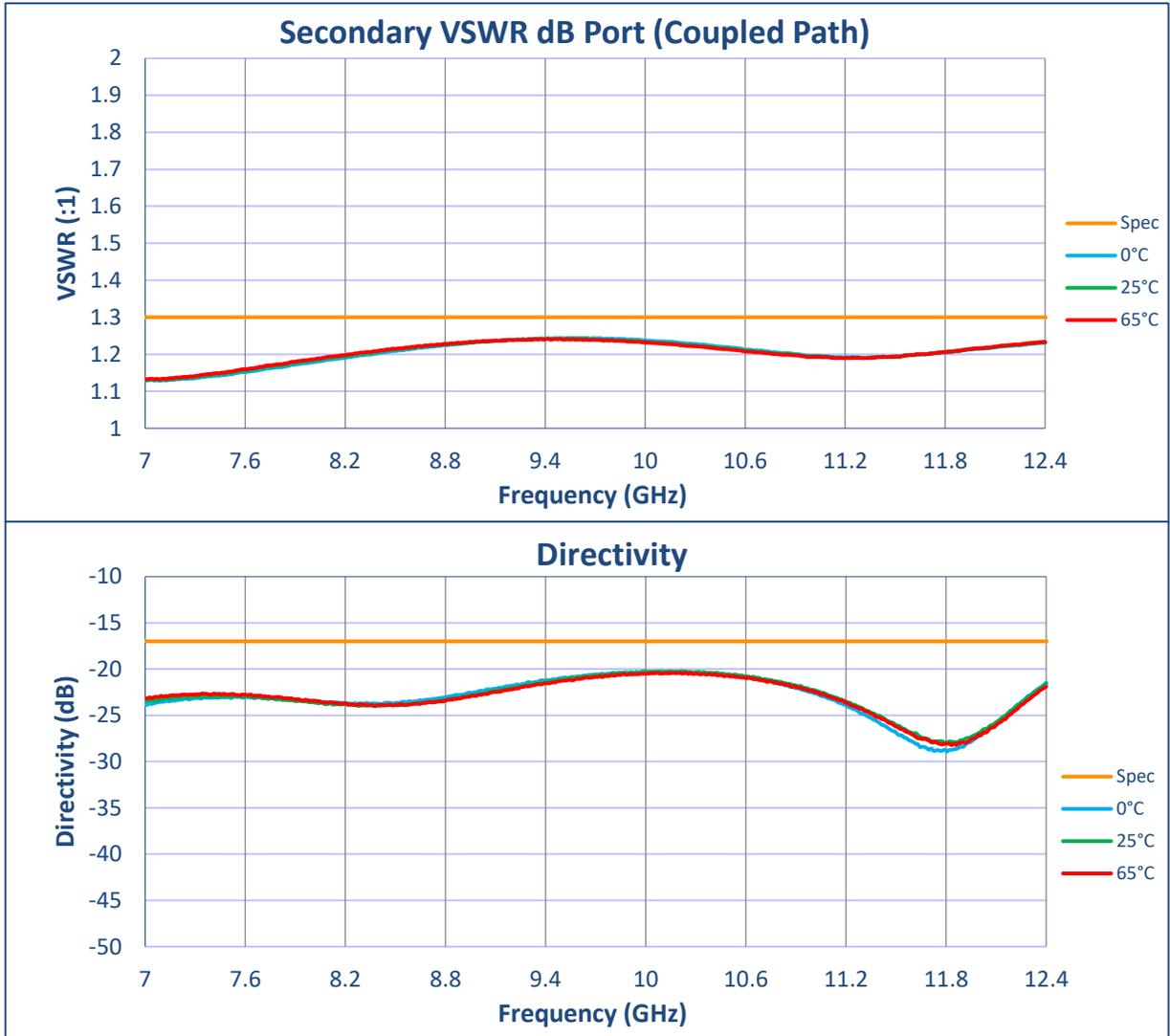
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