

PMI MODEL NUMBER 7SFB9500-18G-CD-SFF OPERATES FROM 0.5 TO 18.5 GHz. THIS SWITCH FILTER BANK HAS BEEN OPTIMIZED FOR VERY LOW INSERTION LOSS WITH CHANNEL TO CHANNEL AMPLITUDE MATCHING



Reported By
Y Li
5/1/2023

**TYPICAL CHARACTERISTICS
ON
7SFB9500-18G-CD-SFF
PRODUCT FEATURE**

DESCRIPTION:

PMI MODEL NUMBER 7SFB9500-18G-CD-SFF OPERATES FROM 0.5 TO 18.5 GHz. THIS SWITCH FILTER BANK HAS BEEN OPTIMIZED FOR VERY LOW INSERTION LOSS WITH CHANNEL TO CHANNEL AMPLITUDE MATCHING.

DATE	REV	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	08/11/2005	
	A2	ECN # 23 - 0085	04/08/05	

SPECIFICATIONS:

- FREQUENCY RANGE:..... 0.5 GHz TO 18.5 GHz
- INSERTION LOSS (1dB PASSBAND):..... 7.0 dB MAX.
- VSWR:..... 2.2:1
- AMPLITUDE RIPPLE (PASSBAND):..... 2 dB MAX.
- SWITCHING SPEED:..... 500 ns MAX.
- VIDEO TRANSIENTS:..... 500mV PEAK TO PEAK
- DC POWER SUPPLY:..... +5V @ 175 mA MAX.
-12V @ 100 mA MAX.
- FINISH:..... GOLD PLATED

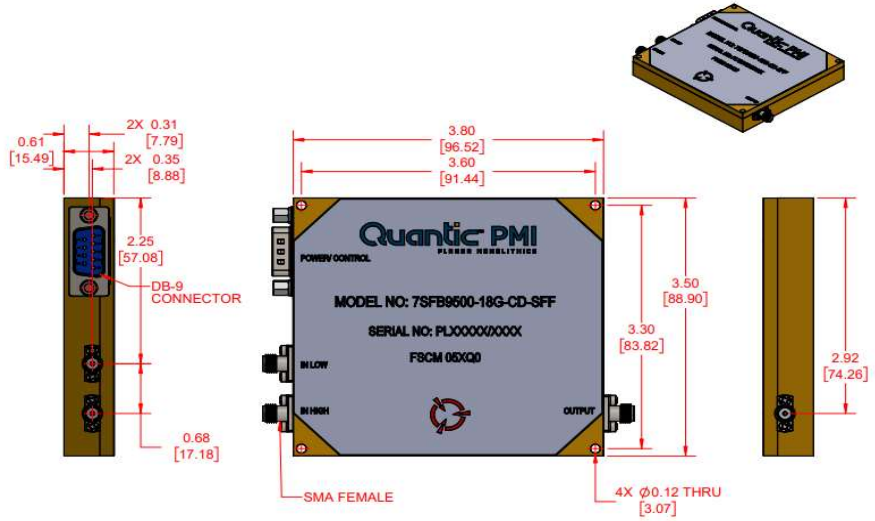
TRUTH TABLE				
L2	L1	L0	SELECTED PATH	SELECTED INPUT
0	0	0	CHANNEL 1 (0.5 TO 0.85 GHz)	LOW
0	0	1	CHANNEL 2 (0.7 TO 1.30 GHz)	LOW
0	1	0	CHANNEL 3 (1.20 TO 2.0 GHz)	LOW
0	1	1	CHANNEL 4 (2.0 TO 3.5 GHz)	LOW
1	0	0	CHANNEL 5 (3.4 TO 6.0 GHz)	LOW
1	0	1	CHANNEL 6 (5.9 TO 10.4 GHz)	HIGH
1	1	0	CHANNEL 7 (10.3 TO 18.5 GHz)	HIGH
ISOLATION STATE				

MULTI-PIN PIN OUT	
PIN	FUNCTION
1	LOGIC LINE (L0)
2	+5 VDC
3	LOGIC LINE (L1)
4	GND
5	LOGIC LINE (L2)
6	-12 VDC
7	NC
8	NC
9	NC

ENVIRONMENTAL RATINGS:

- TEMPERATURE:..... -40°C TO +70°C (OPERATING)
-55°C TO +125°C (STORAGE)
- HUMIDITY:..... MIL-STD-202F, METHOD 103B COND. B
- SHOCK:..... MIL-STD-202F, METHOD 213B COND. B
- VIBRATION:..... MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE:..... MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE:..... MIL-STD-202F, METHOD 107D COND. A

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



PMI CONFIDENTIAL AND PROPRIETARY

APPROVALS		DATE
DESIGN	S. AZHAR	08/11/05
ISSUED		

7309-A GROVE ROAD, FREDERICK, MARYLAND, 21704 USA
 WWW.QUANTICPMI.COM
 7SFB9500-18G-CD-SFF
 TITLE: OUTLINE
 SIZE: FSCM 05XQ0
 PART NO: 27044500
 SCALE: 1:1
 SHEET 1 OF 1



