



TYPICAL CHARACTERISTICS ON PCH-180-5R6G5R8G-SFF

PMI MODEL: PCH-180-5R6G5R8G-SFF IS A 180 DEGREE HYBRID COUPLER THAT OPERATES OVER THE FREQUENCY RANGE OF 5.6 TO 5.8 GHz. IT HAS A MAXIMUM INSERTION LOSS OF 0.50 dB AND A MINIMUM ISOLATION OF 20 dB. THIS MODEL IS OUTFITTED WITH SMA FEMALE CONNECTORS.



JULY 2, 2021

DESIGNED BY: PMI ENGINEERING

TESTED AND REPORTED BY: Bryan Khuu

Page 1 of 12

7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731
Email: sales@pmi-rf.com



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TABLE OF CONTENTS

1.	Product Feature: -----	3
2.	Test Data Summary at +25 Degree Celsius: -----	4
3.	Test Data at +25 Degree Celsius: -----	5
4.	Test Data Summary at -55 Degree Celsius: -----	7
5.	Test Data at -55 Degree Celsius: -----	8
6.	Test Data Summary at +85 Degree Celsius: -----	10
7.	Test Data at +85 Degree Celsius: -----	11



DESCRIPTION

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	2/23/2021	
	A2	UPDATED	6/23/2021	

● FREQUENCY RANGE:	5.6 TO 5.8 GHz (Operational from 5.4 to 5.9 GHz)
● NOMINAL SPLIT:	3.01 dB
● INSERTION LOSS:	0.5 dB MAX
● ISOLATION:	20 dB MIN
● AMPLITUDE BALANCE:	±0.3 dB MAX
● PHASE BALANCE:	±3° MAX
● VSWR:	1.30:1 MAX
● POWER HANDLING:	AVERAGE: 50 WATTS MAX PEAK: 1 kW MAX
● IMPEDANCE:	50 OHMS
● CONNECTORS:	SMA FEMALE
● FINISH:	PAINTED BLUE
● WEIGHT:	2 oz

Technical drawing of the PCH-180-SR-GR8RG-SFF connector. The drawing shows the front view of the connector with dimensions in millimeters. The overall width is 1.380 mm, and the width of the central body is 1.160 mm. The height of the central body is 1.000 mm, and the height of the mounting tabs is 0.500 mm. The distance between the mounting tabs is 0.440 mm, and the distance between the mounting holes is 0.500 mm. The distance between the mounting holes and the edge of the connector is 0.217 mm. The distance between the mounting holes and the edge of the connector is 0.433 mm. The connector is labeled with "PCH-180-SR-GR8RG-SFF", "SERIAL NO. PLUXXXXX/XXXX", and "THRU HOLE Ø0.125 2 PLACES". The connector is also labeled with "PCH-180-SR-GR8RG-SFF" and "SERIAL NO. PLUXXXXX/XXXX".

- **TEMPERATURE:** _____ -55 °C TO +85 °C (OPERATING)
 -65 °C TO +125 °C (STORAGE)
- **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

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

ALL DIMENSIONS
ARE IN INCHES [mm]
TOLERANCES:
X.XX ±0.020
X.XXX ±0.010

PMI CONFIDENTIAL AND PROPRIETARY

PEARL MONOLITHICS 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 PRODUCT FEATURE PCH-180-5R6G5R8G-SFF			
DRAWN		2/25/2021				
RECRAMIN						
ISSUED			SIZE	FORM NO.	DWG NO.	REV
			A	05XQ0	27041740	A
			SCALE	N=S	SHEET	1 OF 1



