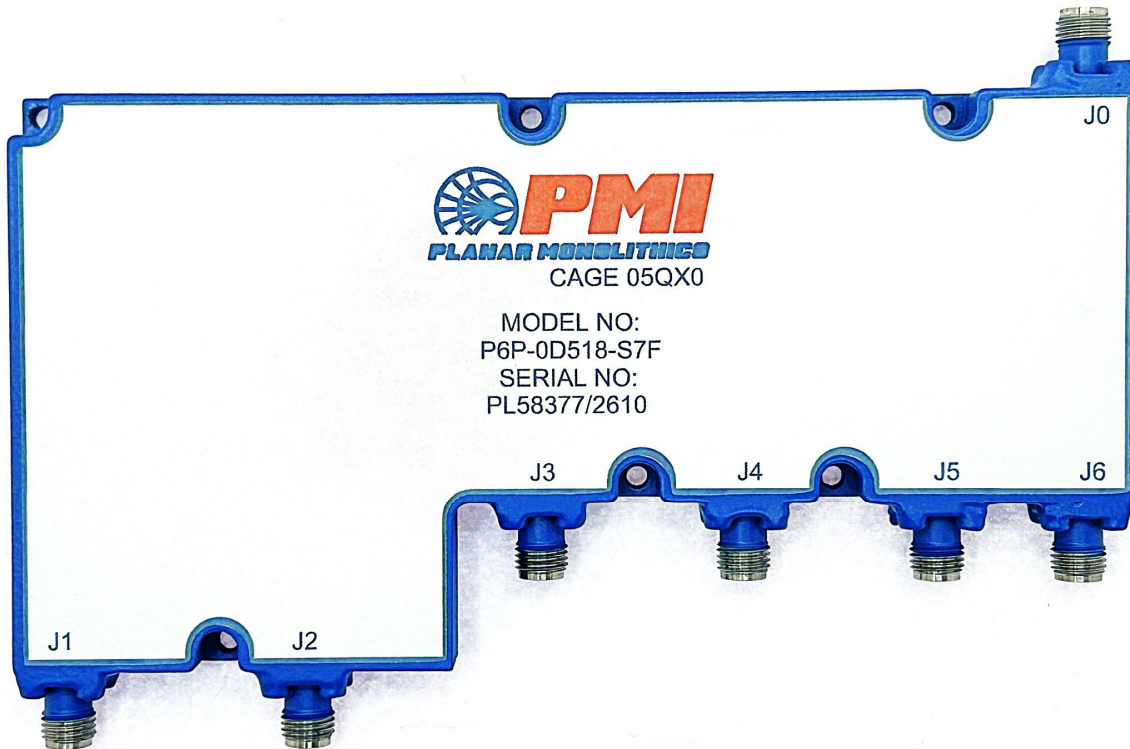




SUMMARY TEST DATA
ON
P6P-0D518-S7F

PLANAR MONOLITHICS INDUSTRIES MODEL NUMBER P6P-0D518-S7F IS A HEXAPLEXER COVERING 0.5 TO 18 GHz. THE UNIT IS BANDED AS FOLLOWS 0.5-1 GHz, 1-2 GHz, 2-4 GHz, 4-8 GHz, 8-12 GHz AND 12-18 GHz, WITH A RF SURVIVAL INPUT POWER OF 1W CW.



DESIGNED BY
PMI ENGINEERING

TESTED & REPORTED BY
R. SIRK

DATE
March 2, 2026



SUMMARY TEST DATA ON P6P-0D518-S7F OUTLINE

DESCRIPTION:
PLANAR MONOLITHICS INDUSTRIES MODEL NUMBER P6P-0D518-S7F IS A HEXAPLEXER COVERING 0.5 TO 18 GHz. THE UNIT IS Banded AS FOLLOWS 0.5-1 GHz, 1-2 GHz, 2-4 GHz, 4-8 GHz, 8-12 GHz AND 12-18 GHz, WITH A RF SURVIVAL INPUT POWER OF 1W CW.

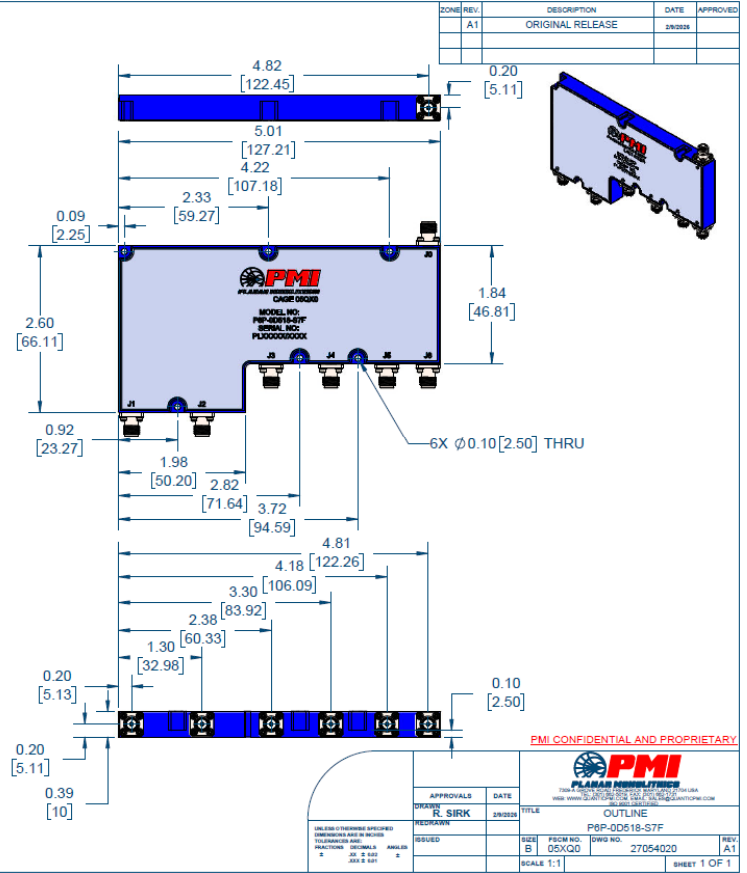
SPECIFICATIONS:

- RF INPUT FREQUENCY RANGE:..... 0.5 TO 18.0 GHz
 - RF SURVIVAL INPUT POWER:..... +30 dBm (1 WATT) CW MAX
 - CROSSOVER INSERTION LOSS:.....
 - 1 GHz ± 2%: 5 dB TYP., 6 dB MAX
 - 2 GHz ± 2%: 5 dB TYP., 6 dB MAX
 - 4 GHz ± 2%: 5 dB TYP., 6 dB MAX
 - 8 GHz ± 2%: 5 dB TYP., 6 dB MAX
 - 12 GHz ± 2%: 5 dB TYP., 6 dB MAX
- BAND 1 (J1):**
- FREQUENCY RANGE:..... 0.5 TO 1.0 GHz
 - INSERTION LOSS:..... 2.5 dB MAX @ 0.6 TO 0.9 GHz
 - RETURN LOSS (OVER INSERTION LOSS BAND): 12 dB MIN
 - REJECTION:..... -40 dBc MIN @ DC TO 0.2 GHz, 1.3 TO 20 GHz
- BAND 2 (J2):**
- FREQUENCY RANGE:..... 1.0 TO 2.0 GHz
 - INSERTION LOSS:..... 1.5 dB MAX @ 1.1 TO 1.9 GHz
 - RETURN LOSS (OVER INSERTION LOSS BAND): 12 dB MIN
 - REJECTION:..... -40 dBc MIN @ DC TO 0.7 GHz, 2.3 TO 20 GHz
- BAND 3 (J3):**
- FREQUENCY RANGE:..... 2.0 TO 4.0 GHz
 - INSERTION LOSS:..... 2.0 dB MAX @ 2.1 TO 3.9 GHz
 - RETURN LOSS (OVER INSERTION LOSS BAND): 12 dB MIN
 - REJECTION:..... -35 dBc MIN @ DC TO 1.7 GHz, 4.3 TO 20 GHz
- BAND 4 (J4):**
- FREQUENCY RANGE:..... 4.0 TO 8.0 GHz
 - INSERTION LOSS:..... 1.5 dB MAX @ 4.2 TO 7.8 GHz
 - RETURN LOSS (OVER INSERTION LOSS BAND): 12 dB MIN
 - REJECTION:..... -35 dBc MIN @ DC TO 3.6 GHz, 8.3 TO 20 GHz
- BAND 5 (J5):**
- FREQUENCY RANGE:..... 8.0 TO 12.0 GHz
 - INSERTION LOSS:..... 1.5 dB MAX @ 8.4 TO 11.6 GHz
 - RETURN LOSS (OVER INSERTION LOSS BAND): 10 dB MIN
 - REJECTION:..... -35 dBc MIN @ DC TO 7.7 GHz, 12.6 TO 20 GHz
- BAND 6 (J6):**
- FREQUENCY RANGE:..... 12.0 TO 18.0 GHz
 - INSERTION LOSS:..... 1.5 dB MAX @ 12.6 TO 17.8 GHz
 - RETURN LOSS (OVER INSERTION LOSS BAND): 10 dB MIN
 - REJECTION:..... -35 dBc MIN @ DC TO 11.7 GHz, 19.3 TO 20 GHz
- SIZE:..... 5.01" X 2.61" X 0.39"
 - FINISH:..... PAINTED BLUE

ENVIRONMENTAL RATINGS:

- TEMPERATURE:..... -40°C TO +85°C (OPERATING)
-65°C TO +125°C (STORAGE)

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





**SUMMARY TEST DATA
ON
P6P-0D518-S7F**

Technical Specifications - Band 1

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			-40°C	+25°C	+85°C
1	Passband:	0.5 to 1 GHz	0.5 to 1 GHz		
2	Insertion Loss:	2.5 dB Max (0.6 to 0.9 GHz)	1.95 dB	2.04 dB	2.09 dB
3	Return Loss: (Over Insertion Loss Band)	12 dB Min	15.56 dB	15.59 dB	15.76 dB
4	Rejections:	-40 dBc MIN (DC-0.2 GHz & 1.3-20 GHz)	DC - 1.7 GHz: 44.44 dBc 1.3 - 20 GHz: 47.19 dBc	DC - 0.2 GHz: 44.77 dBc 1.3 - 20 GHz: 48.49 dBc	DC - 0.2 GHz: 45.89 dBc 1.3 - 20 GHz: 45.89 dBc

Technical Specifications - Band 2

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			-40°C	+25°C	+85°C
5	Passband:	1 to 2 GHz	1 to 2 GHz		
6	Insertion Loss:	1.5 dB Max (1.1 to 1.9 GHz)	1.23 dB	1.23 dB	1.24 dB
7	Return Loss: (Over Insertion Loss Band)	12 dB Min	18.94 dB	19.64 dB	19.32 dB
8	Rejections:	-40 dBc MIN (DC-0.7 GHz & 2.3-20 GHz)	DC - 0.7 GHz: 46.14 dBc 2.3 - 20 GHz: 48.38 dBc	DC - 0.7 GHz: 44.77 dBc 2.3 - 20 GHz: 48.03 dBc	DC - 0.7 GHz: 44.75 dBc 2.3 - 20 GHz: 47.86 dBc

Technical Specifications - Band 3

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			-40°C	+25°C	+85°C
9	Passband:	2 to 4 GHz	2 to 4 GHz		
10	Insertion Loss:	2.0 dB Max (2.1 to 3.9 GHz)	1.81 dB	1.43 dB	1.35 dB
11	Return Loss: (Over Insertion Loss Band)	12 dB Min	18.46 dB	21.68 dB	22.21 dB
12	Rejections:	-35 dBc MIN (DC-1.7 GHz & 4.3-20 GHz)	DC - 1.7 GHz: 45.97 dBc 4.3 - 20 GHz: 48.96 dBc	DC - 1.7 GHz: 42.9 dBc 4.3 - 20 GHz: 43.05 dBc	DC - 1.7 GHz: 42.93 dBc 4.3 - 20 GHz: 39.24 dBc