**SUMMARY TEST DATA
ON
7SFB9500-18G-CD-SFF**

Model No: 7SFB9500-18G-CD-SFF

Tested By: Y Li
Temperature: 25°C

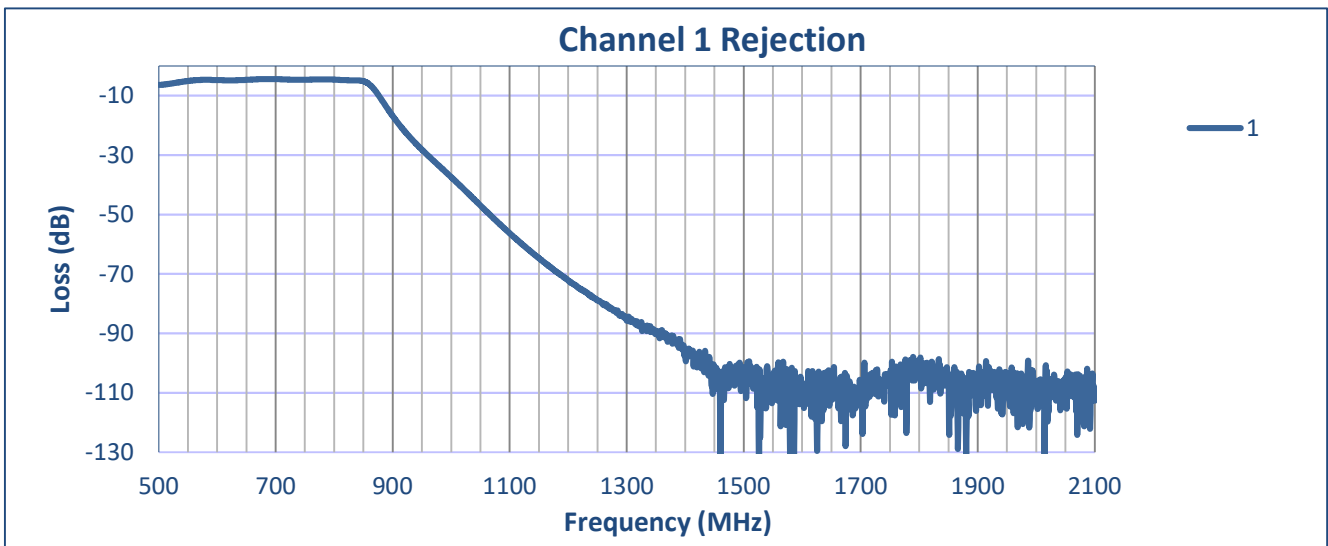
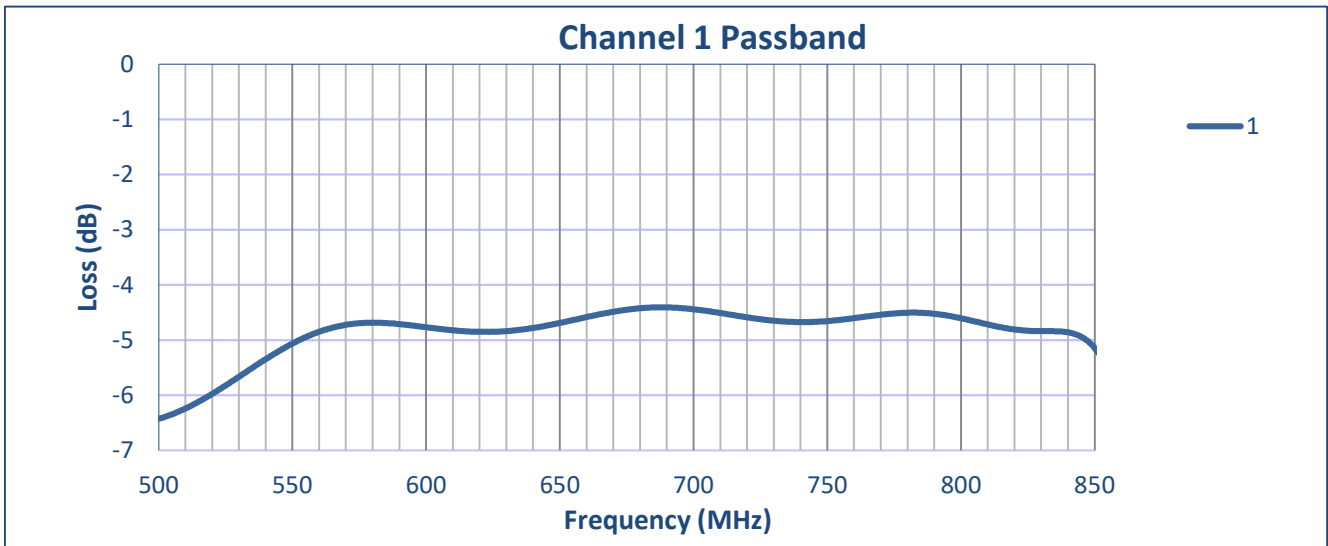
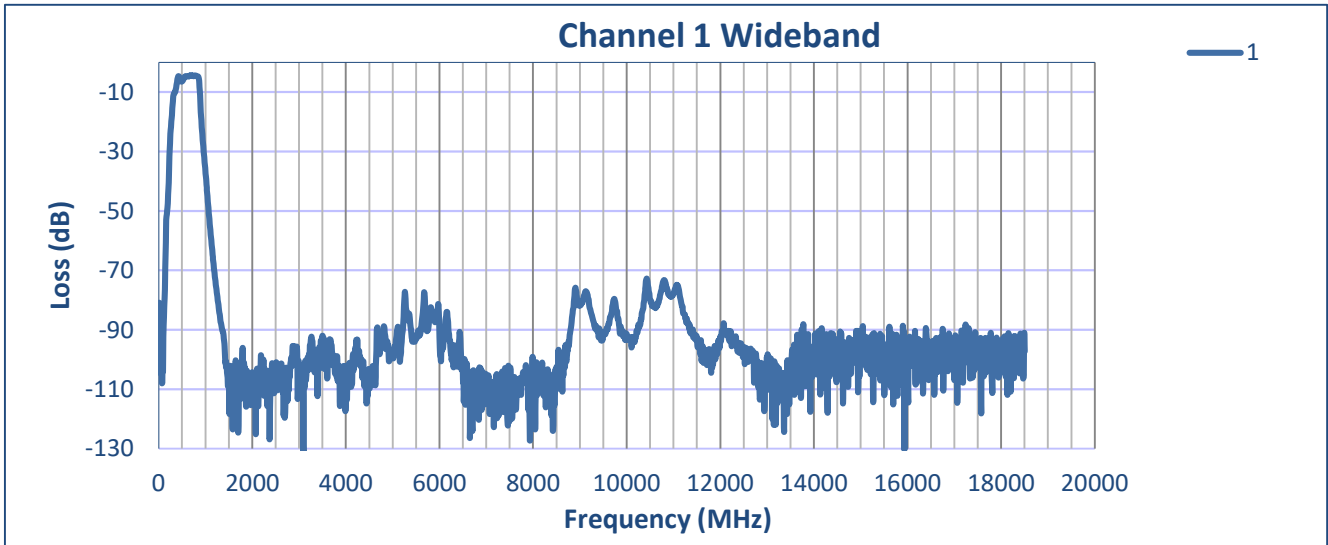
Date: 4/29/2023

