

**TYPICAL CHARACTERISTICS
ON
PDC-1G2G-20-3KW-SMF**

PMI MODEL NO: PDC-1G2G-20-3KW-SMF IS A 1 GHz TO 2 GHz DIRECTIONAL COUPLER. IT HAS A MINIMUM DIRECTIVITY OF 25 dB, AND A MAXIMUM INSERTION LOSS OF 0.2 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

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	10/2008	

DESCRIPTION:
 PMI MODEL NO. PDC-1G2G-20-3KW-SMF IS A 1GHZ TO 2 GHz DIRECTIONAL COUPLER. IT HAS A MINIMUM DIRECTIVITY OF 25 dB, AND A MAXIMUM INSERTION LOSS OF 0.2 dB. IT IS OUTFITTED WITH AN SMA MALE CONNECTOR FOR THE INPUT PORT, AND SMA FEMALE CONNECTORS FOR THE OUTPUT PORT AND COUPLED PORT.

SPECIFICATIONS:

- FREQUENCY RANGE:..... 1.0 TO 2.0 GHz
- COUPLING INCLUDING FREQUENCY SENSITIVITY:.. 20±1.25 dB
- DIRECTIVITY:..... 25 dB MINIMUM
- INSERTION LOSS:..... 0.2 dB MAXIMUM
(THEORETICAL COUPLING LOSS OF 0.044 REMOVED FROM INSERTION LOSS)
- VSWR (PRIMARY LINE):..... 1.15:1 MAXIMUM
- VSWR (SECONDARY LINE):..... 1.15:1 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:..... 1.78" 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% CONDENSATION
- SHOCK:..... 50 G'S PEAK HALF-SINEWAVE
6 mSEC DURATION
- VIBRATION:..... VELOCITY CHANGE OF 9.2 FT PER SEC
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 ± 0.0001-0.001 in. AMPLITUDE (0.75 G'S PEAK)*
*IN THREE MUTUALLY PERPENDICULAR DIRECTIONS
OVER A MINIMUM OF TWO HOURS

PMI CONFIDENTIAL AND PROPRIETARY

APPROVALS	DATE	TITLE
VP	10/2008	OUTLINE
DESIGN		
TEST		
MANUFACTURE		
DATE: 10/2008		
SCALE: 2:1		

FROM A QUANTIC PMI PRODUCT OF PLANAR MONOLITHICS, INC. (PMI) IN THE USA
 WWW.QUANTICPMI.COM
 PDC-1G2G-20-3KW-SMF
 SIZE: B PART NO.: PDC-1G2G-20-3KW-SMF
 REV: A1
 27051980
 SHEET 1 OF 1

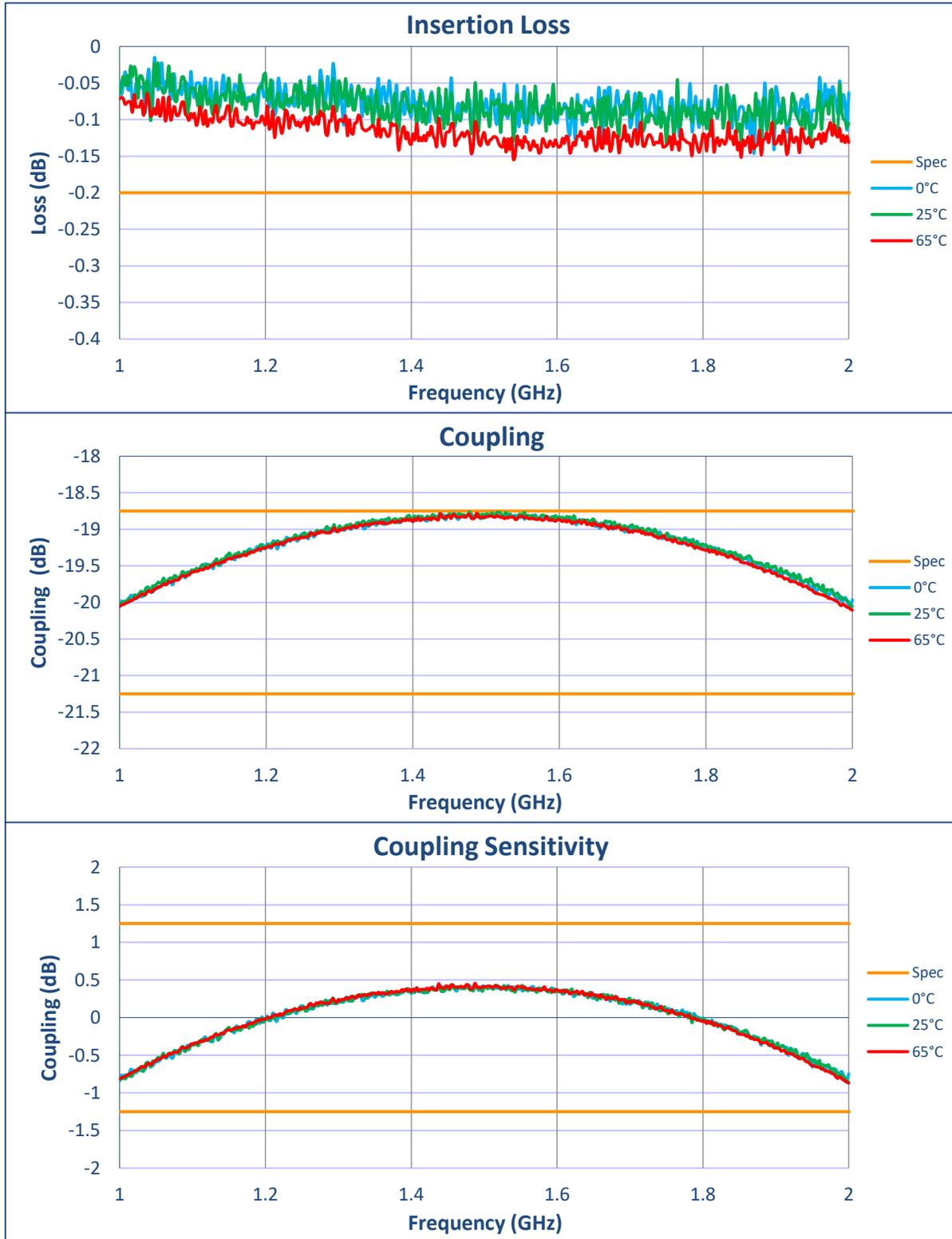
NOTE: SPECIFICATIONS WILL VARY OVER TEMPERATURE
 NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