Technical Specifications - Band 4

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			-40°C	+25°C	+85°C
13	Passband:	4 to 8 GHz	4 to 8 GHz		
14	Insertion Loss:	1.5 dB Max (4.2 to 7.8 GHz)	0.83 dB	0.96 dB	1.15 dB
15	Return Loss: (Over Insertion Loss Band)	12 dB Min	13.24 dB	15.12 dB	16.22 dB
16	Rejections:	-35 dBc MIN (DC-3.6 GHz & 8.3-20 GHz)	DC - 3.6 GHz: 44.73 dBc 8.3 - 20 GHz: 46.25 dBc	DC - 3.6 GHz: 47.27 dBc 8.3 - 20 GHz: 47.77 dBc	DC - 3.6 GHz: 43.53 dBc 8.3 - 20 GHz: 47.09 dBc



**SUMMARY TEST DATA
ON
P6P-0D518-S7F**

Technical Specifications - Band 5

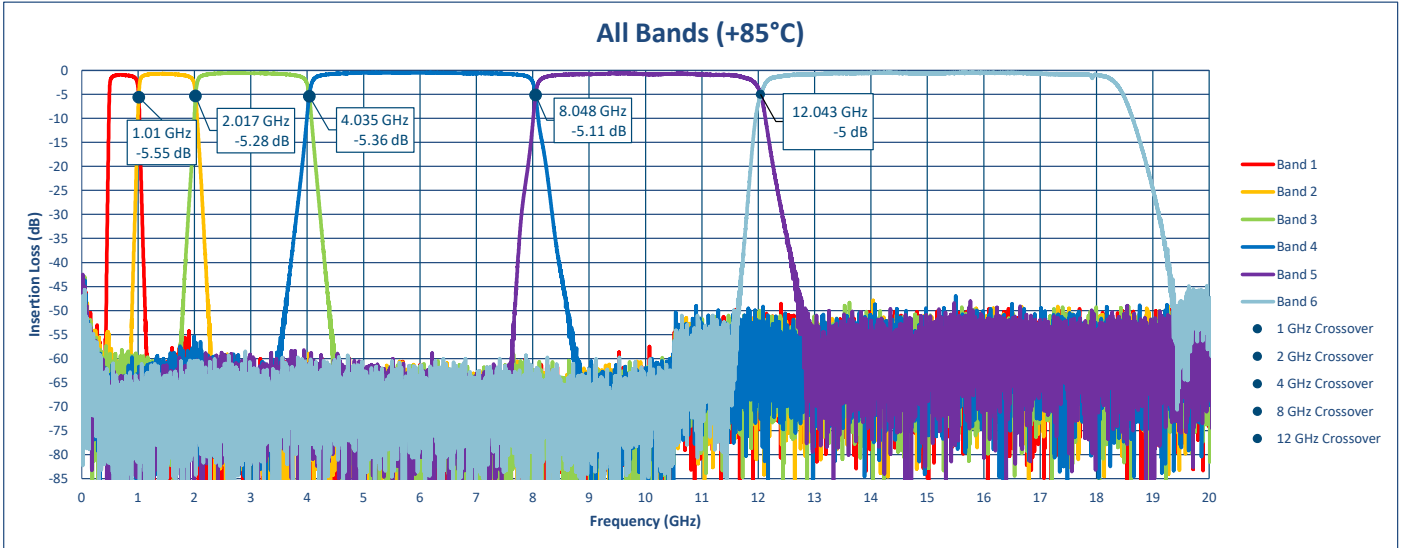
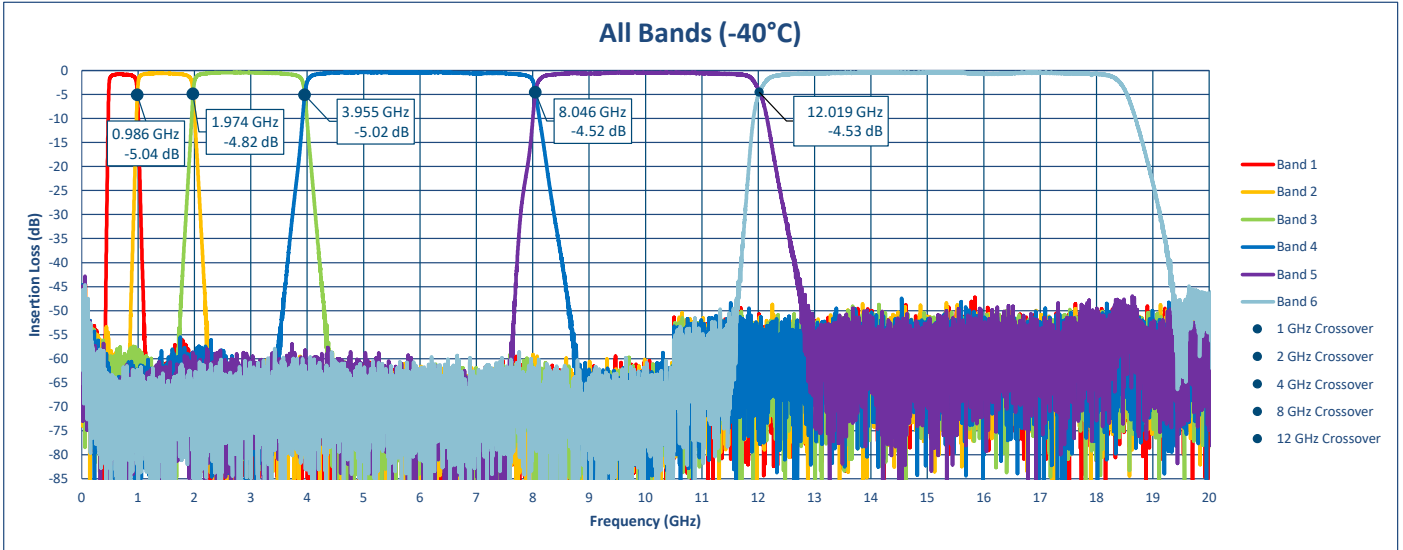
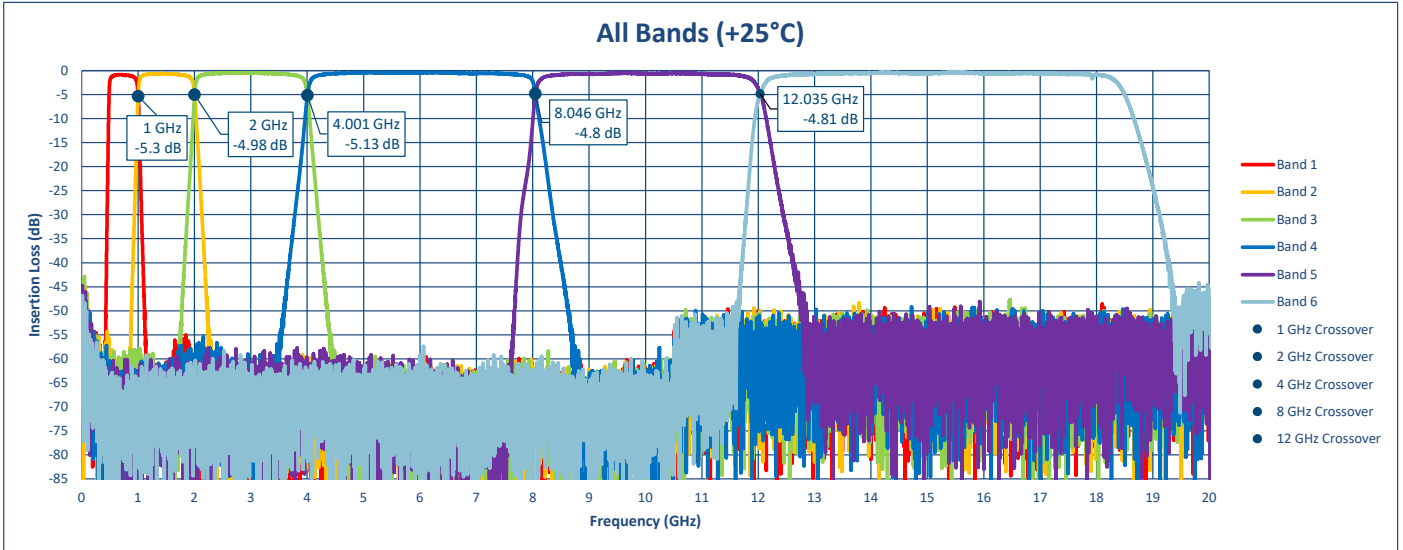
TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			-40°C	+25°C	+85°C
17	Passband:	8 to 12 GHz	8 to 12 GHz		
18	Insertion Loss:	1.5 dB Max (8.4 to 11.6 GHz)	0.82 dB	0.93 dB	1.1 dB
19	Return Loss: (Over Insertion Loss Band)	10 dB Min	13.6 dB	13.37 dB	11.56 dB
20	Rejections:	-35 dBc MIN (DC-8.7 GHz & 12.6-20 GHz)	DC - 8.7 GHz: 42.8 dBc 12.6 - 20 GHz: 37.47 dBc	DC - 8.7 GHz: 44.7 dBc 12.6 - 20 GHz: 38.17 dBc	DC - 8.7 GHz: 42.47 dBc 12.6 - 20 GHz: 40.29 dBc