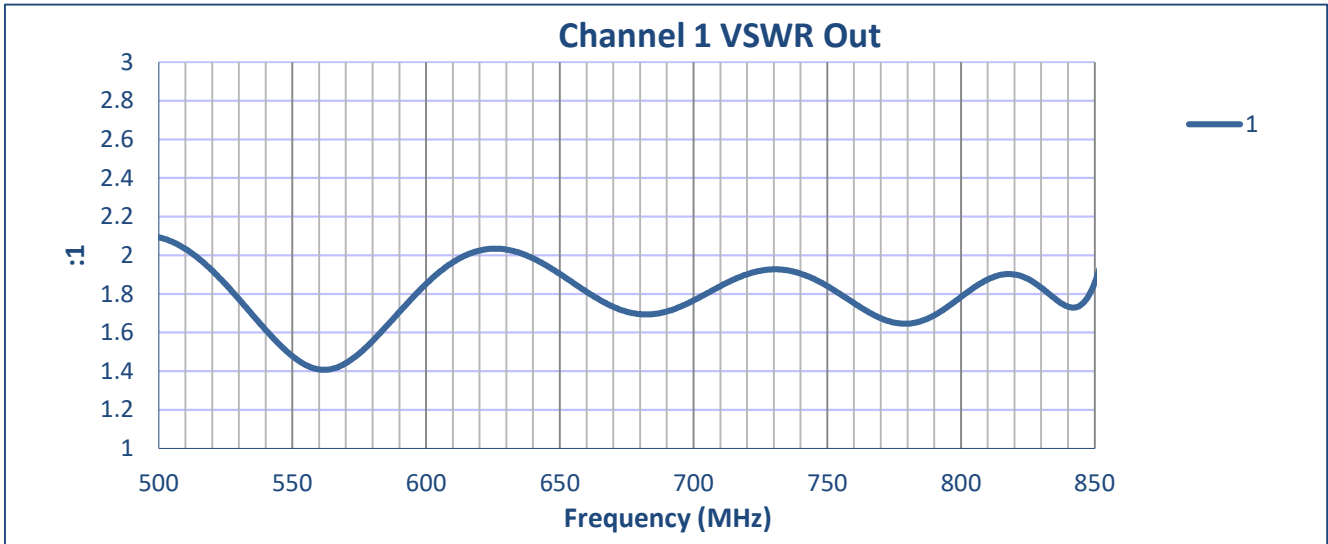
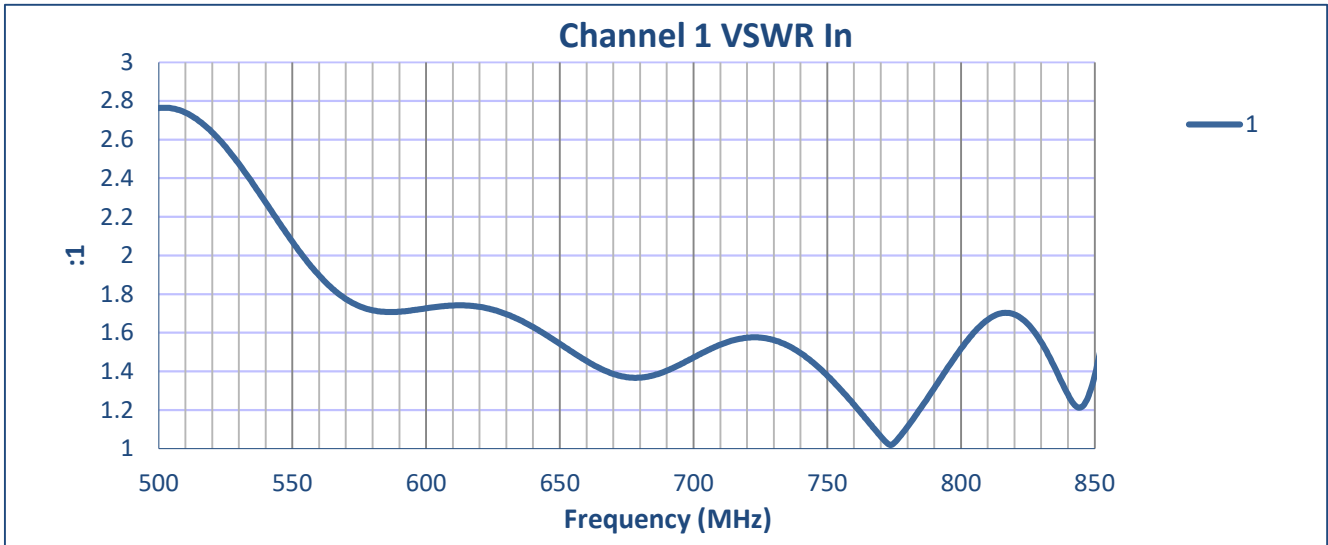
Drawing No: 27644500 Rev: A1

