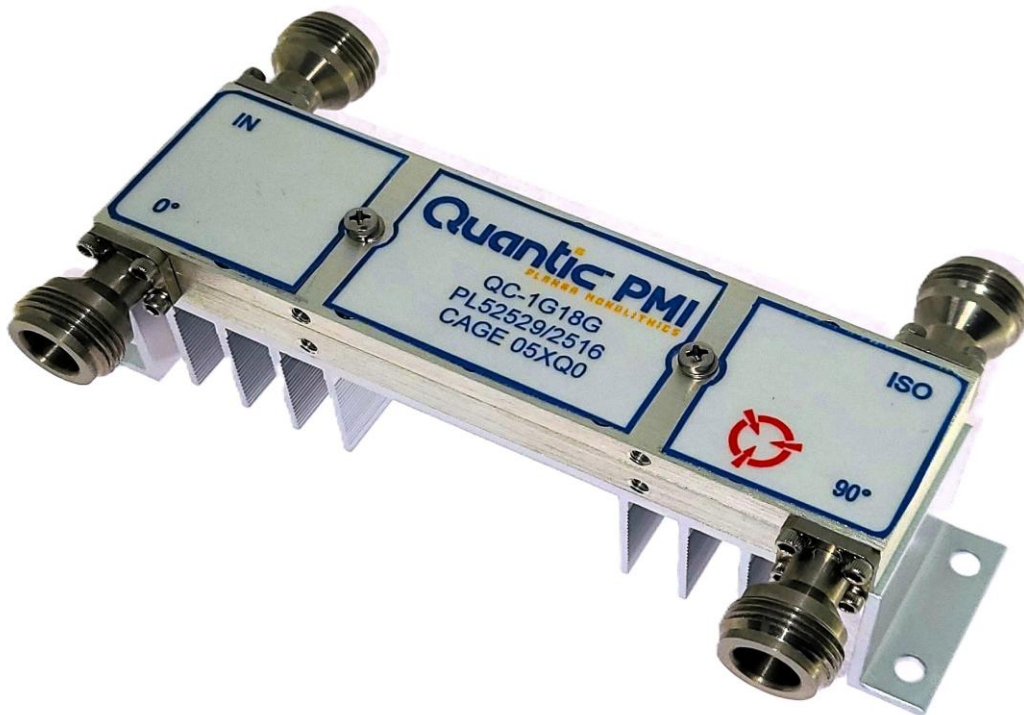


TYPICAL CHARACTERISTICS ON QC-1G18G

PMI MODEL: QC-1G18G IS A QUADRATURE HYBRID COUPLER THAT OPERATES OVER THE FREQUENCY RANGE OF 1.0 GHz TO 18.0 GHz. THIS MODEL PROVIDES LOW LOSS OF 2 dB AND AN ISOLATION OF 16 dB MINIMUM. THE VSWR IS 1.60:1 MAXIMUM WITH AN AMPLITUDE BALANCE OF ± 0.9 dB MAXIMUM AND A PHASE BALANCE OF $\pm 8^\circ$ MAXIMUM. THIS COUPLER IS OUTFITTED WITH N-TYPE FEMALE CONNECTORS.



REPORTED BY: V. PRATAP
TESTED BY: E. KRETZ AND A. LOPEZ
DATE: 4/1/2025

TYPICAL CHARACTERISTICS ON QC-1G18G

PRODUCT FEATURE

DESCRIPTION:

PMI MODEL: QC-1G18G IS A QUADRATURE HYBRID COUPLER THAT OPERATES OVER THE FREQUENCY RANGE OF 1.0 GHz TO 18.0 GHz. THIS MODEL PROVIDES LOW LOSS OF 2 dB AND AN ISOLATION OF 16 dB MINIMUM. THE VSWR IS 1.60:1 MAXIMUM WITH AN AMPLITUDE BALANCE OF ±0.9 dB MAXIMUM AND A PHASE BALANCE OF ±8° MAXIMUM. THIS COUPLER IS OUTFITTED WITH N-TYPE FEMALE CONNECTORS.

SPECIFICATIONS:

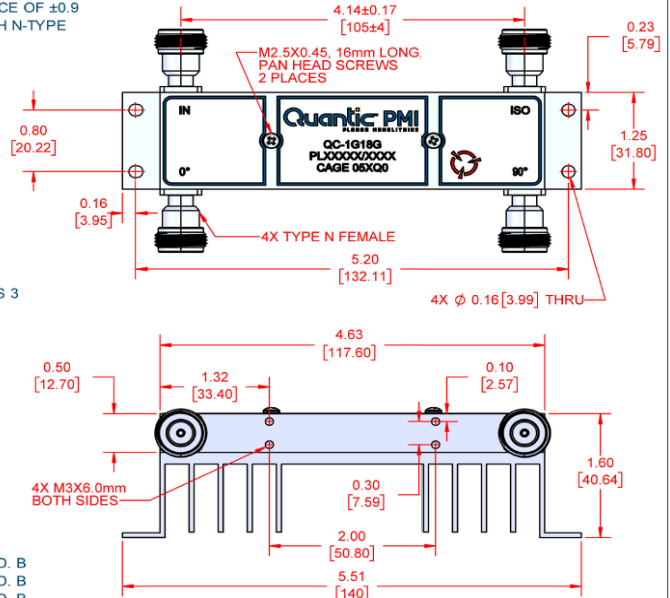
- FREQUENCY RANGE:..... 1.0 GHz TO 18.0 GHz
- ISOLATION:..... 16 dB MINIMUM
- VSWR:..... 1.60:1 MAXIMUM
- COUPLING:..... 3 dB
- INSERTION LOSS:..... 2 dB MAXIMUM
- INPUT POWER:..... 300 W CW AVERAGE, 3kW PEAK
- AMPLITUDE BALANCE:..... ±0.9 dB MAXIMUM
- PHASE BALANCE:..... ±8° MAXIMUM
- CONNECTORS:..... N-TYPE FEMALE
- SIZE:..... 5.51" x 1.60" x 1.25"
- FINISH:..... CHEMICALLY COATED
IAW MIL-DTL-5541, TYPE II, CLASS 3

ENVIRONMENTAL RATINGS:

- TEMPERATURE:..... -45°C TO +75°C (OPERATING)
-65°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 TEMPERATURE
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