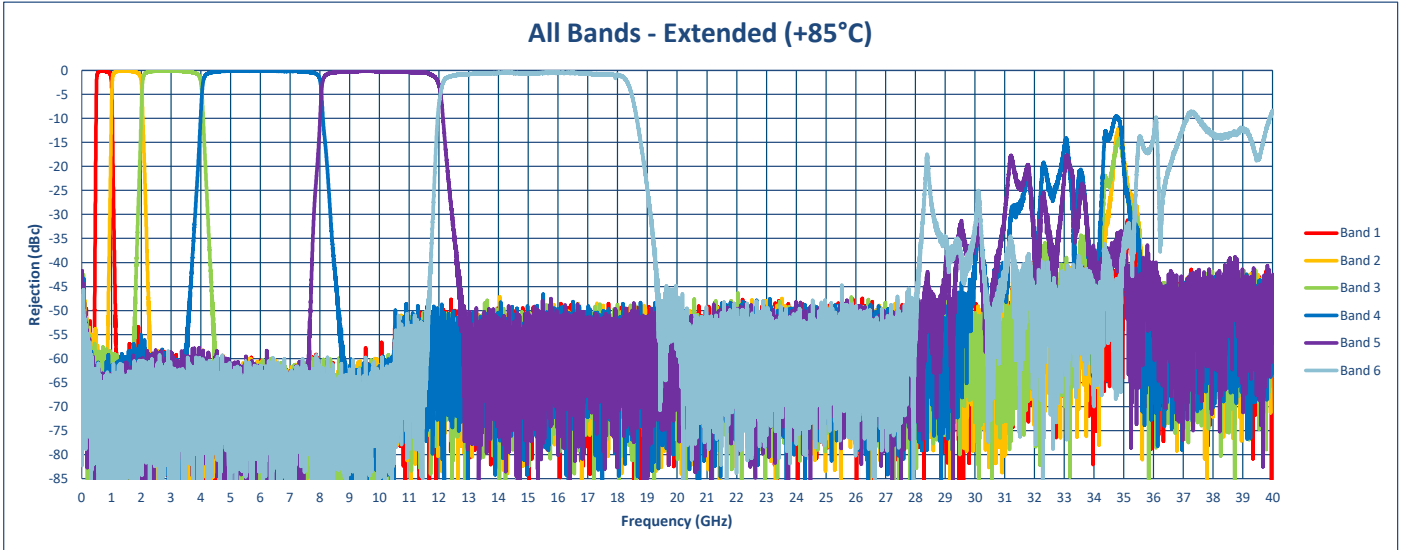
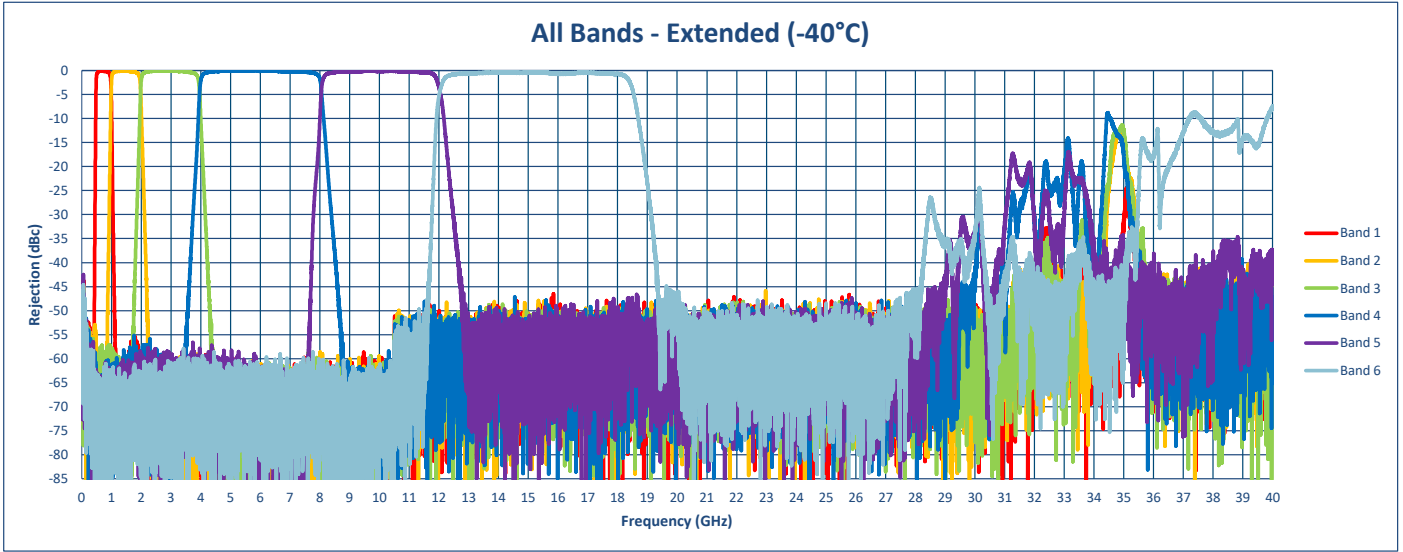
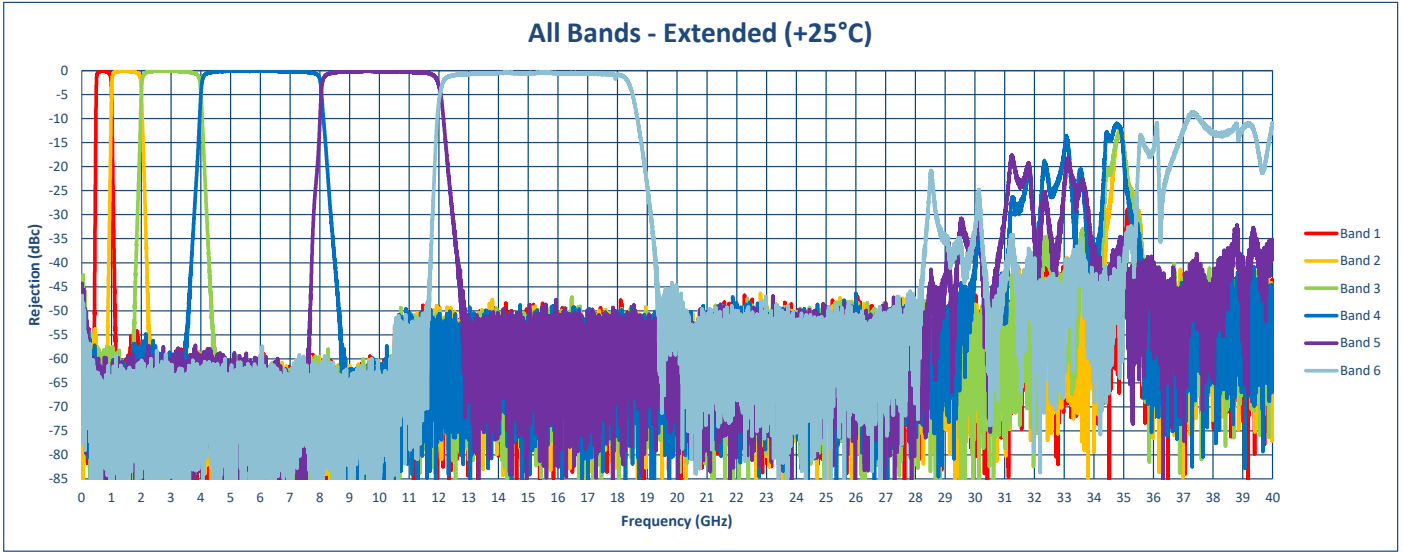
Technical Specifications - Band 6

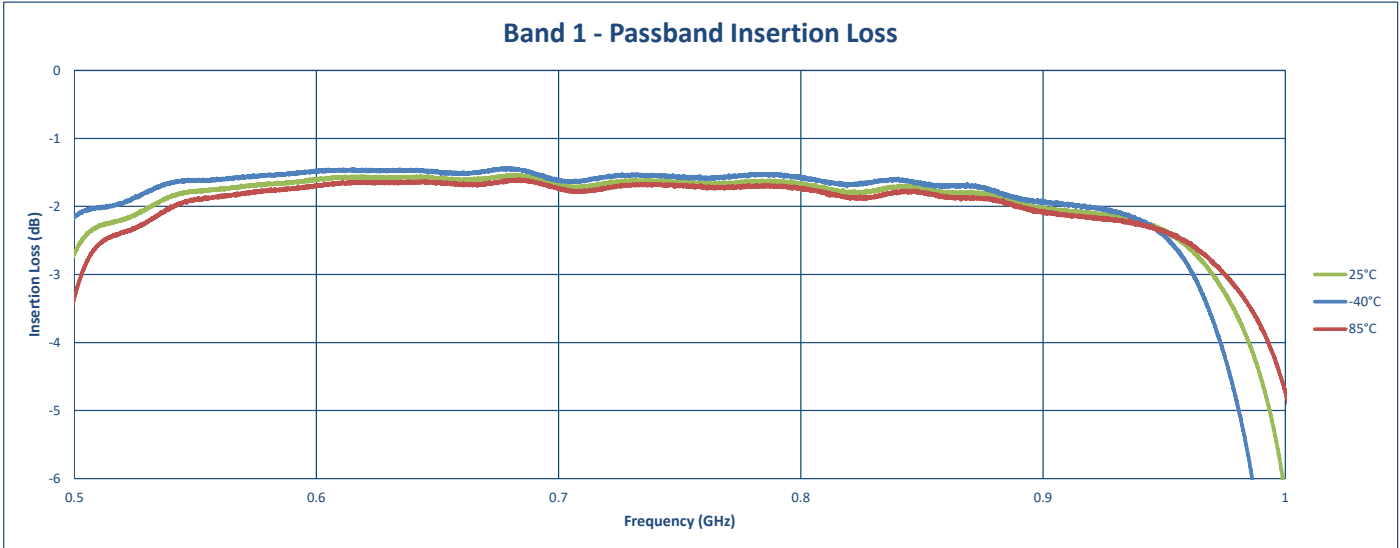
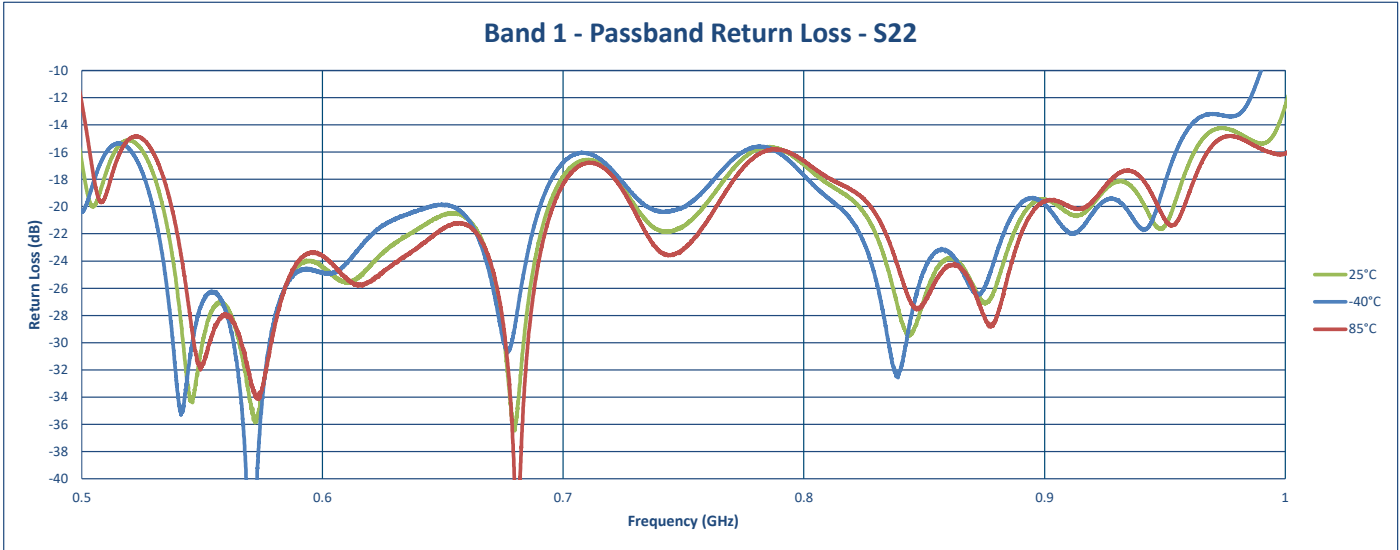
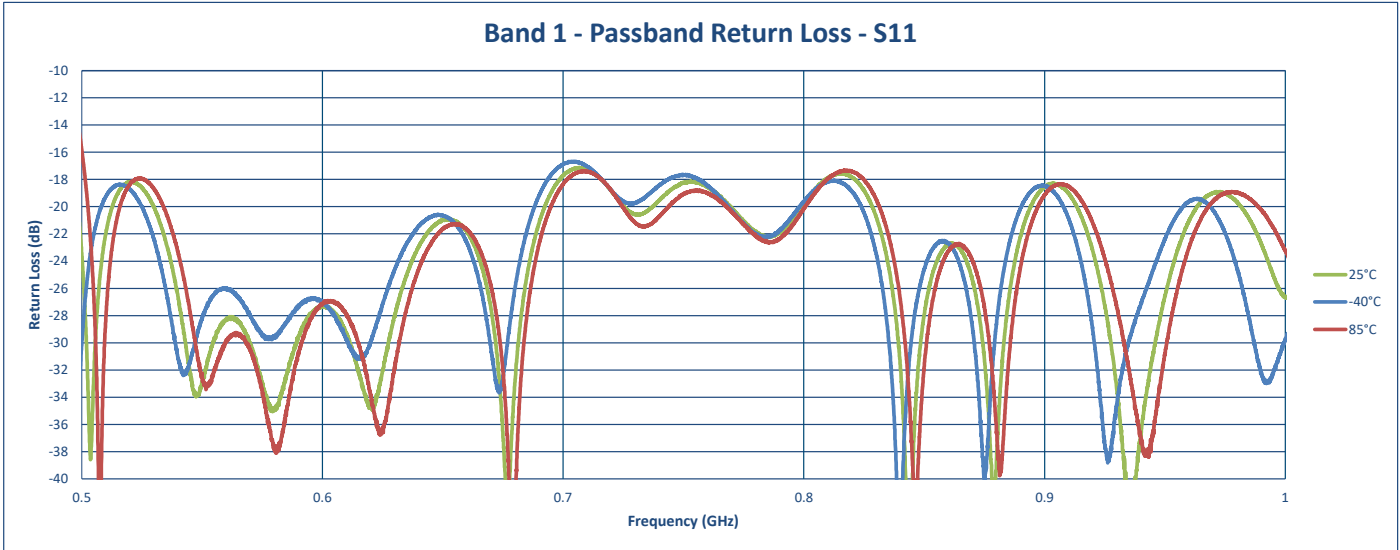
TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			-40°C	+25°C	+85°C
17	Passband:	12 to 18 GHz	12 to 18 GHz		
18	Insertion Loss:	1.5 dB Max (12.6 to 17.8 GHz)	0.81 dB	0.89 dB	0.97 dB
19	Return Loss: (Over Insertion Loss Band)	10 dB Min	11.02 dB	14.76 dB	12.82 dB
20	Rejections:	-15 dBc MIN (DC-11.7 GHz & 19.3-20 GHz)	DC - 11.7 GHz: 38.86 dBc 19.3 - 20 GHz: 39.63 dBc	DC - 11.7 GHz: 40.56 dBc 19.3 - 20 GHz: 40.98 dBc	DC - 11.7 GHz: 41.36 dBc 19.3 - 20 GHz: 41.96 dBc