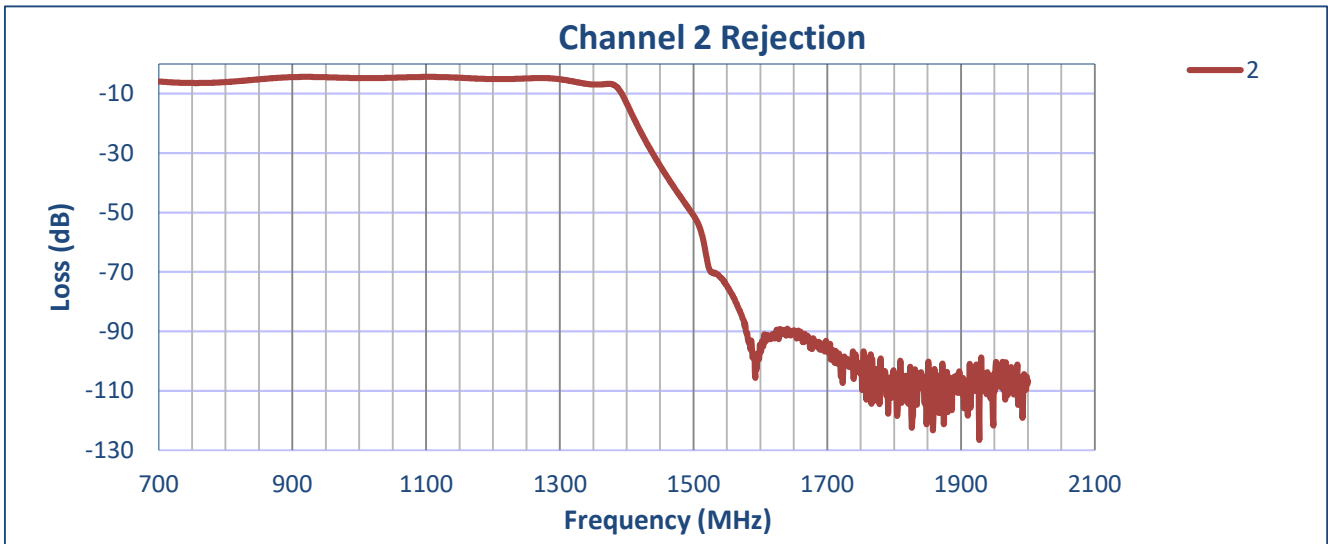
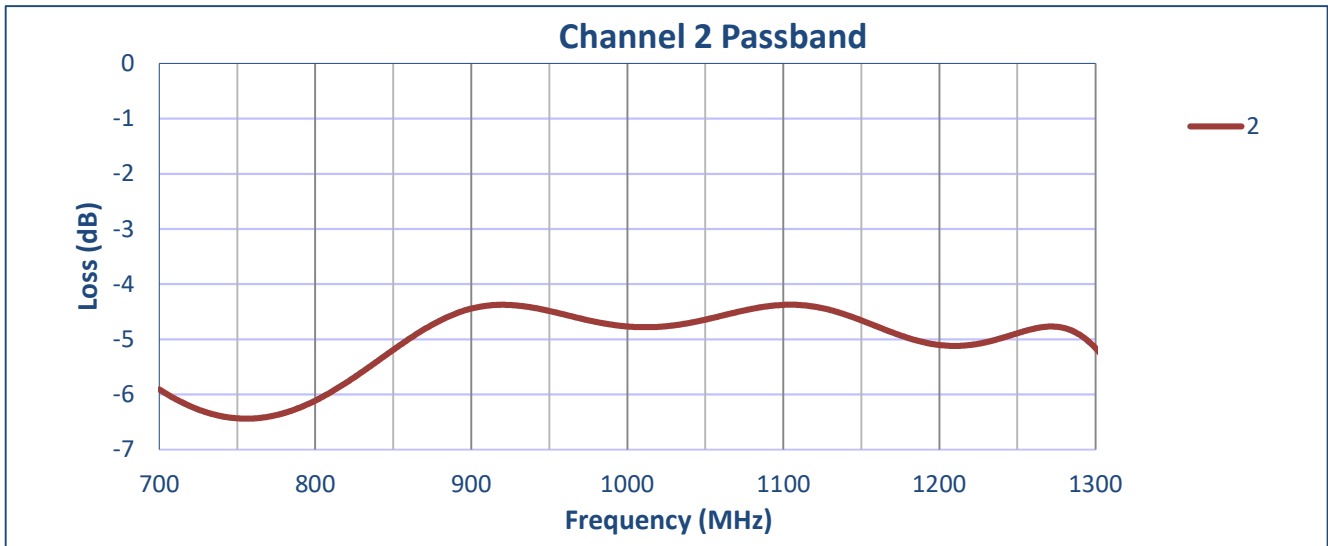
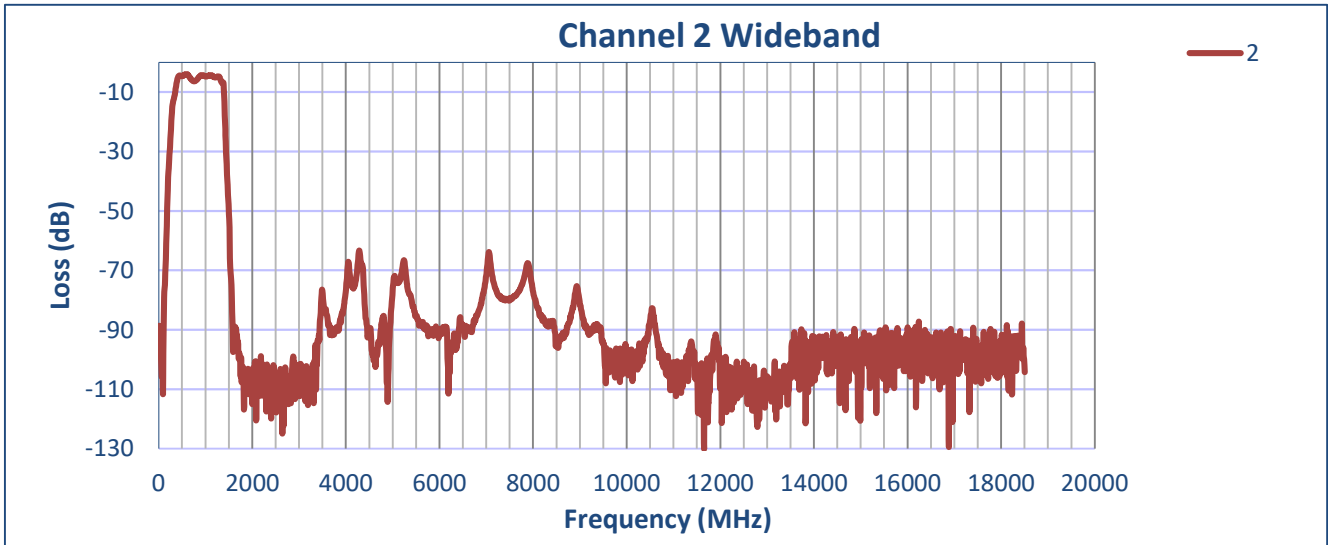
TEST ITEM	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range	0.5 GHz to 18.5 GHz	0.5 GHz to 18.5 GHz	
2	Insertion Loss (Passband)	7 dB Max	Channel 1: 6.4 dB Channel 2: 6.4 dB Channel 3: 5.4 dB Channel 4: 6 dB Channel 5: 6.5 dB Channel 6: 4.3 dB Channel 7: 6.5 dB	
3	VSWR: In/Out	2.2:1 Max	Channel 1: 2.8 Channel 2: 3.1 Channel 3: 1.9 Channel 4: 1.8 Channel 5: 1.9 Channel 6: 1.8 Channel 7: 1.8	
4	Amplitude Ripple (Passband)	+ - 2 dB Max	Channel 1: 1 dB Channel 2: 1 dB Channel 3: 0.5 dB Channel 4: 0.9 dB Channel 5: 1.1 dB Channel 6: 0.6 dB Channel 7: 1.7 dB	
5	Switching Speed	500 ns Max.	252 ns	
6	Video Transients	500 mV Pk-Pk Max	380 mV Pk-Pk	
7	DC Supply	+5VDC @ 175 mA Max -12VDC @ 100 mA Max	5V @ 65 mA -12V @ 49 mA	

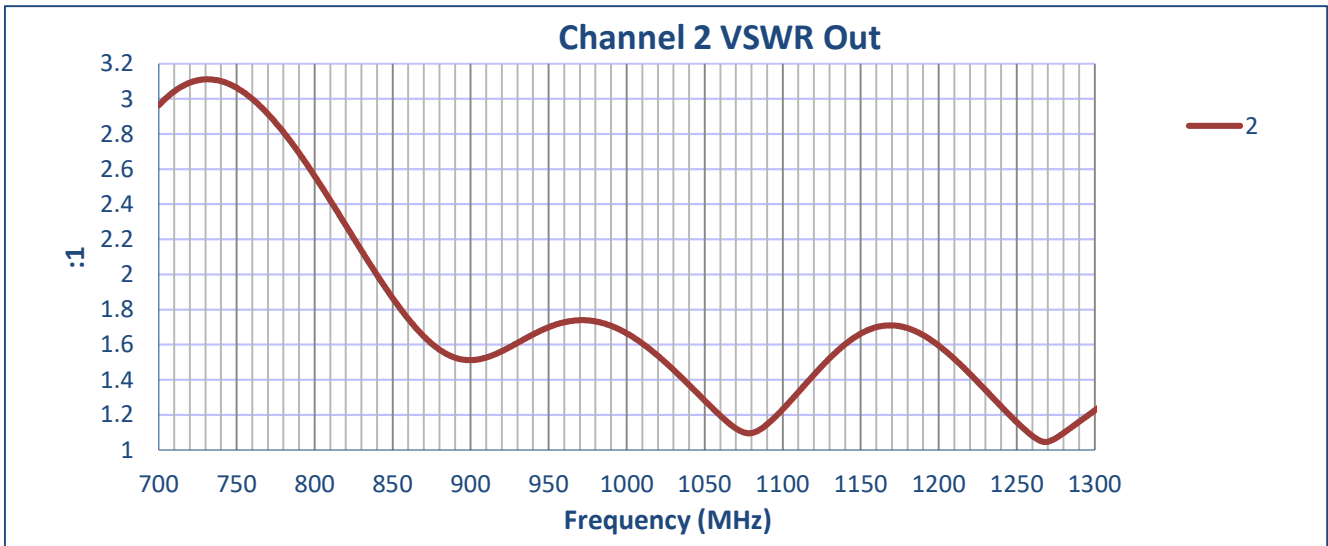
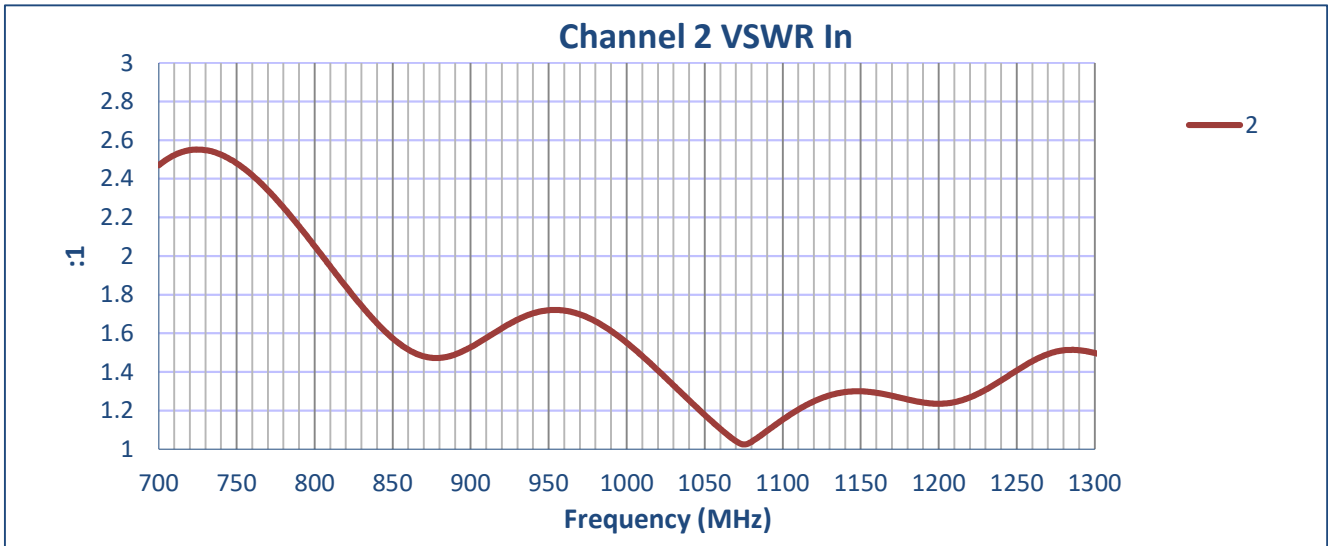
QA/QC Approval: _____