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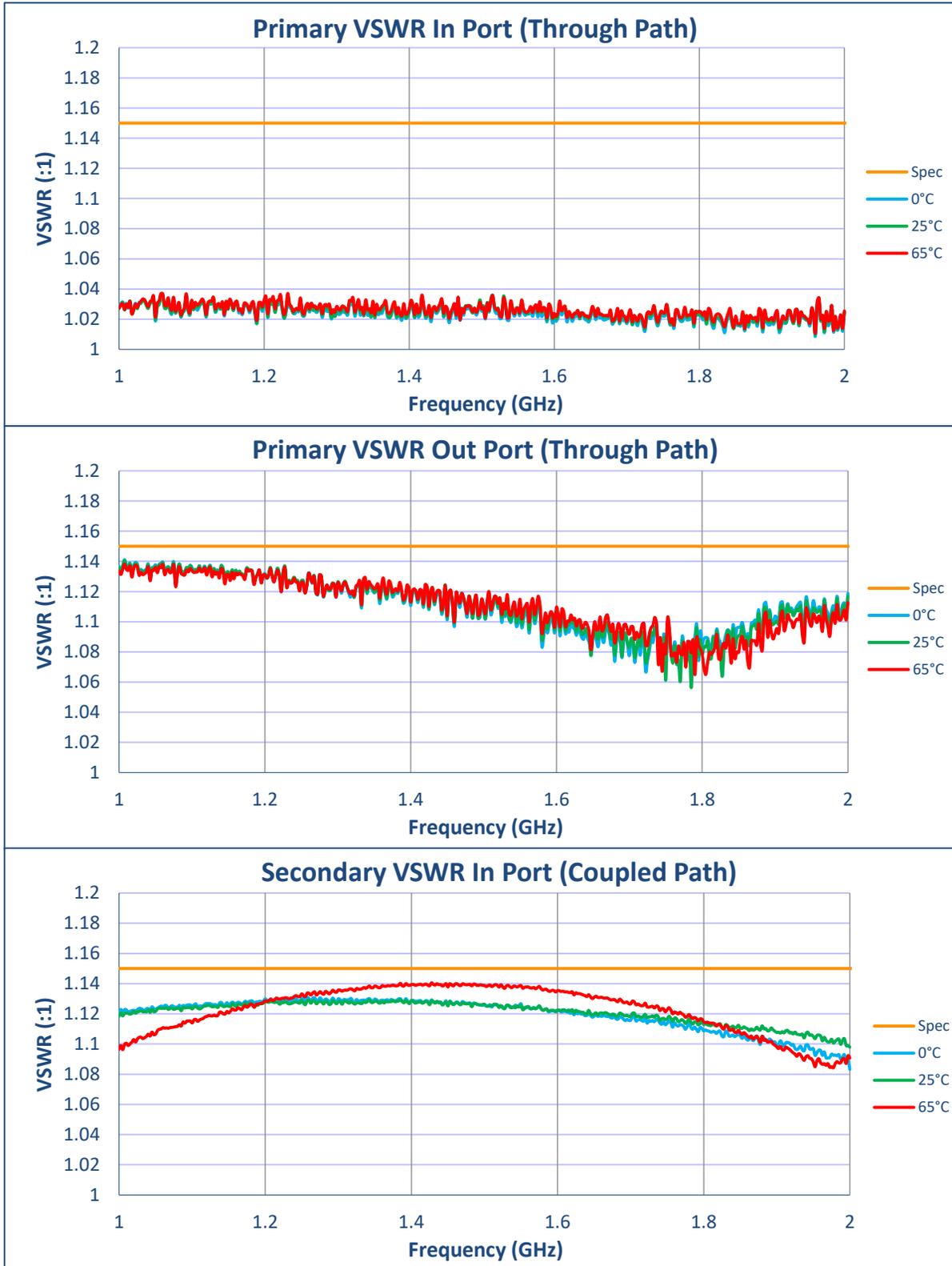
TECHNICAL SPECIFICATIONS