Technical Specifications - General

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			-40°C	+25°C	+85°C
21	Operating Frequency:	2 GHz to 18 GHz	2 GHz to 18 GHz		
22	Crossover Insertion Loss:	5 dB Typ. 6 dB Max. (1 GHz ± 2%)	5.04 dB @ 0.986 GHz	5.3 dB @ 1 GHz	5.55 dB @ 1.01 GHz
		5 dB Typ. 6 dB Max. (2 GHz ± 2%)	4.82 dB @ 1.974 GHz	4.98 dB @ 2 GHz	5.28 dB @ 2.017 GHz
		5 dB Typ. 6 dB Max. (4 GHz ± 2%)	5.02 dB @ 3.955 GHz	5.13 dB @ 4.001 GHz	5.36 dB @ 4.035 GHz
		5 dB Typ. 6 dB Max. (8 GHz ± 2%)	4.52 dB @ 8.046 GHz	4.8 dB @ 8.046 GHz	5.11 dB @ 8.048 GHz
		5 dB Typ. 6 dB Max. (12 GHz ± 2%)	4.53 dB @ 12.019 GHz	4.81 dB @ 12.035 GHz	5 dB @ 12.043 GHz

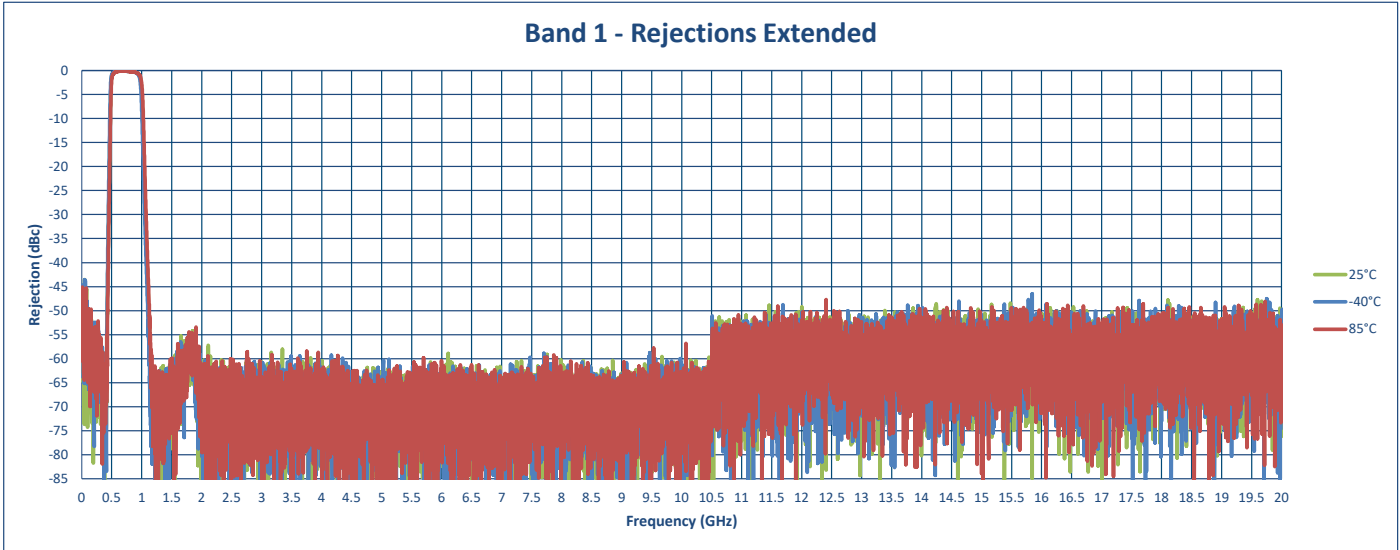
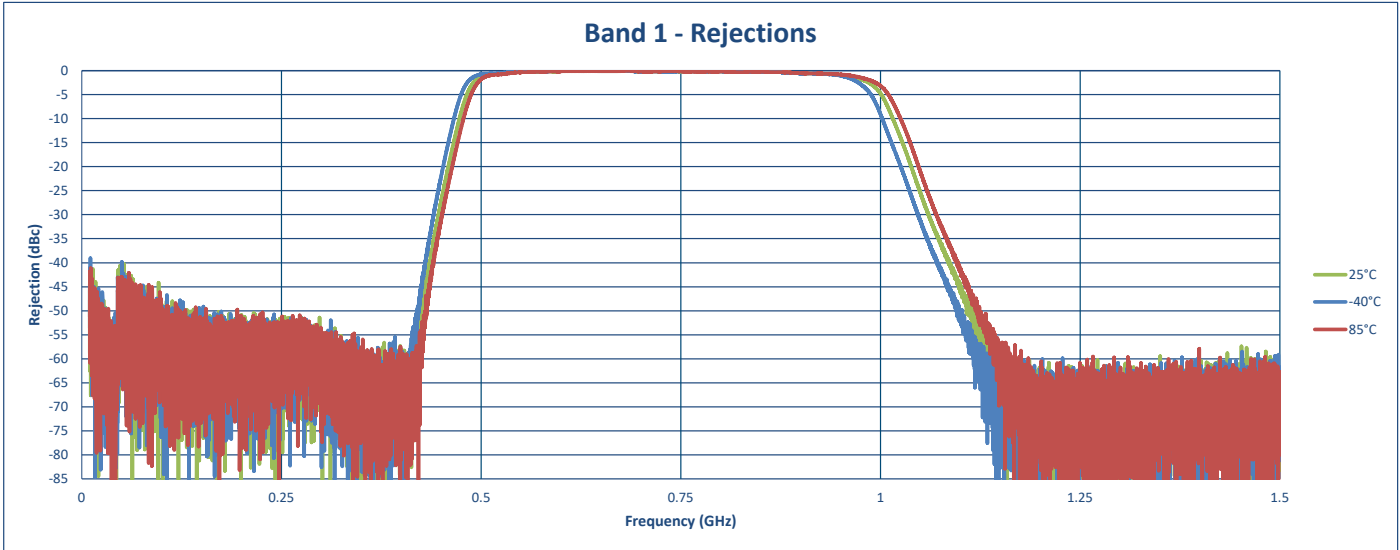