Date: _____

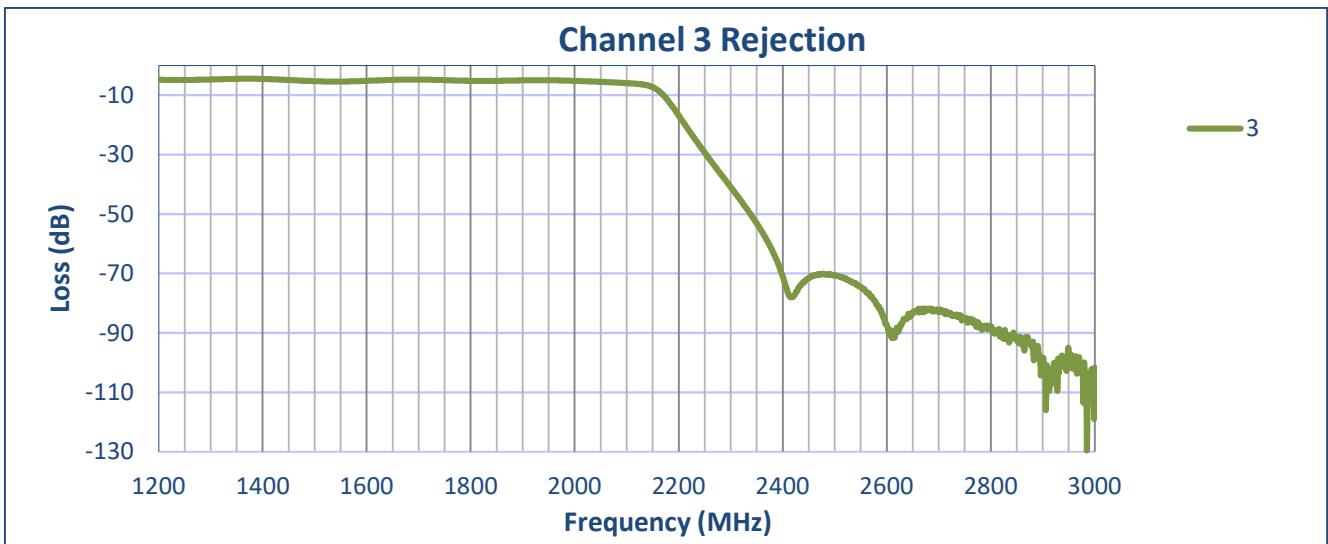
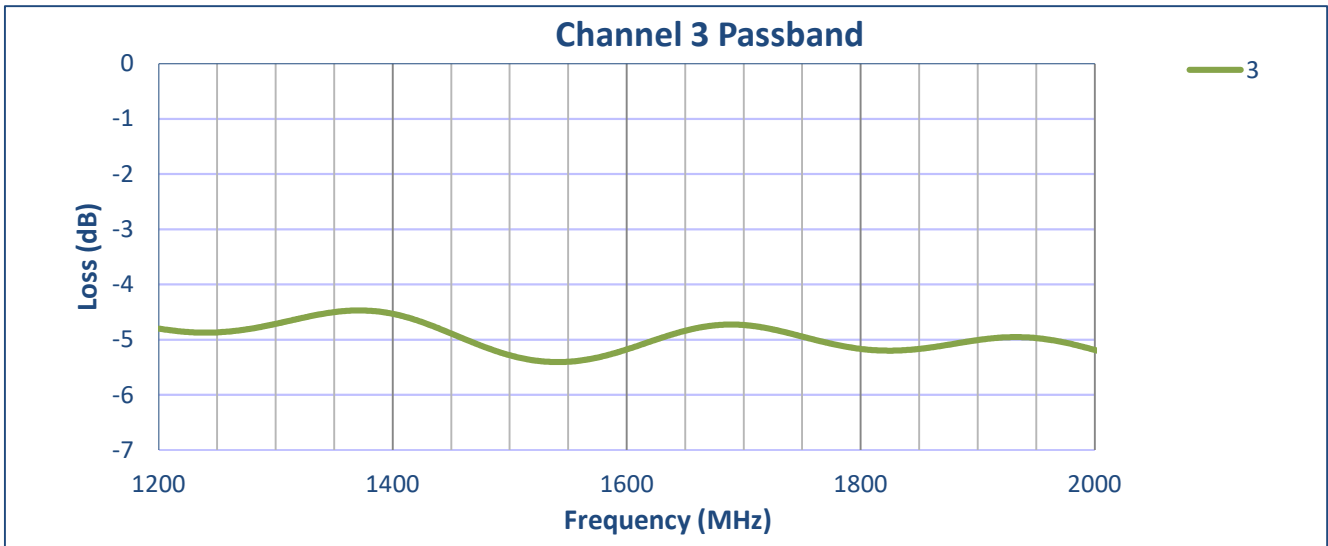
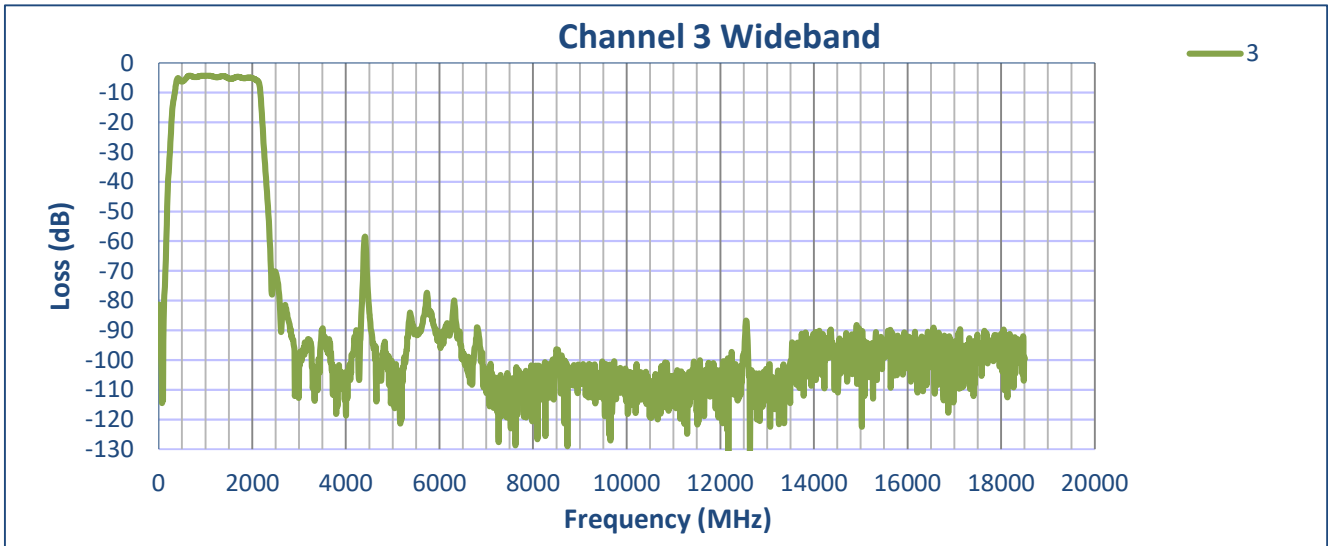