REV	DESCRIPTION	DATE	APPROVED
A1	ORIGINAL RELEASE	01/08/2016	



PMI CONFIDENTIAL AND PROPRIETARY

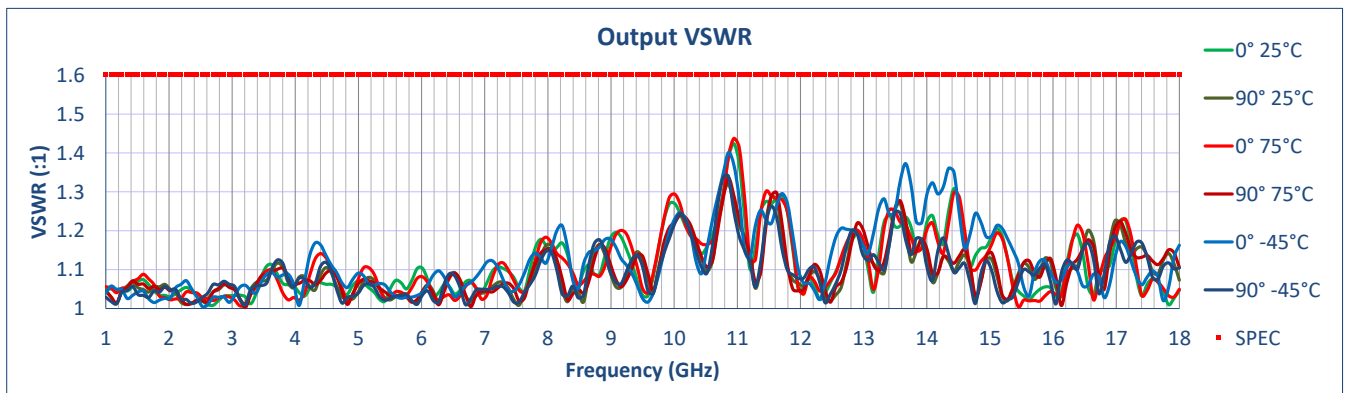
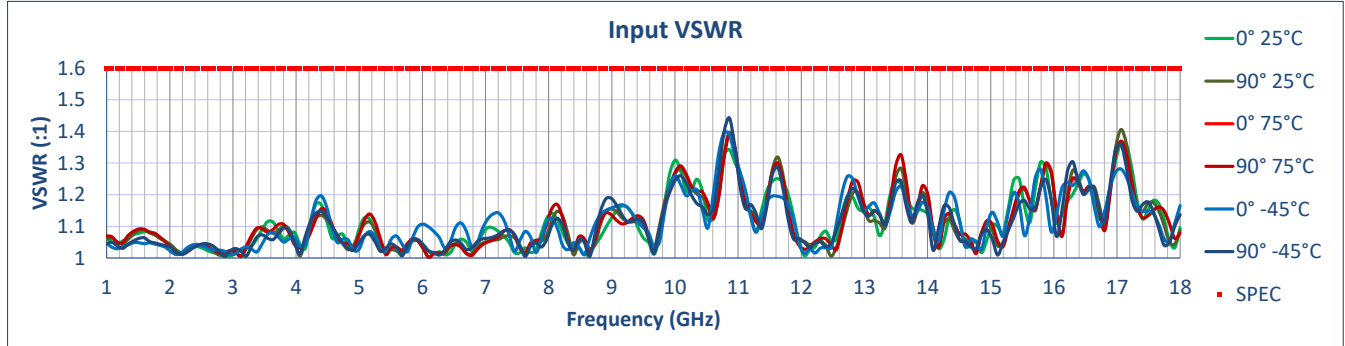
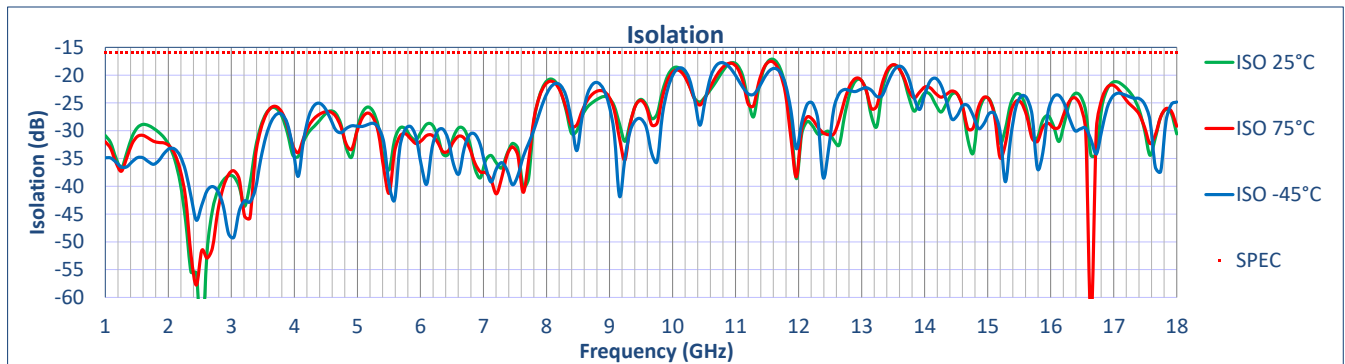
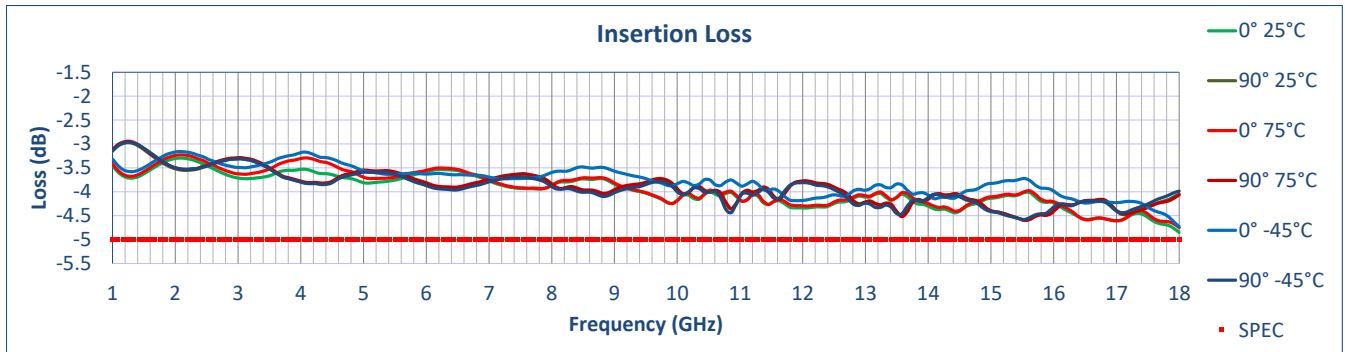
APPROVALS		DATE	TITLE
SIGNATURE: V. PRATAP		01/08/2016	OUTLINE
DESIGNER:			QC-1G18G
CHECKED:			
DRAWN:			
SCALE: 1:1			
PART NO: 27050380			
REV: B			
MATERIAL: 05X00			
SHEET: 1 OF 1			