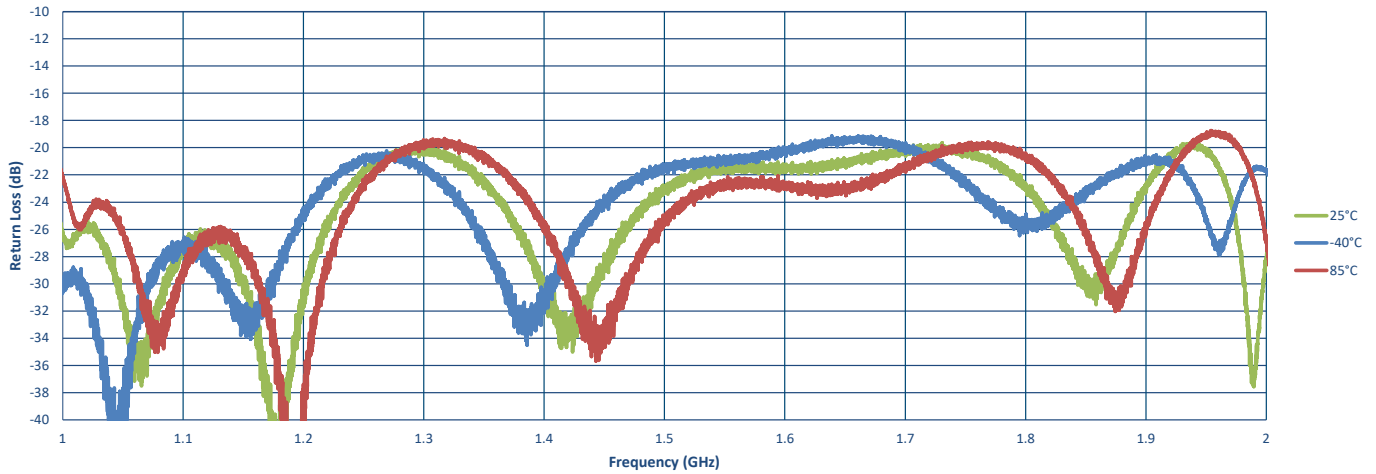




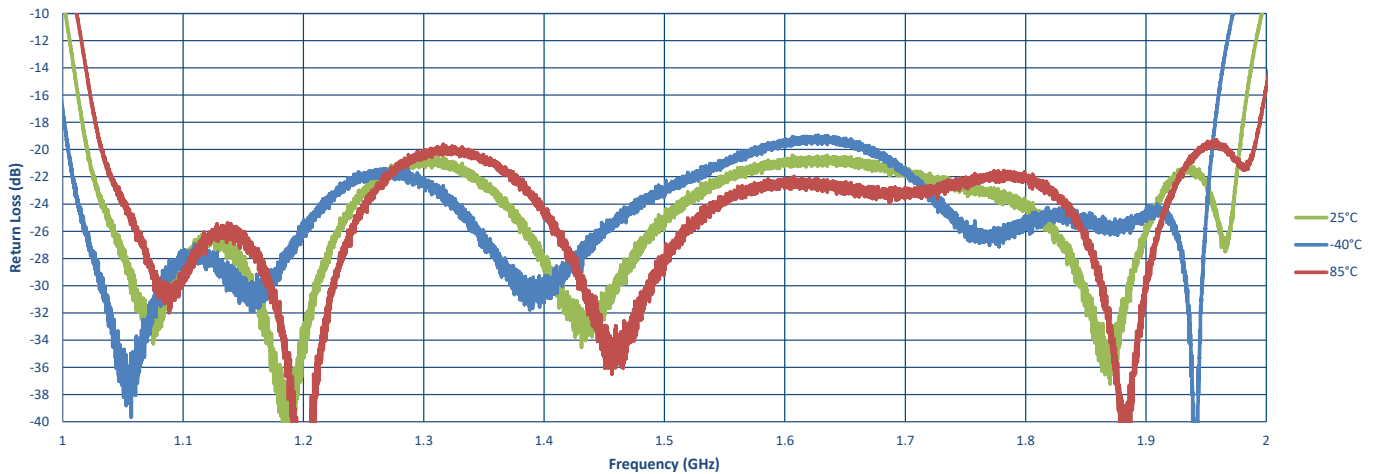
SUMMARY TEST DATA ON P6P-0D518-S7F



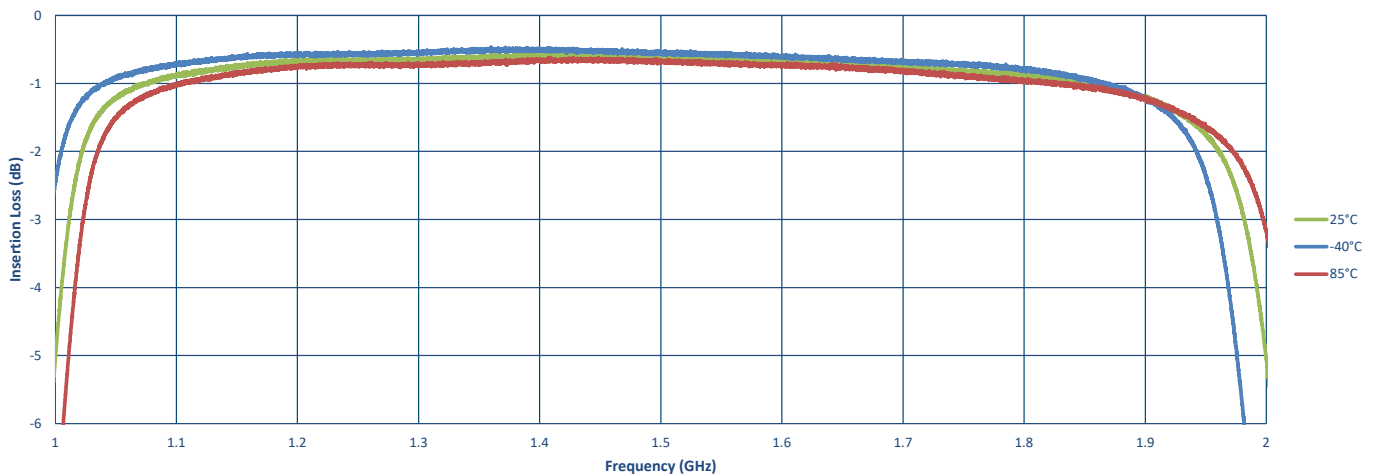
Band 2 - Passband Return Loss - S11

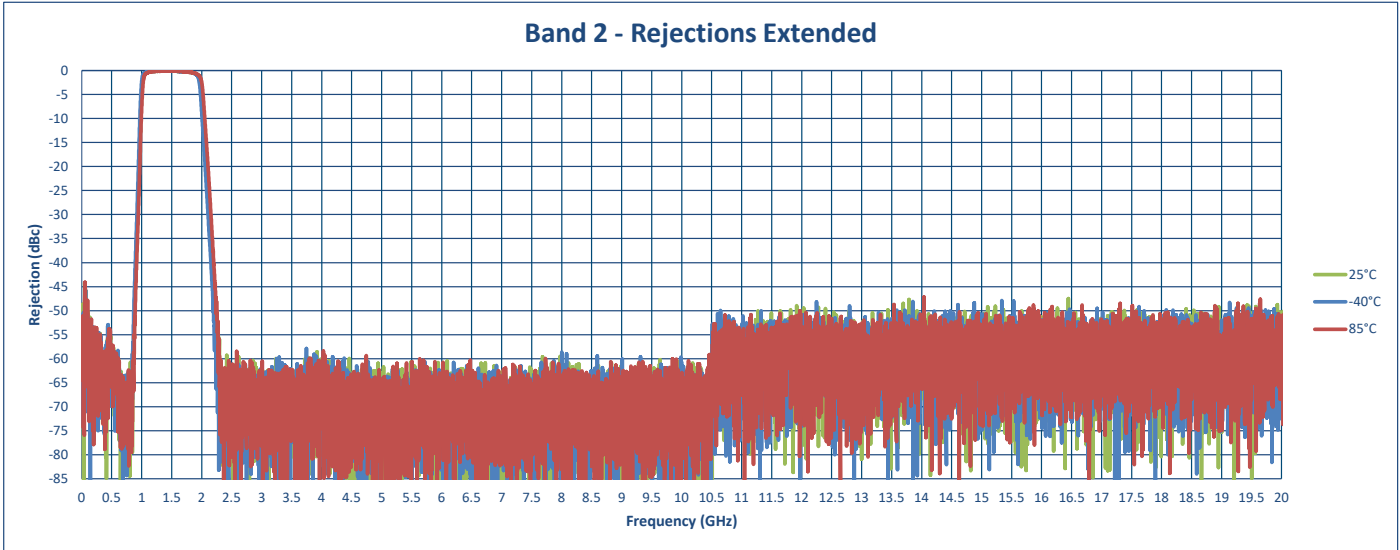
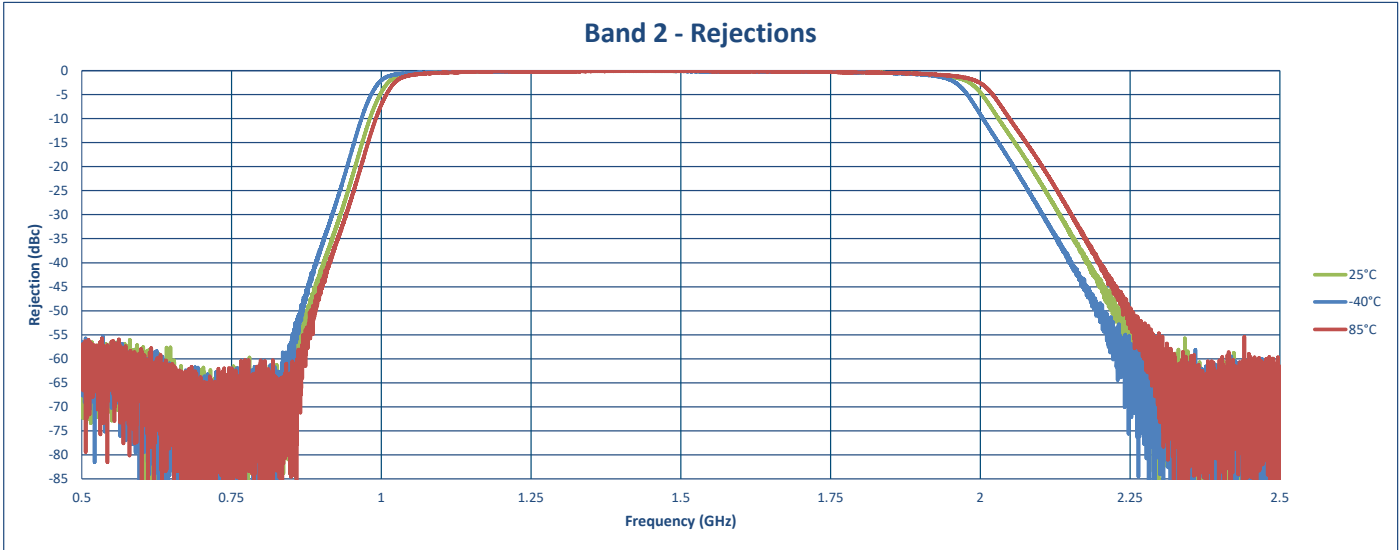