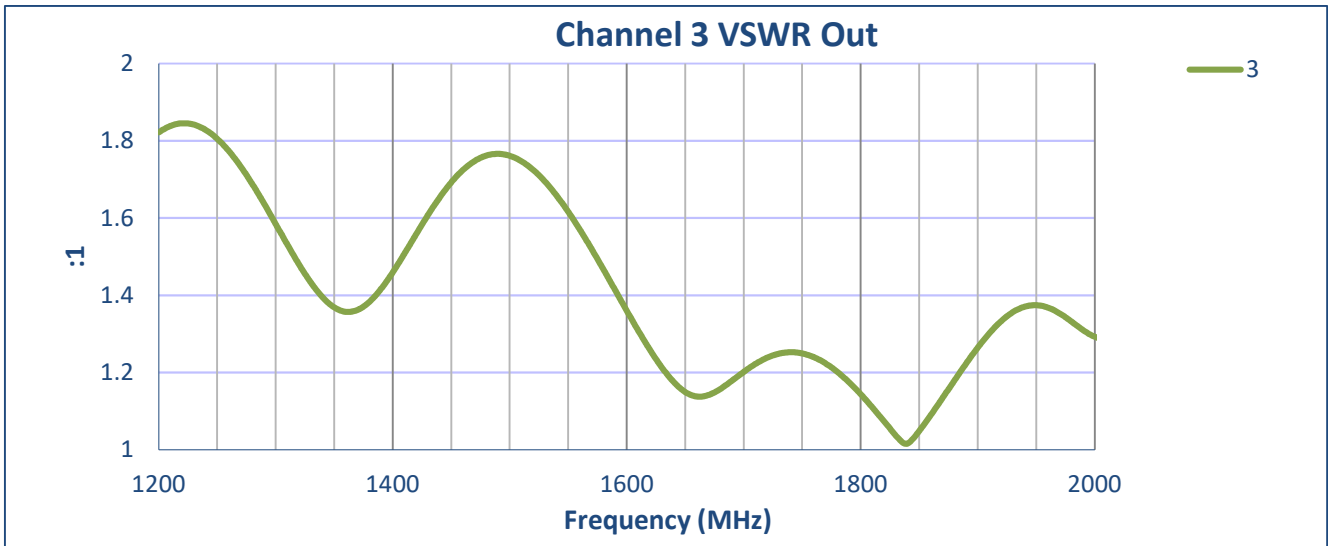
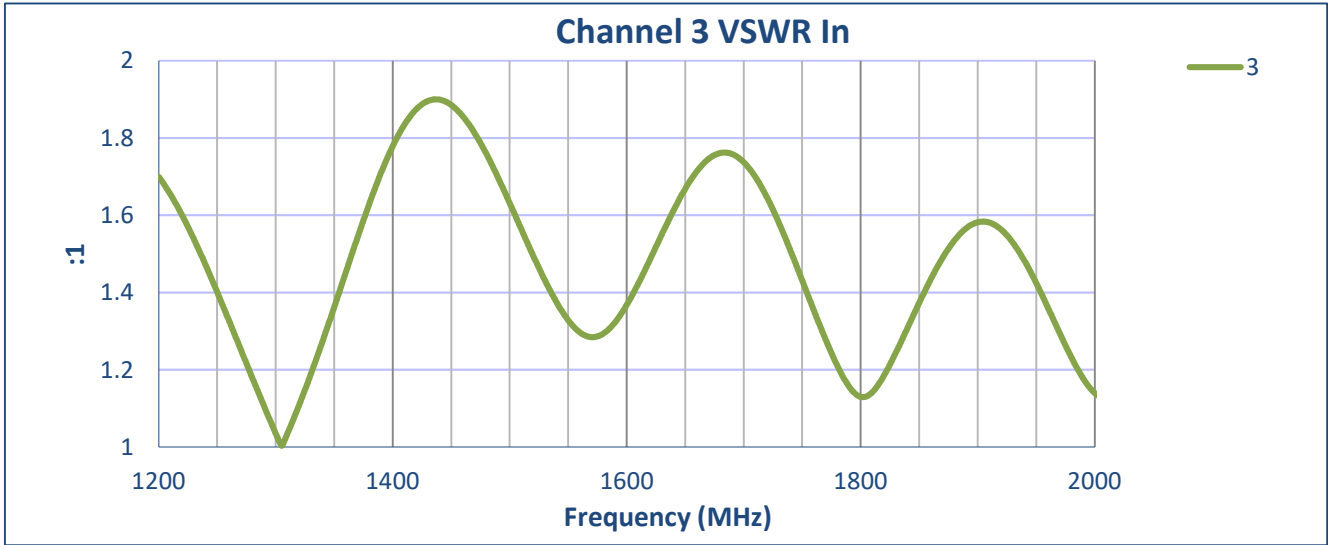