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE		
			0°C	+25°C	65°C
1	Frequency Range	1 GHz To 2 GHz	1 GHz To 2 GHz		
2	Coupling (Including Frequency Sensitivity)	20 ±1.25 dB	18.78 dB to 20.07 dB	18.76 dB to 20.05 dB	18.78 dB to 20.11 dB
3	Directivity	25 dB Min	28.1 dB	26.7 dB	27.5 dB
4	Insertion Loss (Theoretical Coupling Loss of 0.044 Removed from Insertion Loss)	0.2 dB Max	0.15 dB	0.13 dB	0.15 dB
5	VSWR	Primary 1.15:1 Max Secondary 1.15:1 Max	1.14:1 Primary 1.14:1 Secondary	1.14:1 Primary 1.14:1 Secondary	1.14:1 Primary 1.14:1 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

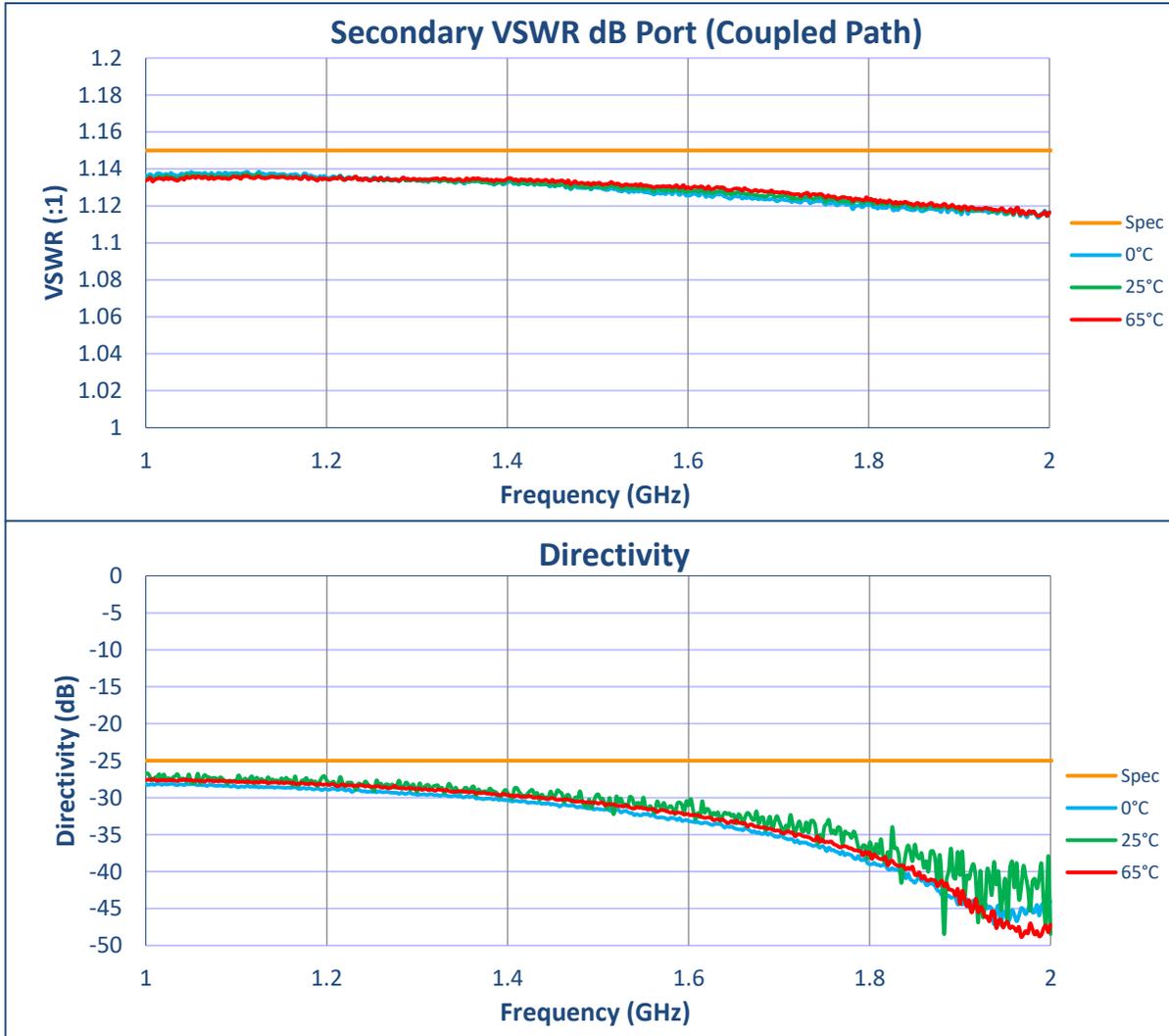
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