Band 2 - Passband Return Loss - S22

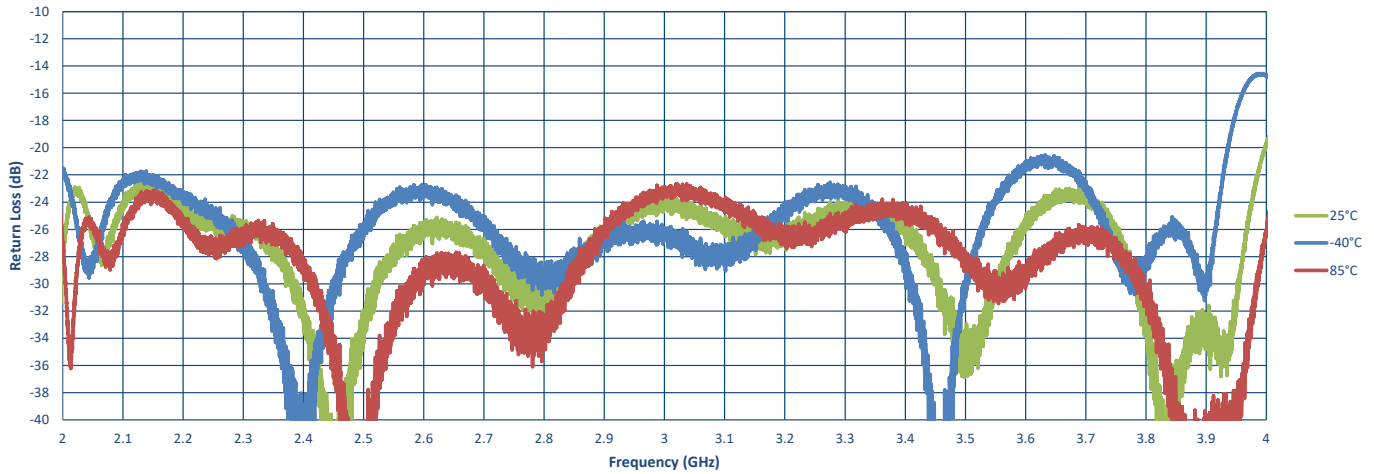


Band 2 - Passband Insertion Loss

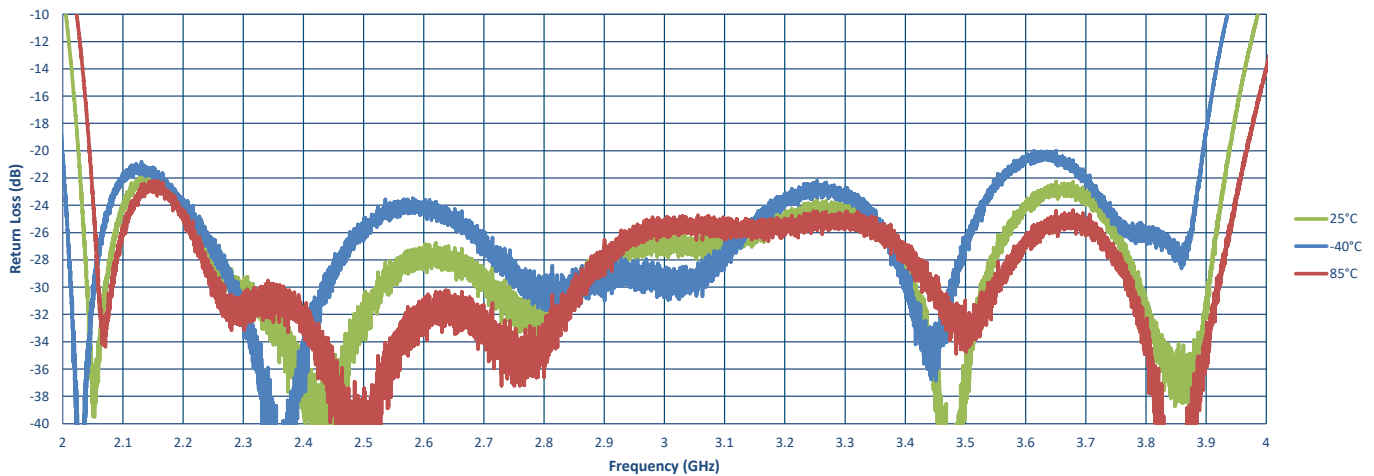




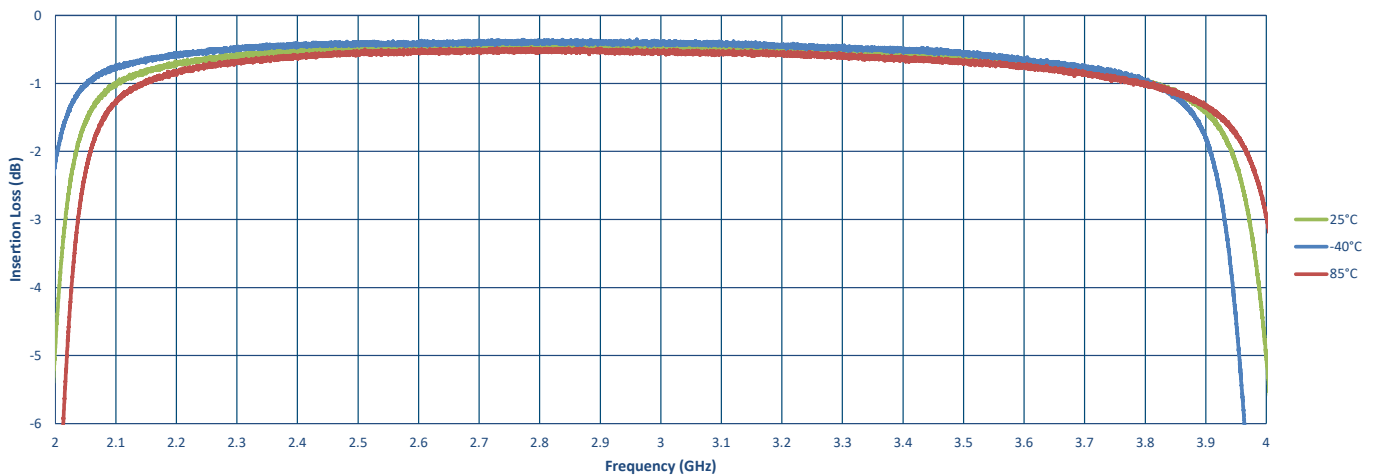
Band 3 - Passband Return Loss - S11

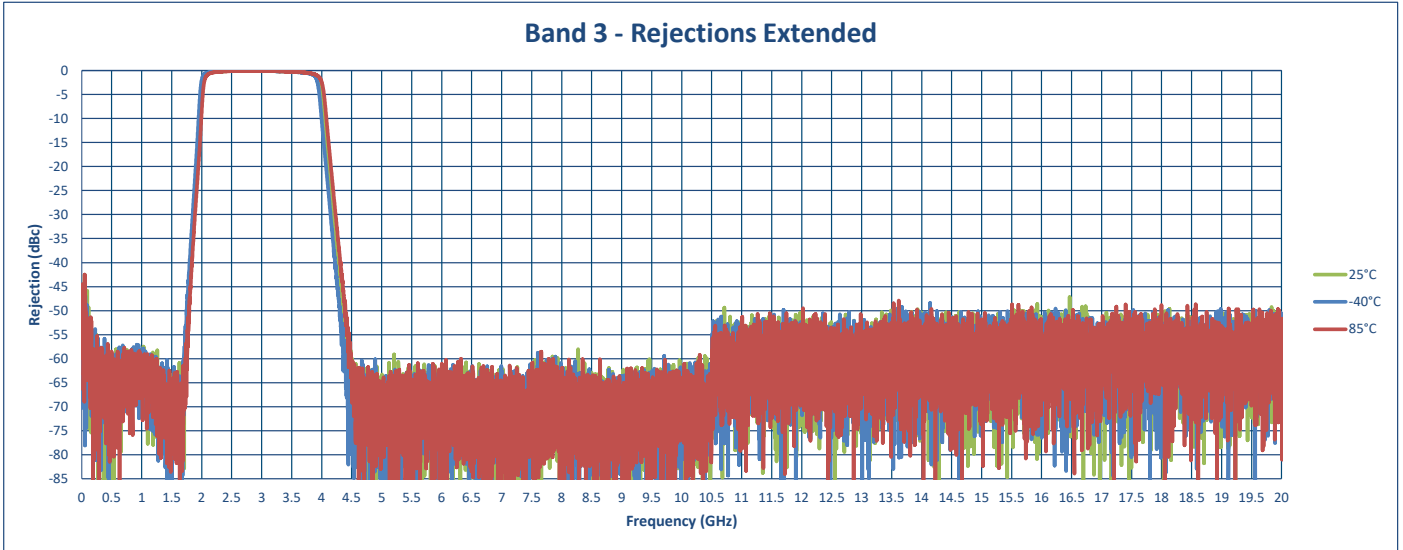
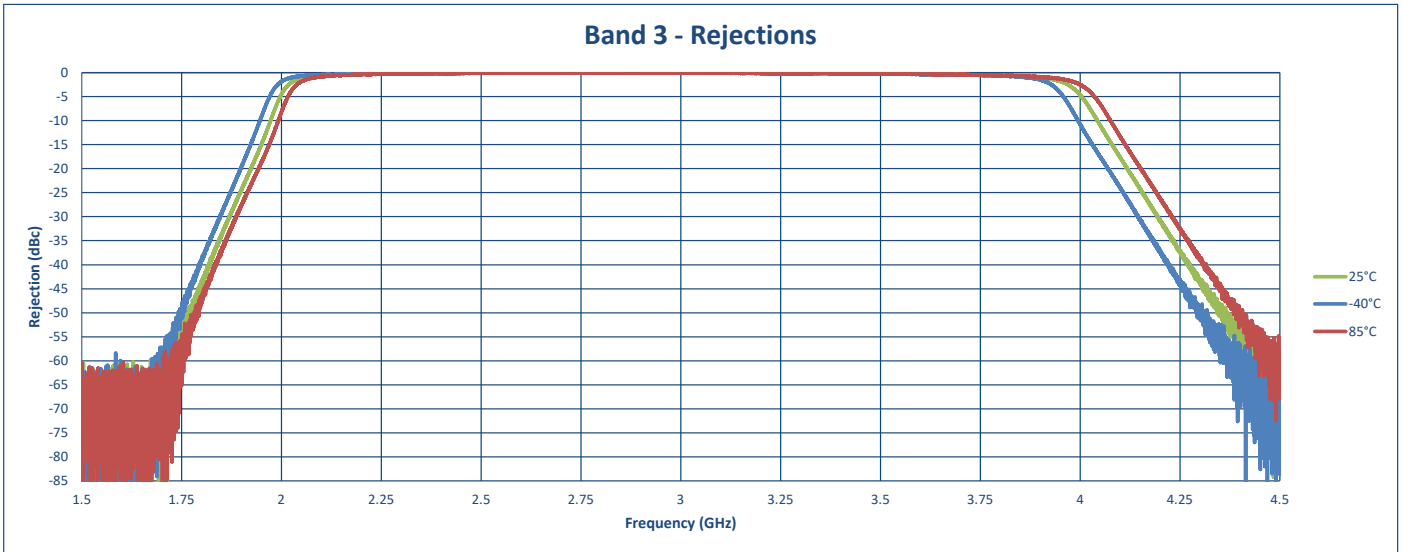