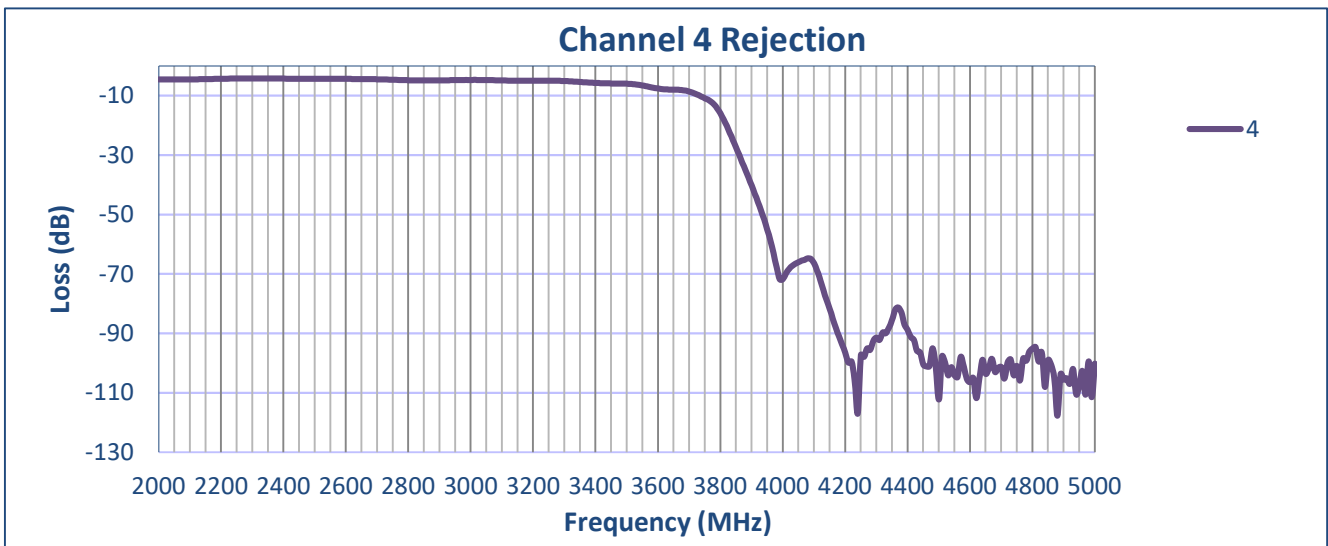
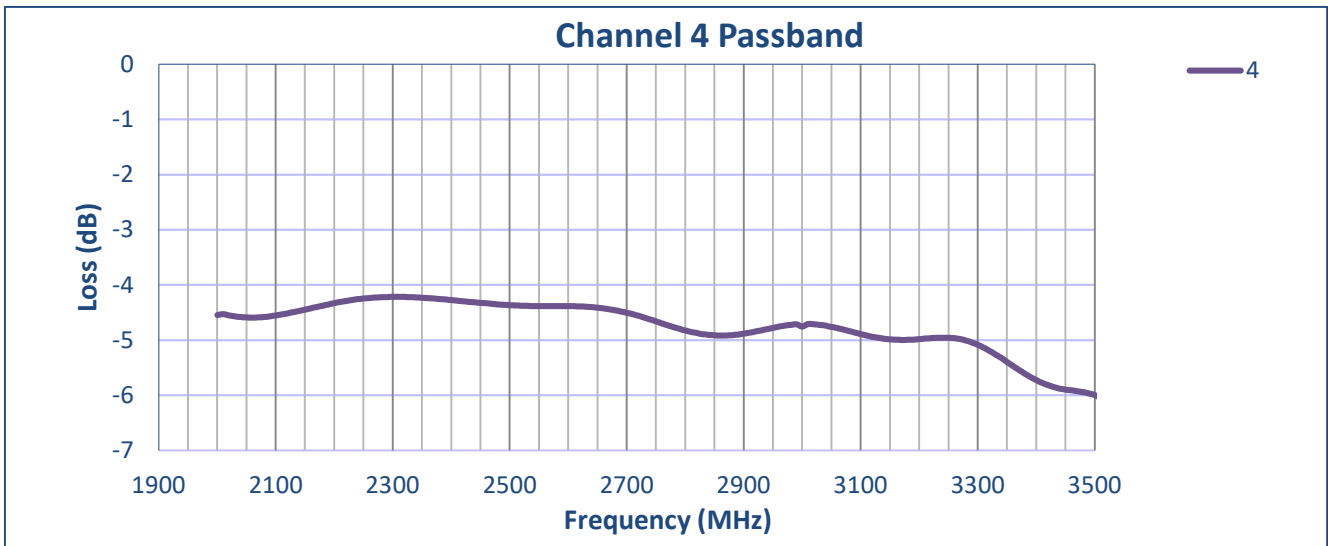
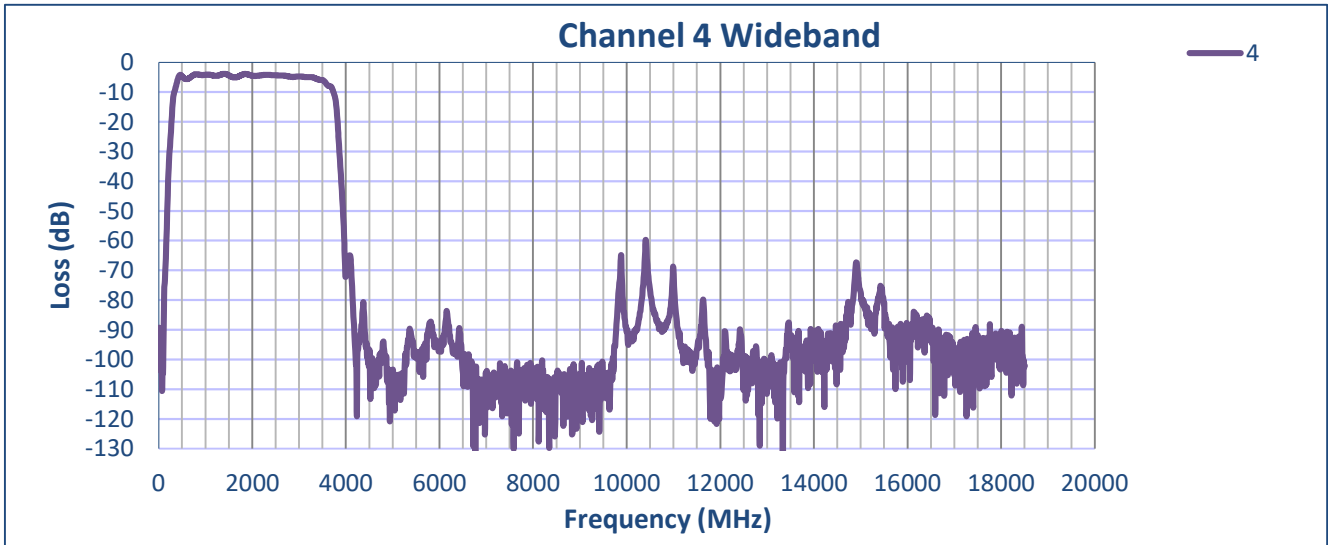