TYPICAL CHARACTERISTICS ON PCH-180-5R6G5R8G-SFF

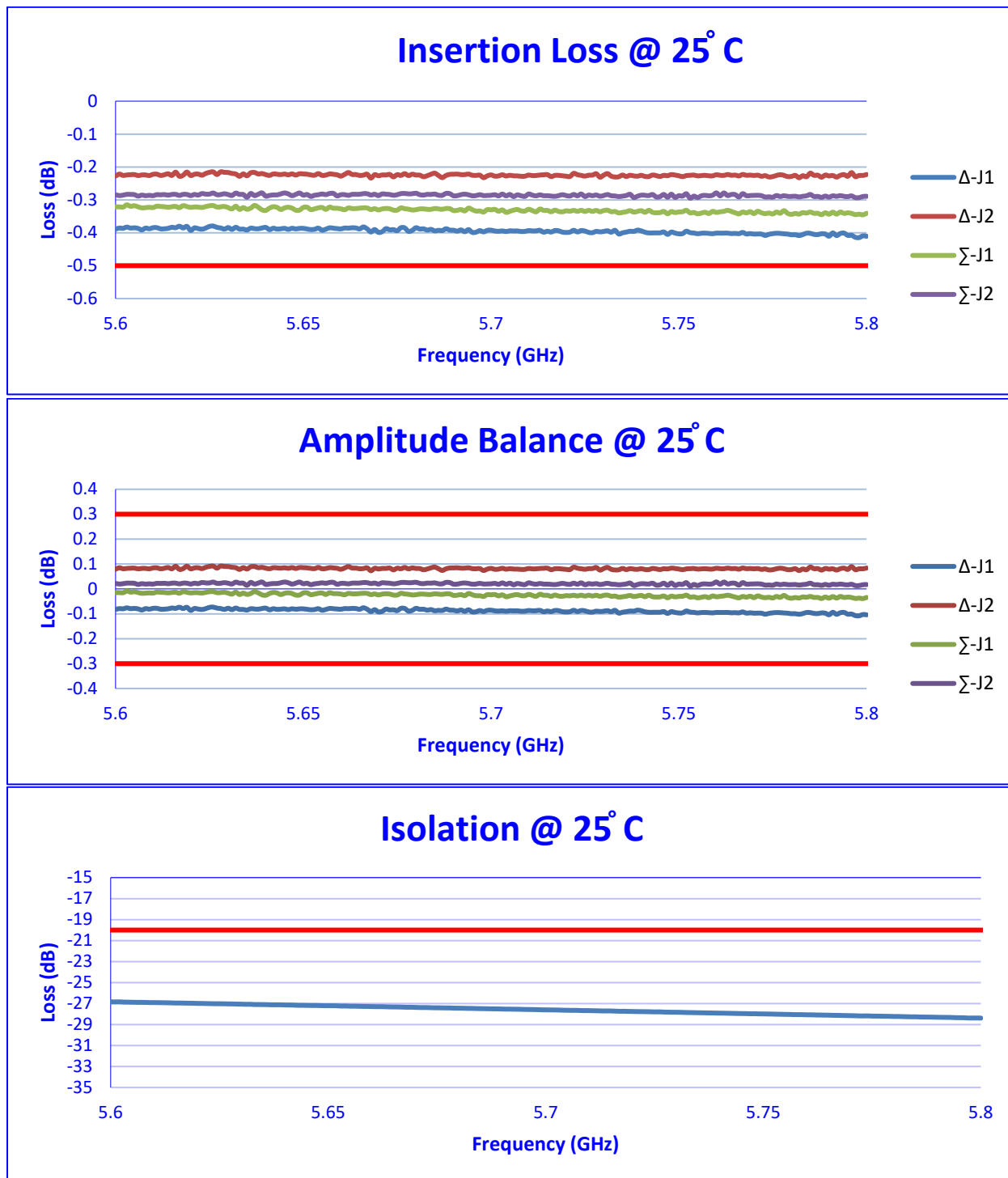
TEST DATA SUMMARY @ 25° C

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range	5.6 to 5.8 GHz	5.6 to 5.8 GHz	
2	Nominal Split	3.01 dB	3.01 dB	
3	Insertion Loss	0.5 dB Max	0.41 dB See Plot	
4	Isolation	20 dB Min	26.84 dB See Plot	
5	Amplitude Balance	±0.3 dB Max	±0.11 dB See Plot	
6	Phase Balance	±3° dB Max	±0.52° See Plot	
7	VSWR	1.3:1 Max	1.14:1 See Plot	
8	Power Handling	Average: 20 Watts Max Peak: 1 kW Max	Pass By Design	
9	Impedance	50 Ohms	50 Ohms	