Band 3 - Passband Return Loss - S22

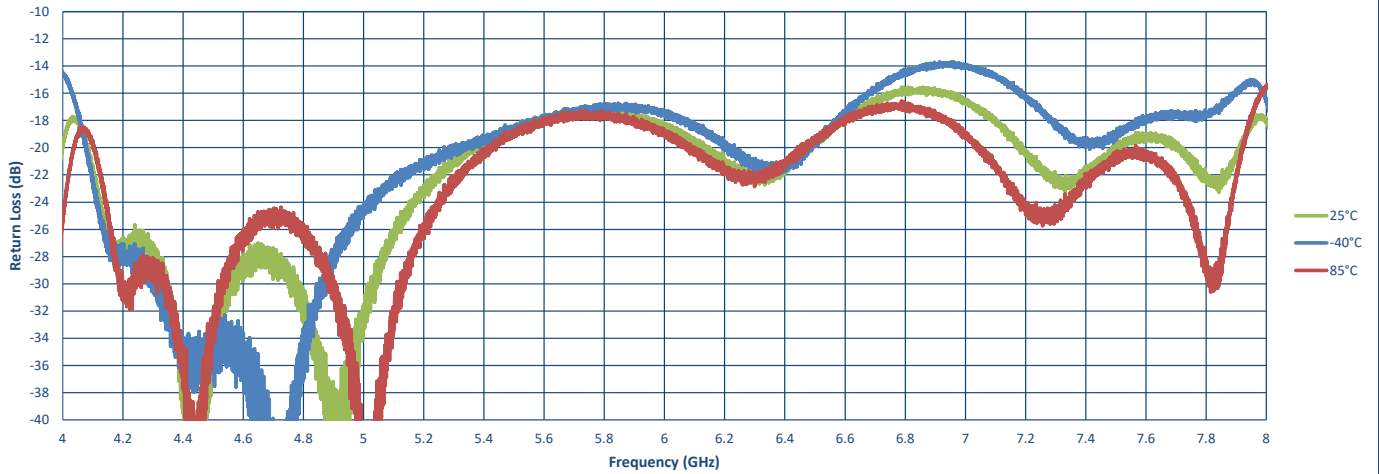


Band 3 - Passband Insertion Loss

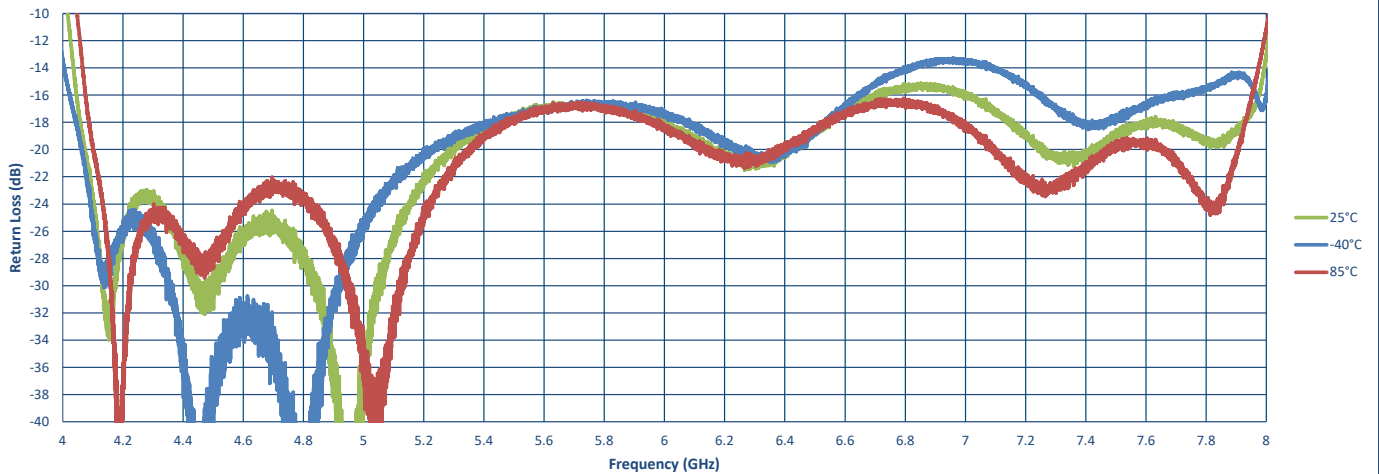




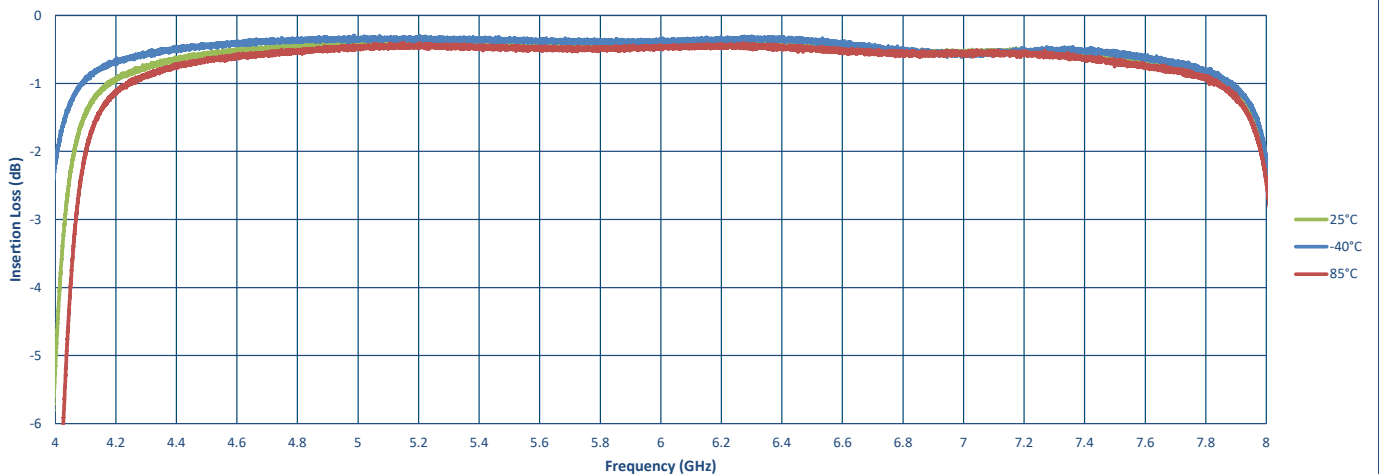
Band 4 - Passband Return Loss - S11

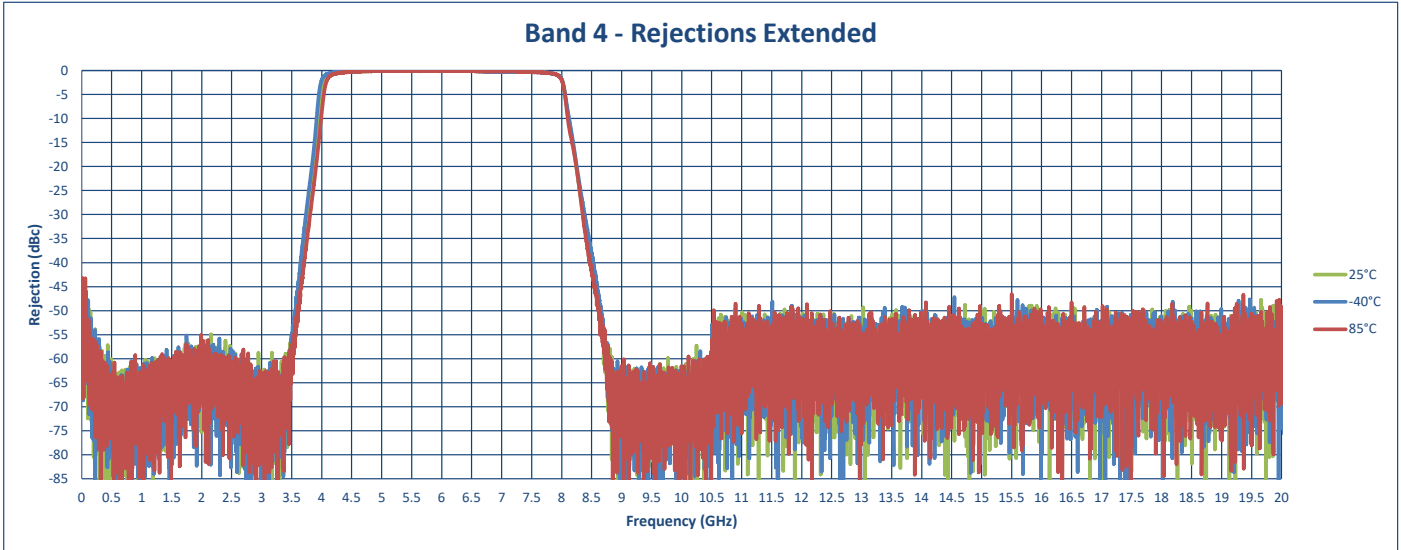
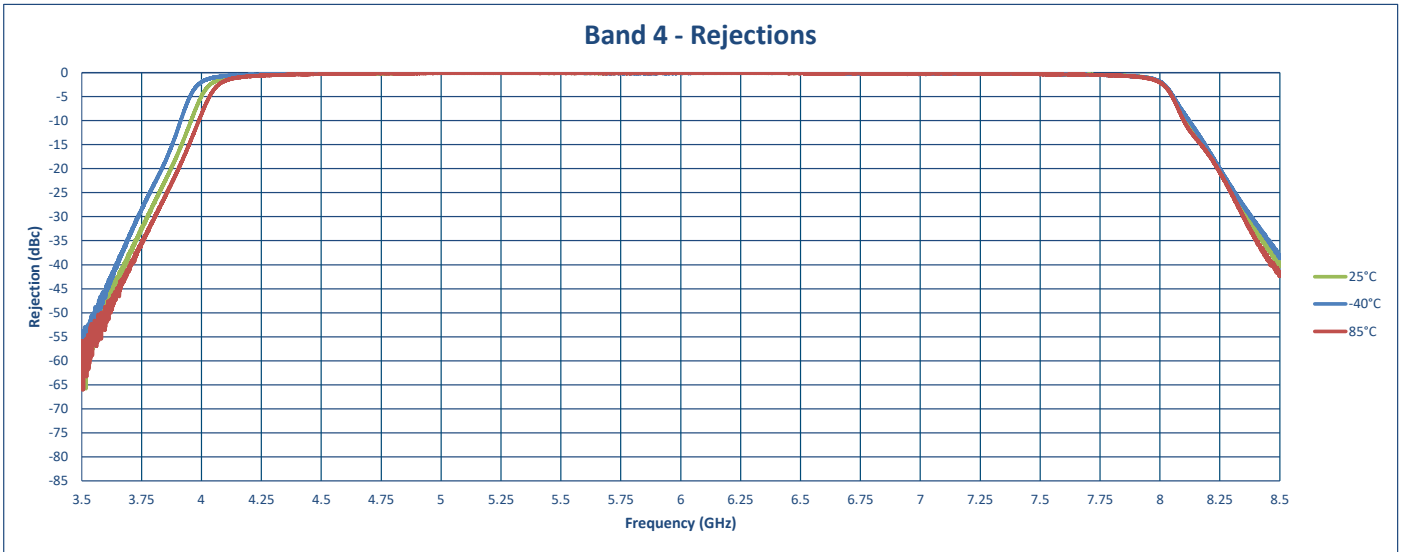


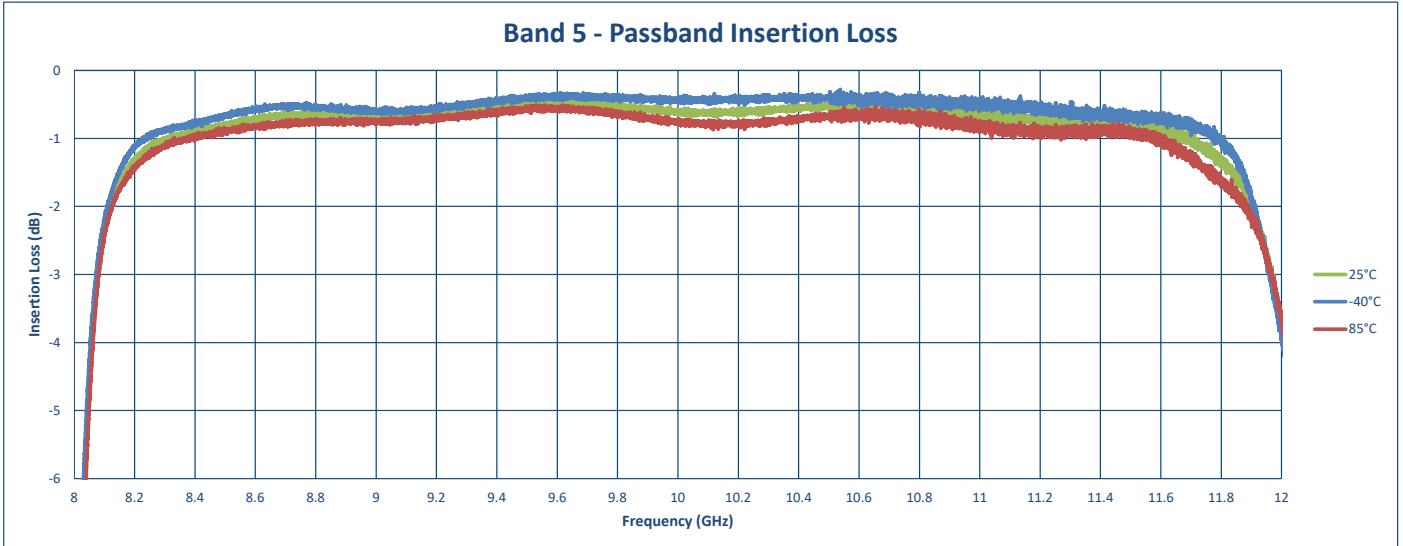
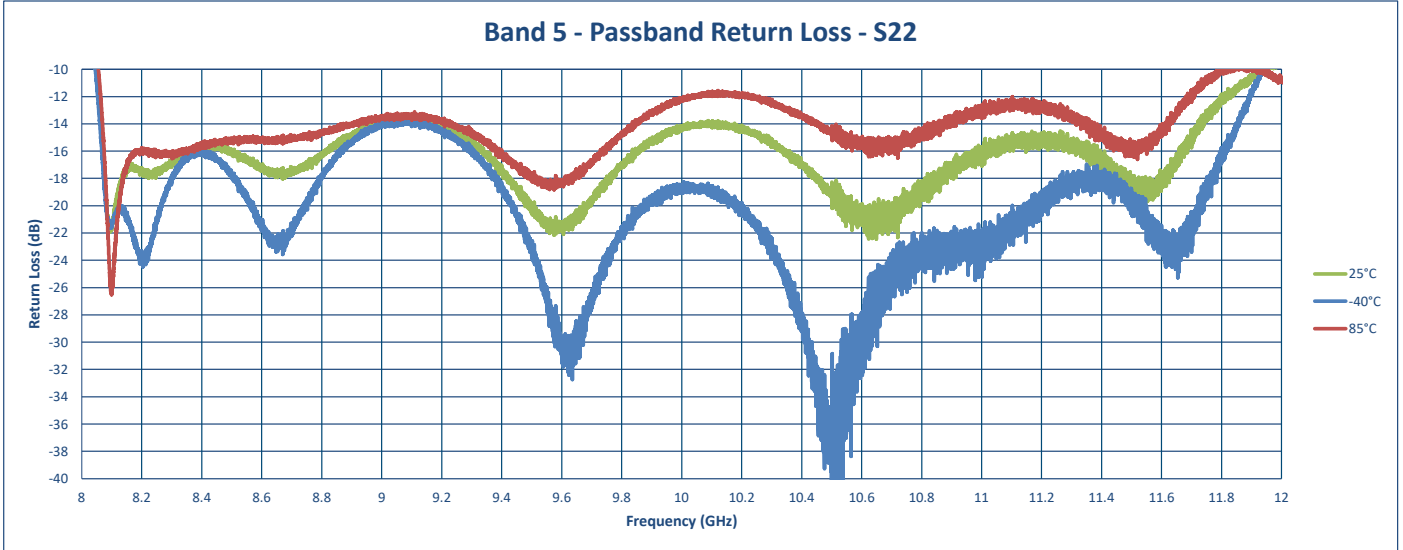
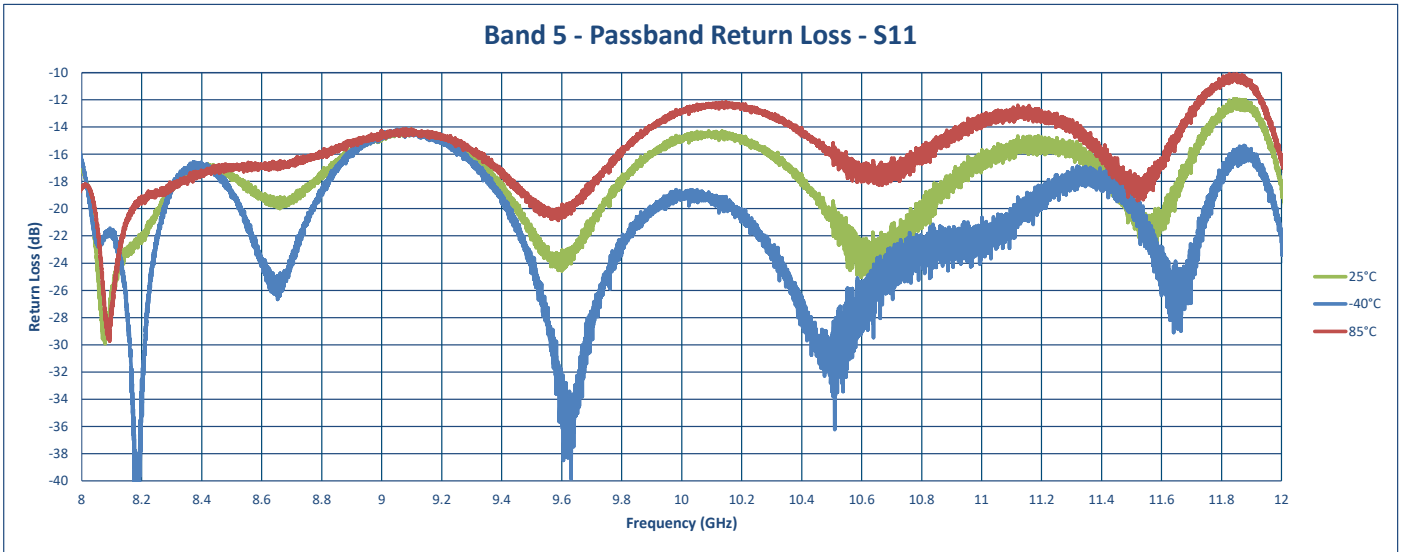
Band 4 - Passband Return Loss - S22