TYPICAL CHARACTERISTICS ON QC-1G18G

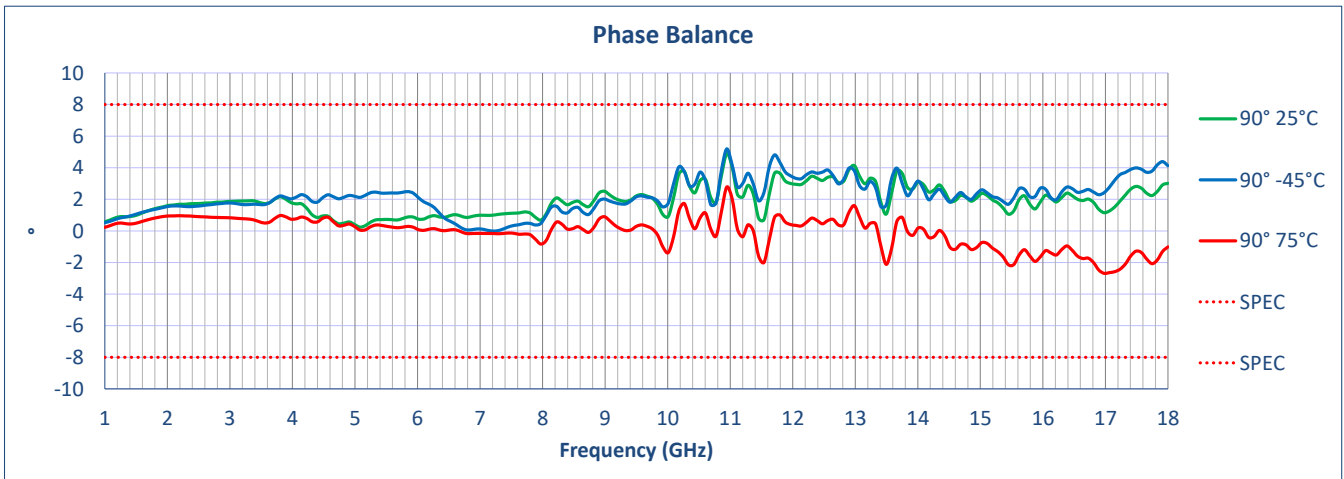
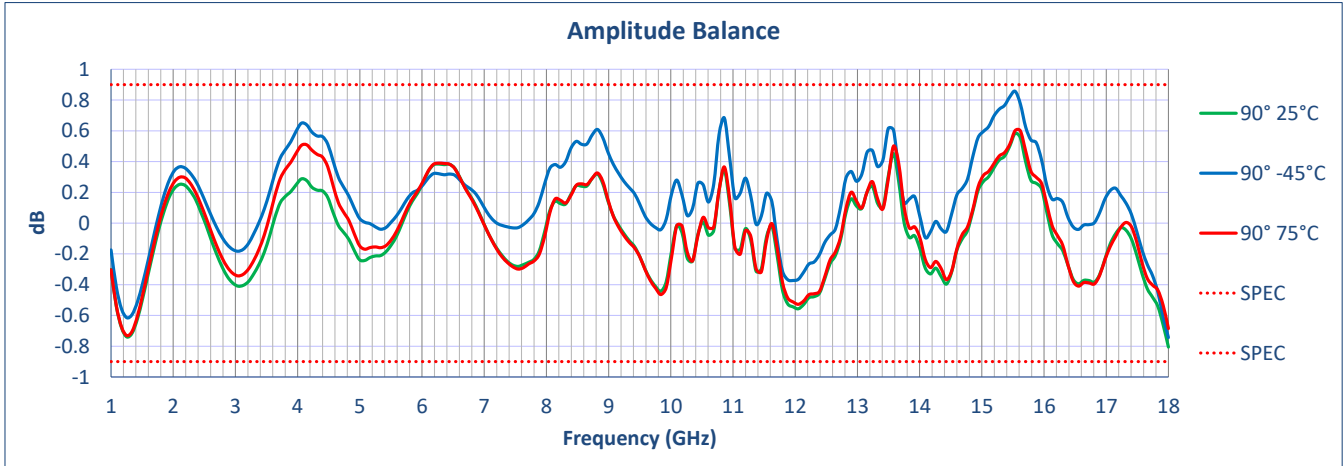
TECHNICAL SPECIFICATIONS

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			-45°C	+25°C	+75°C
1	Frequency Range	1 GHz to 18 GHz	1 GHz to 18 GHz	1 GHz to 18 GHz	1 GHz to 18 GHz
2	Isolation	16 dB Min.	17.7 dB	17.3 dB	17.6 dB
3	VSWR	1.6:1 Max.	1.44:1	1.42:1	1.44:1
4	Coupling	3 dB	3 dB	3 dB	3 dB
5	Insertion Loss	2 dB Max.	1.72 dB	1.84 dB	1.74 dB
6	Power	300 W CW Max. 3000 W Peak Max.	Highest Testing Capability Is +51dBm CW Highest Testing Capability Is 1kW Peak (1us Pulse Width, 0.1% Duty Cycle) (See Graphs)		
7	Amplitude Balance	±0.9 dB Max.	+0.86 dB -0.74 dB	+0.58 dB -0.81 dB	+0.6 dB 0.73 dB
8	Phase Balance	±8° Max.	+5.19° -0.01°	+4.89° +0.24°	+2.78° -2.69°

TYPICAL CHARACTERISTICS ON QC-1G18G



TYPICAL CHARACTERISTICS ON QC-1G18G



TYPICAL CHARACTERISTICS ON QC-1G18G