TYPICAL CHARACTERISTICS ON PCH-180-5R6G5R8G-SFF

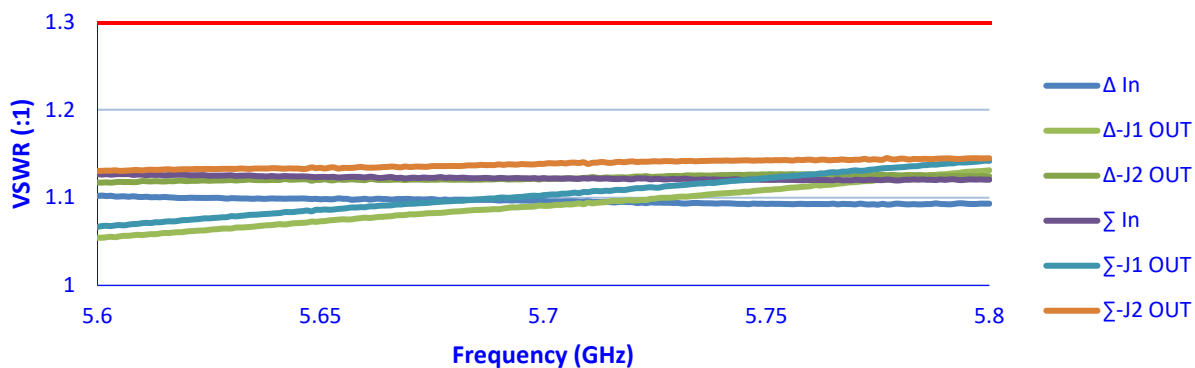
TEST DATA @ 25° C



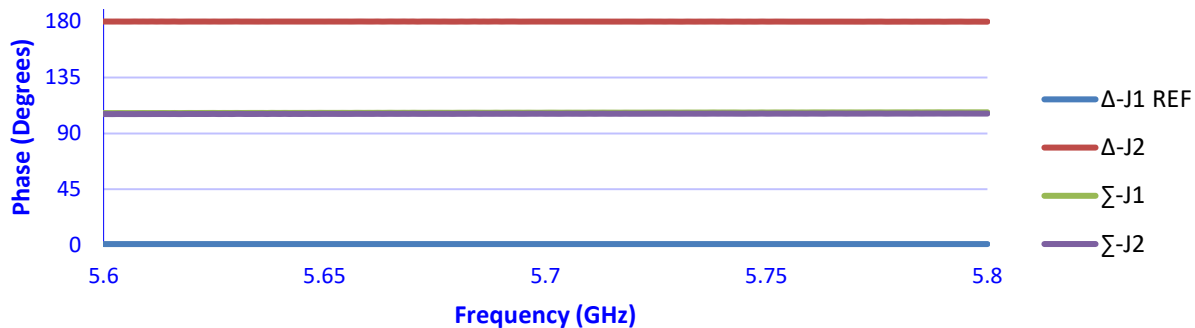


TYPICAL CHARACTERISTICS ON PCH-180-5R6G5R8G-SFF

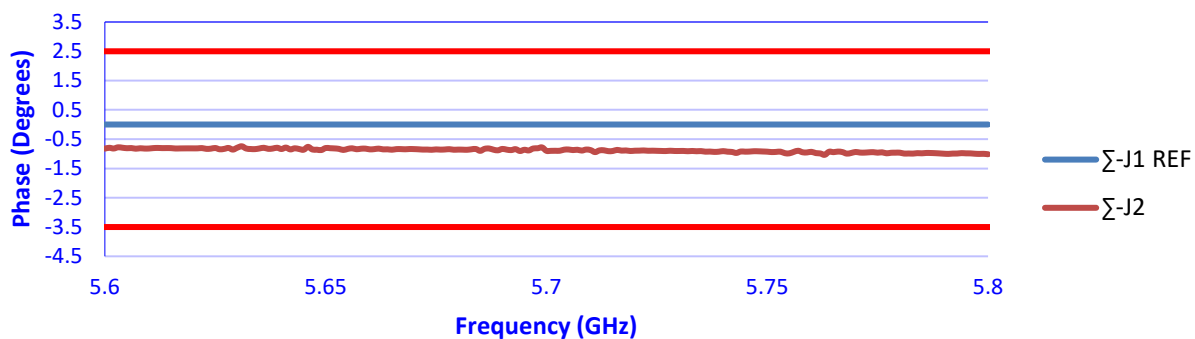
VSWR @ 25°C



Phase @ 25°C



Phase Balance @ 25°C





TYPICAL CHARACTERISTICS ON PCH-180-5R6G5R8G-SFF

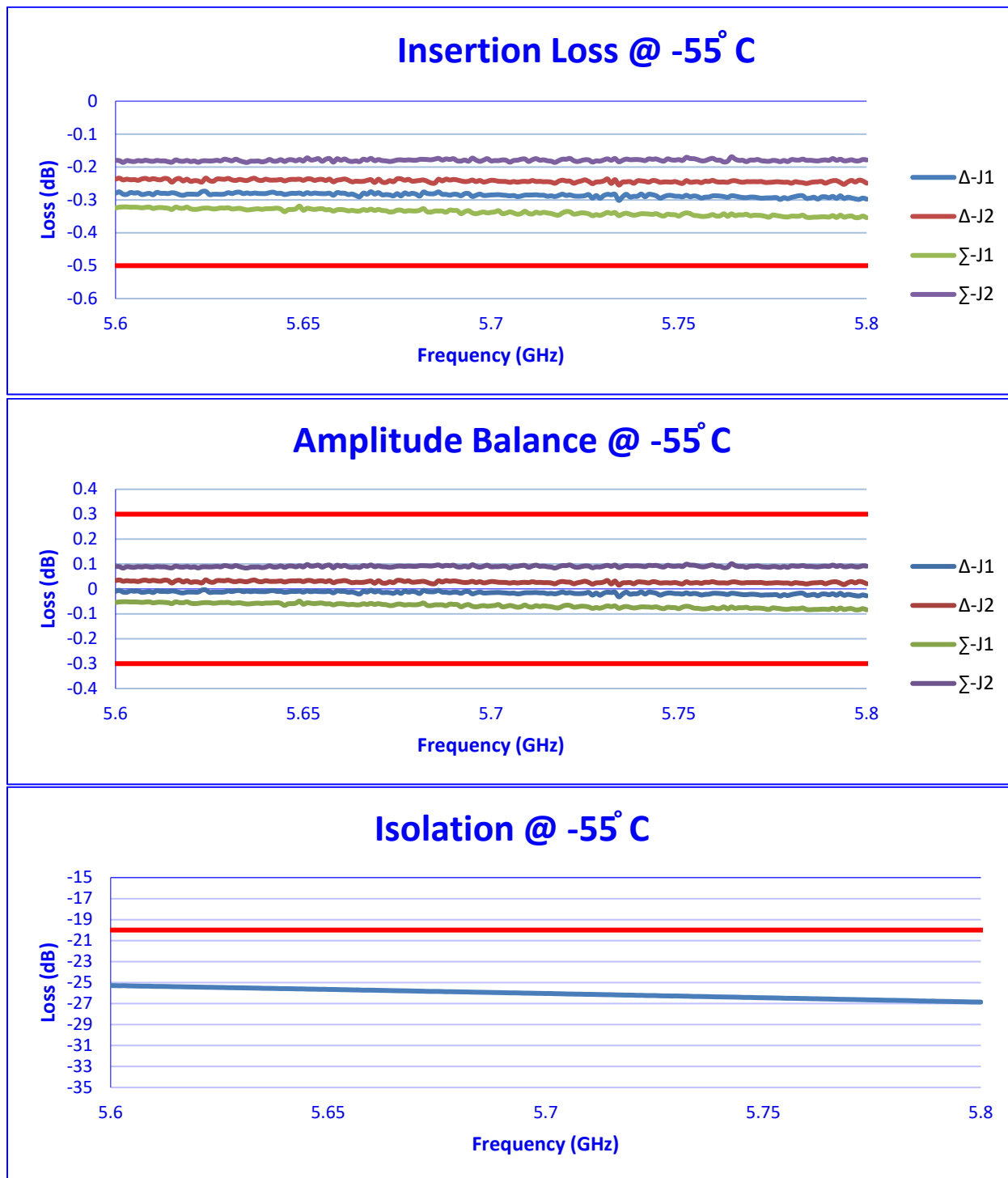
TEST DATA SUMMARY @ -55° C

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range	5.6 to 5.8 GHz	5.6 to 5.8 GHz	
2	Nominal Split	3.01 dB	3.01 dB	
3	Insertion Loss	0.5 dB Max	0.35 dB See Plot	
4	Isolation	20 dB Min	25.29 dB See Plot	
5	Amplitude Balance	±0.3 dB Max	±0.14 dB See Plot	
6	Phase Balance	±3° dB Max	±1.32° See Plot	
7	VSWR	1.3:1 Max	1.15:1 See Plot	
8	Power Handling	Average: 20 Watts Max Peak: 1 kW Max	Pass By Design	
9	Impedance	50 Ohms	50 Ohms	