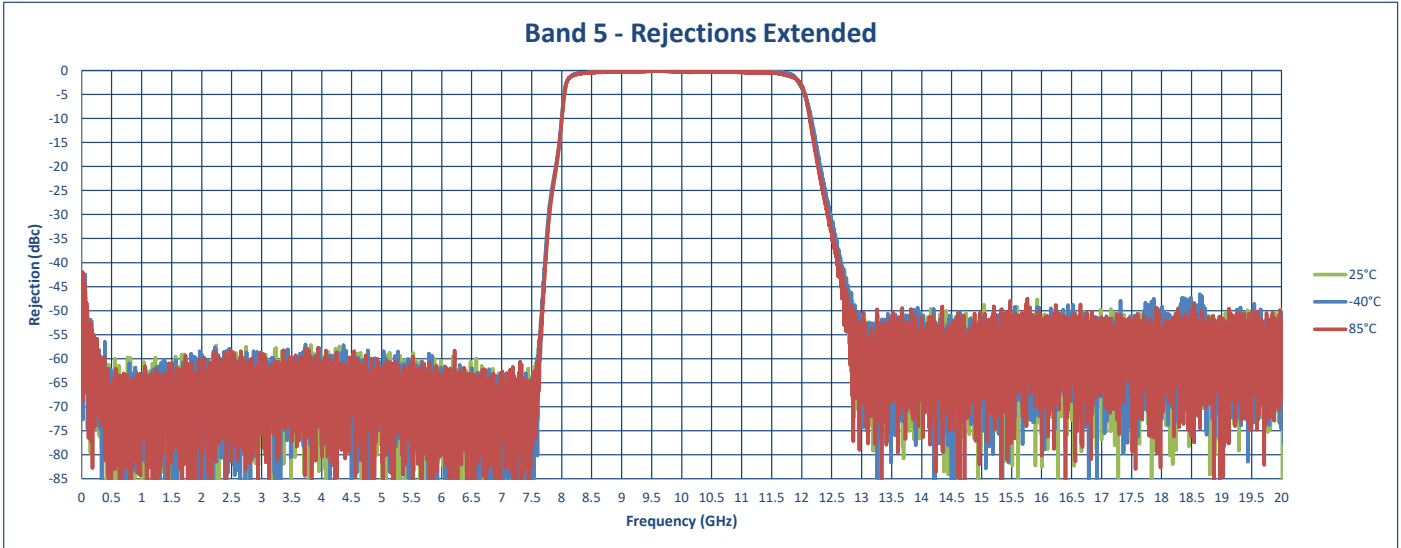
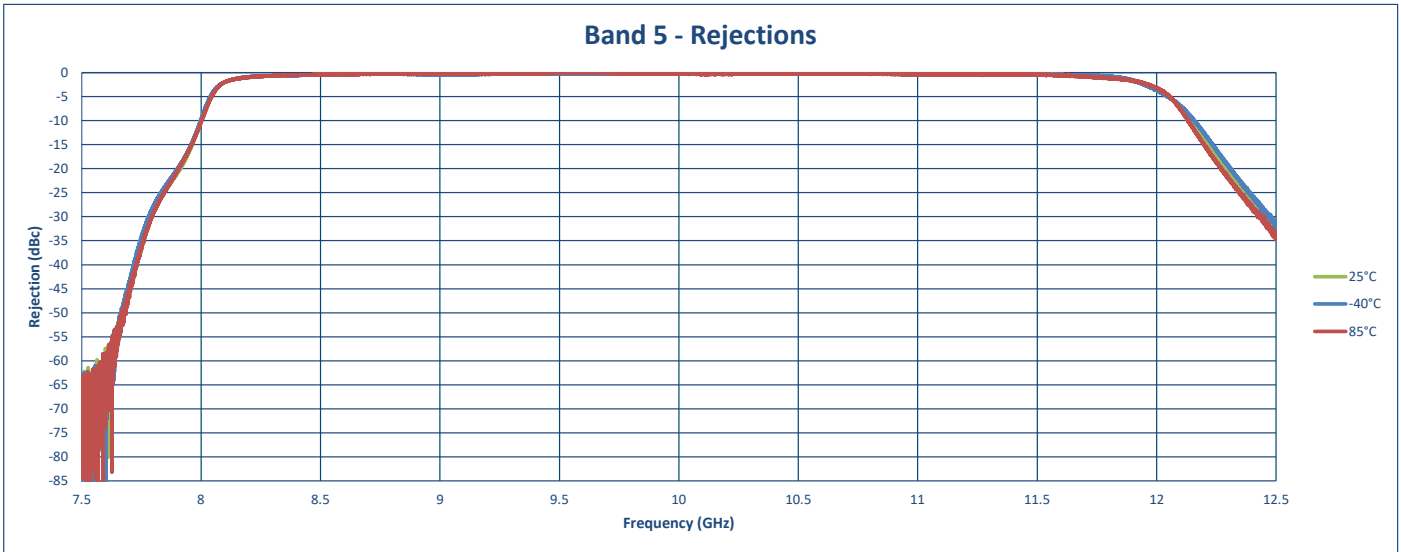


Band 4 - Passband Insertion Loss

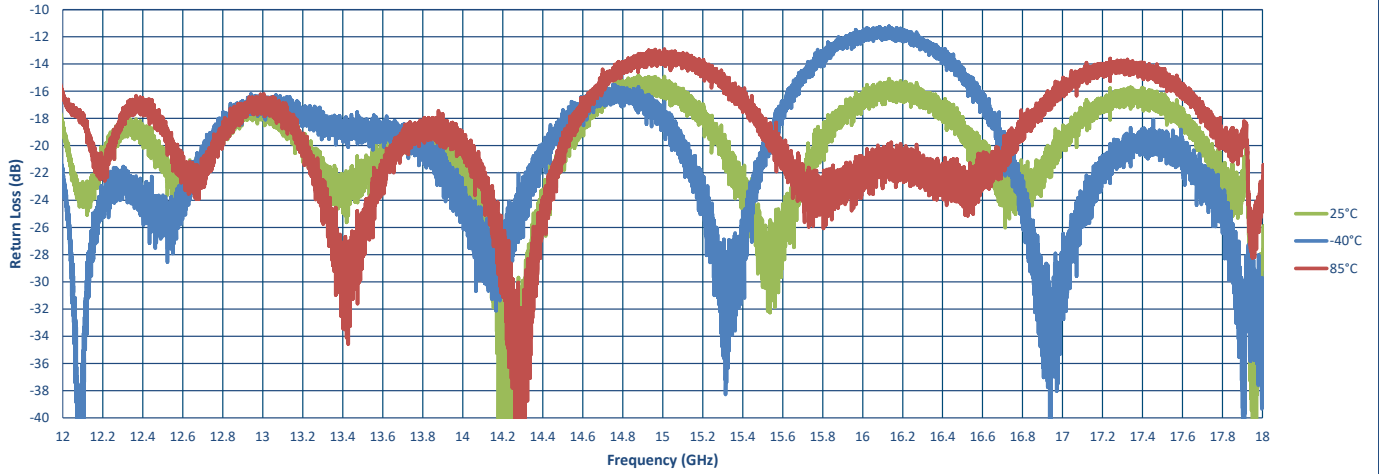




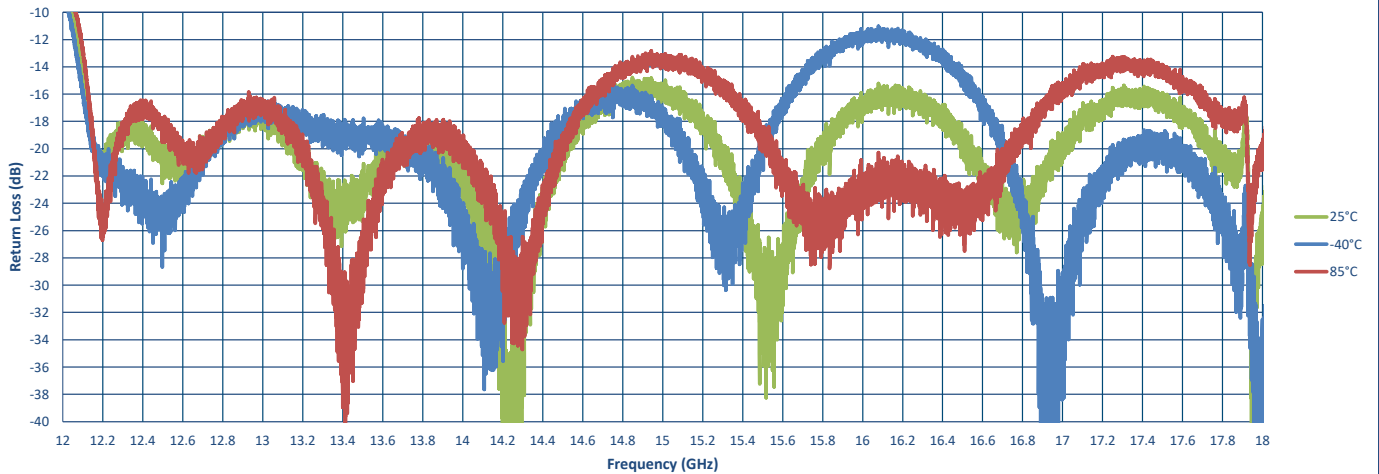




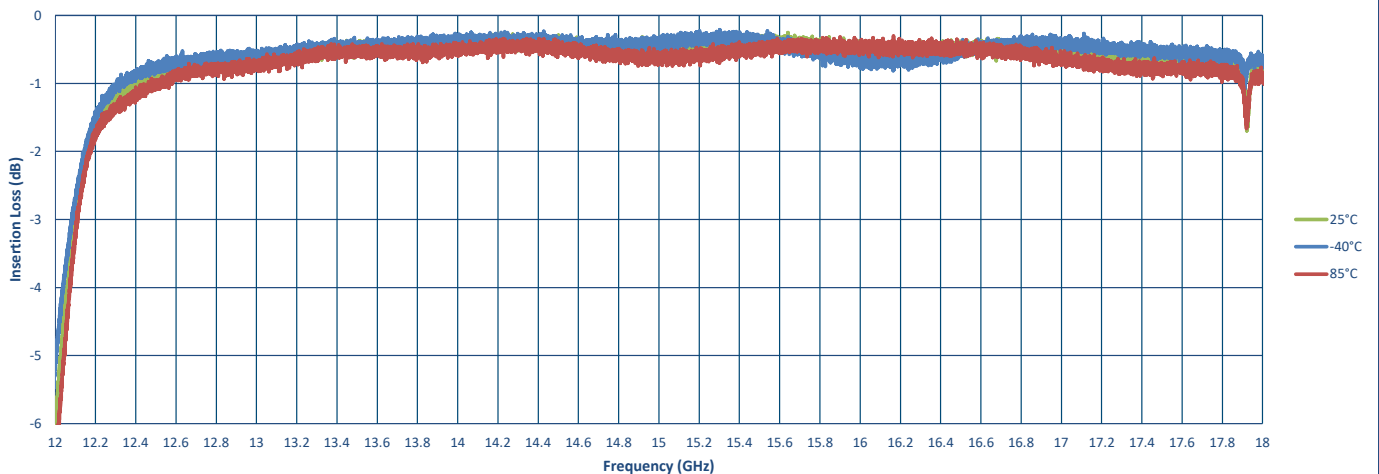
Band 6 - Passband Return Loss - S11



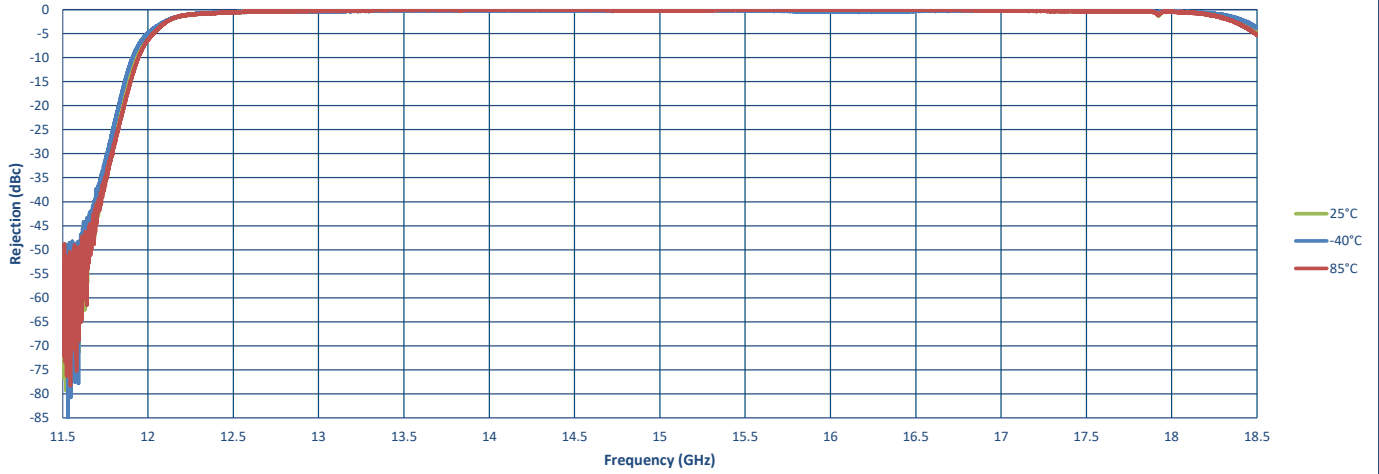
Band 6 - Passband Return Loss - S22



Band 6 - Passband Insertion Loss



Band 6 - Rejections



Band 6 - Rejections Extended