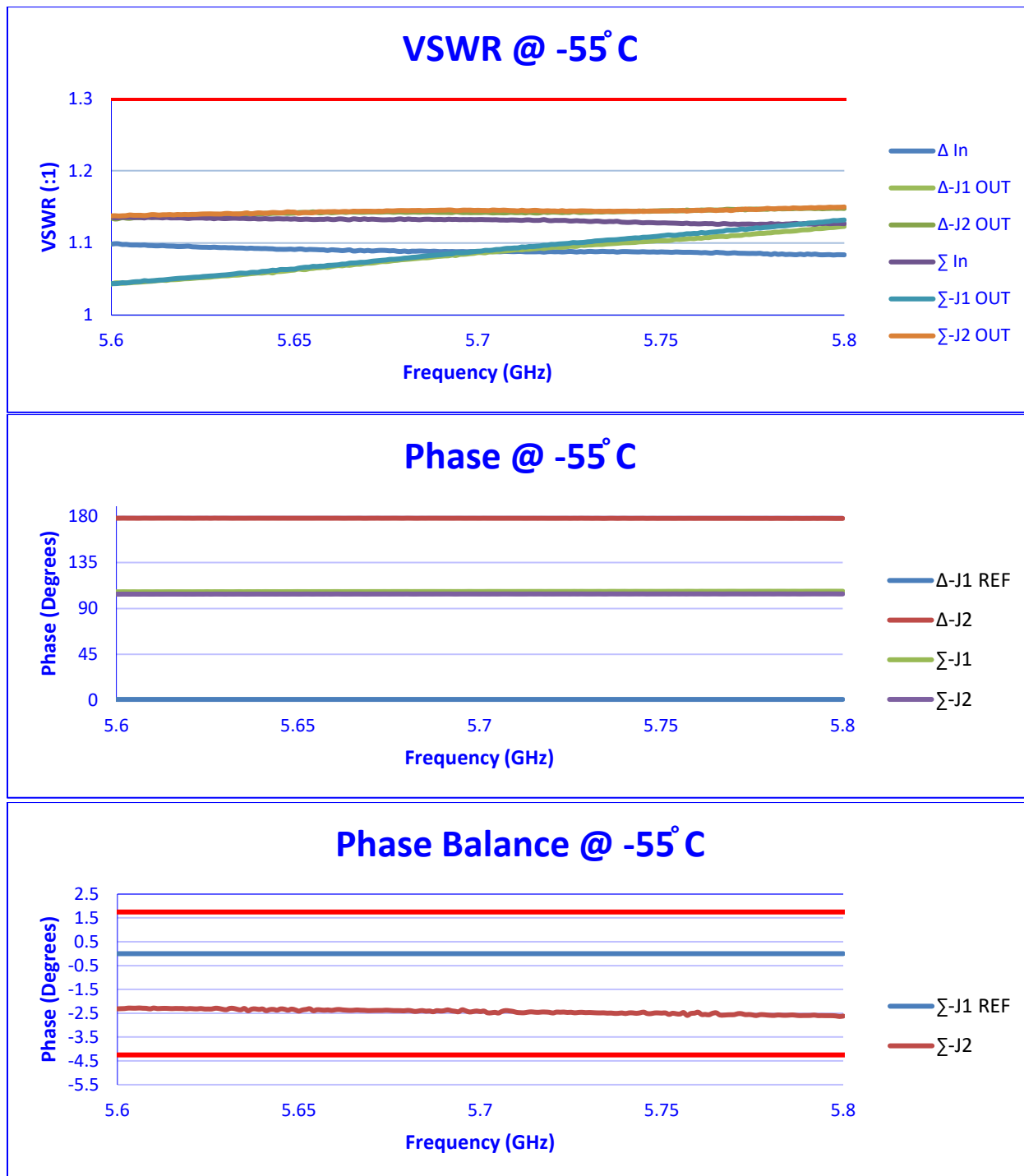
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TEST DATA @ -55° C





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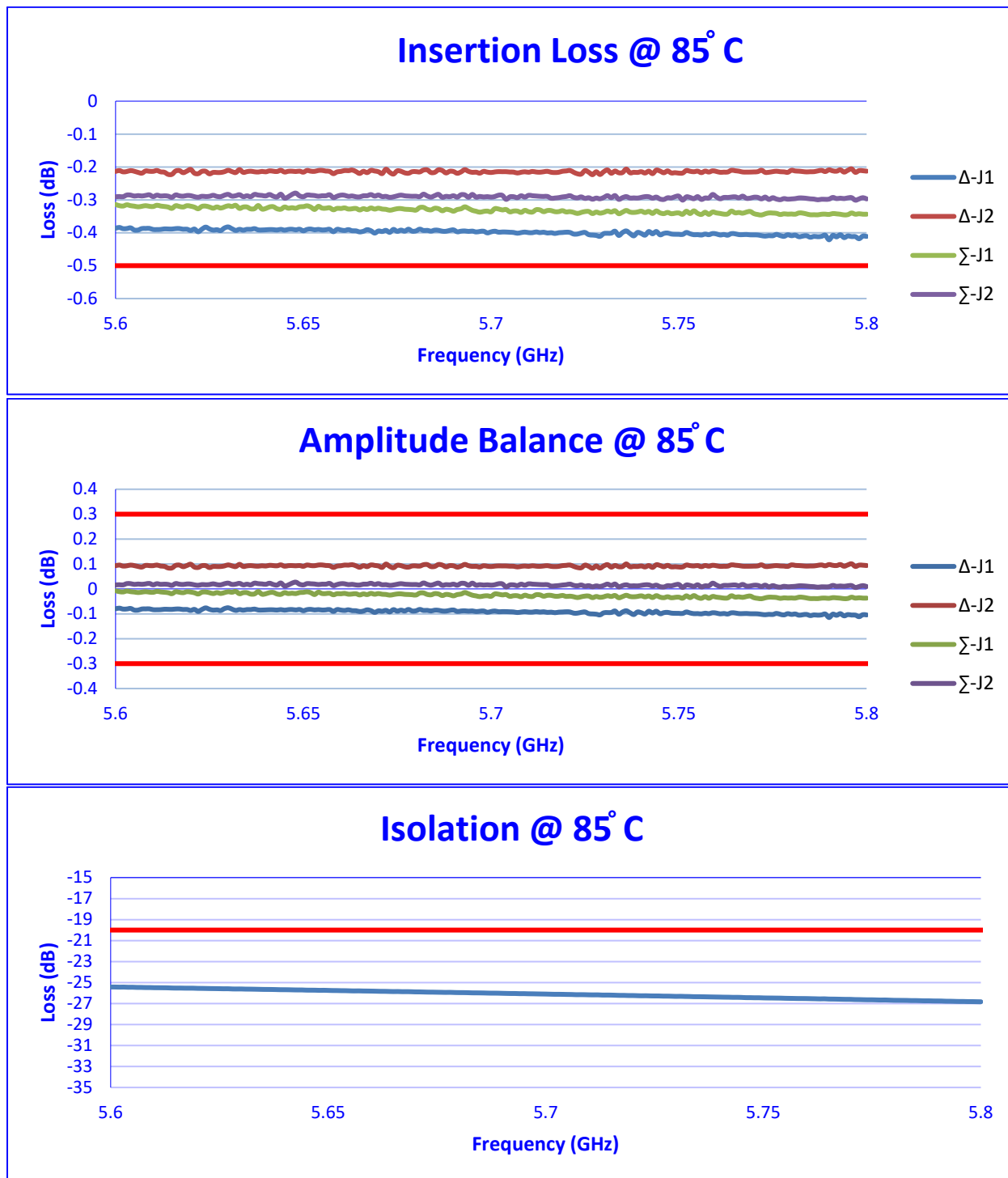
TEST DATA SUMMARY @ 85° C

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range	5.6 to 5.8 GHz	5.6 to 5.8 GHz	
2	Nominal Split	3.01 dB	3.01 dB	
3	Insertion Loss	0.5 dB Max	0.42 dB See Plot	
4	Isolation	20 dB Min	25.43 dB See Plot	
5	Amplitude Balance	±0.3 dB Max	±0.11 dB See Plot	
6	Phase Balance	±3° dB Max	±0.43° See Plot	
7	VSWR	1.3:1 Max	1.14:1 See Plot	
8	Power Handling	Average: 20 Watts Max Peak: 1 kW Max	Pass By Design	
9	Impedance	50 Ohms	50 Ohms	



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TEST DATA @ -85° C





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