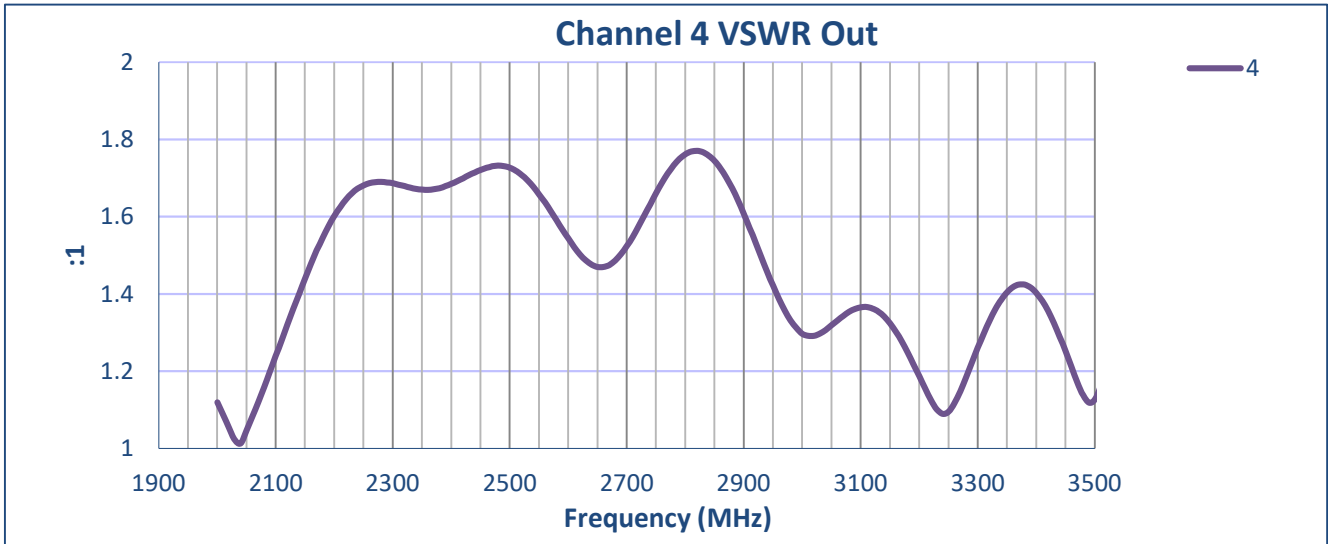
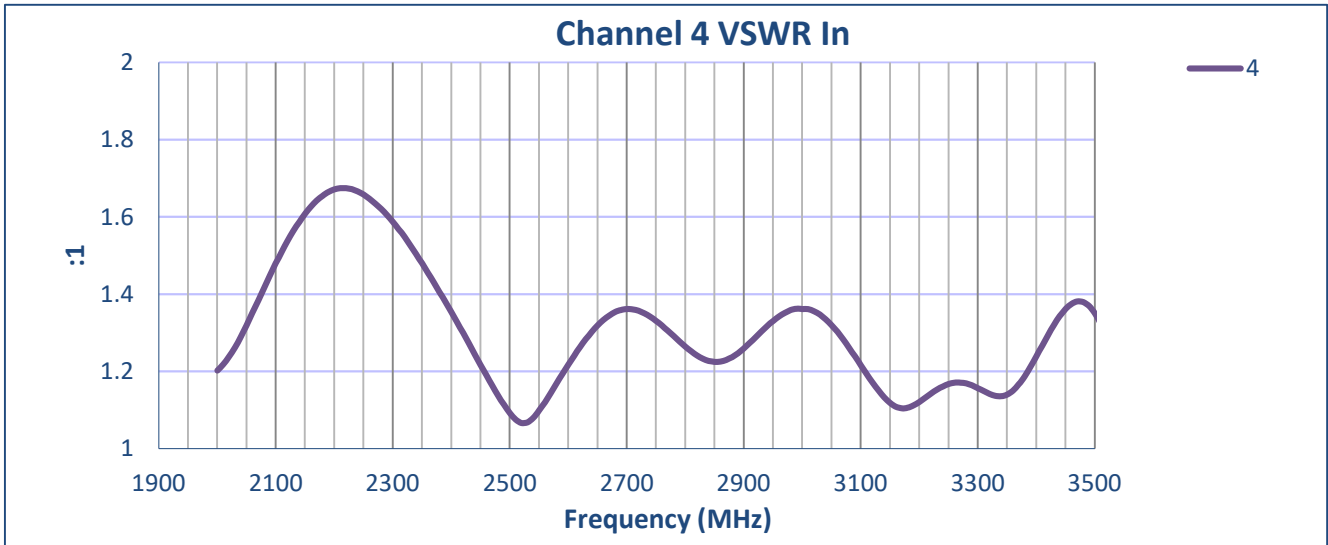
**SUMMARY TEST DATA
ON
7SFB9500-18G-CD-SFF**

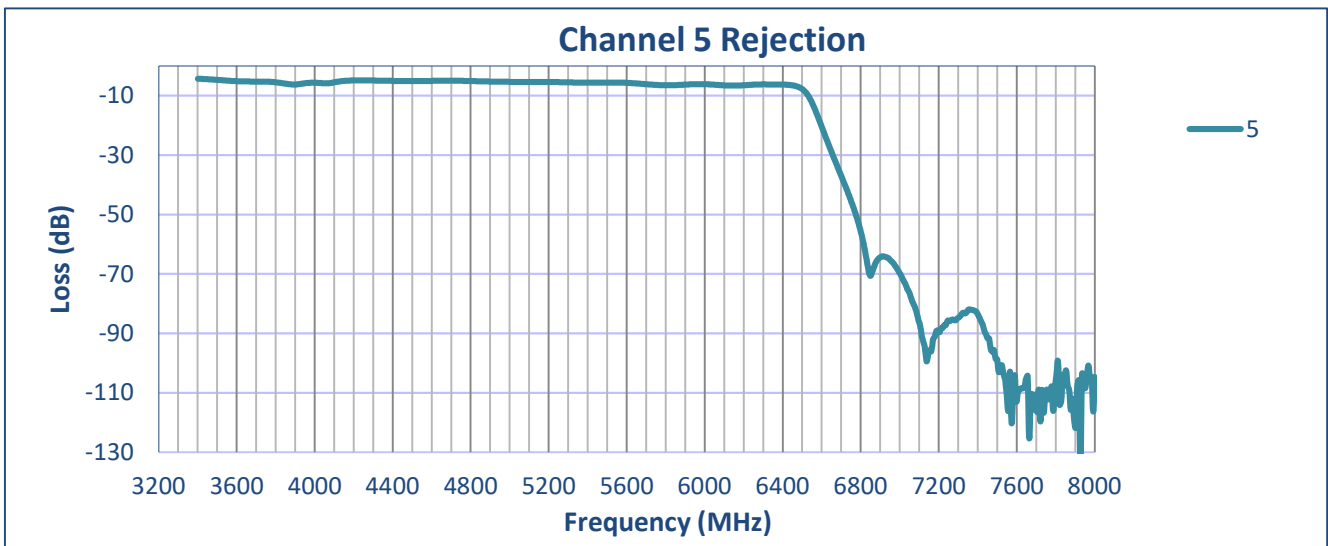
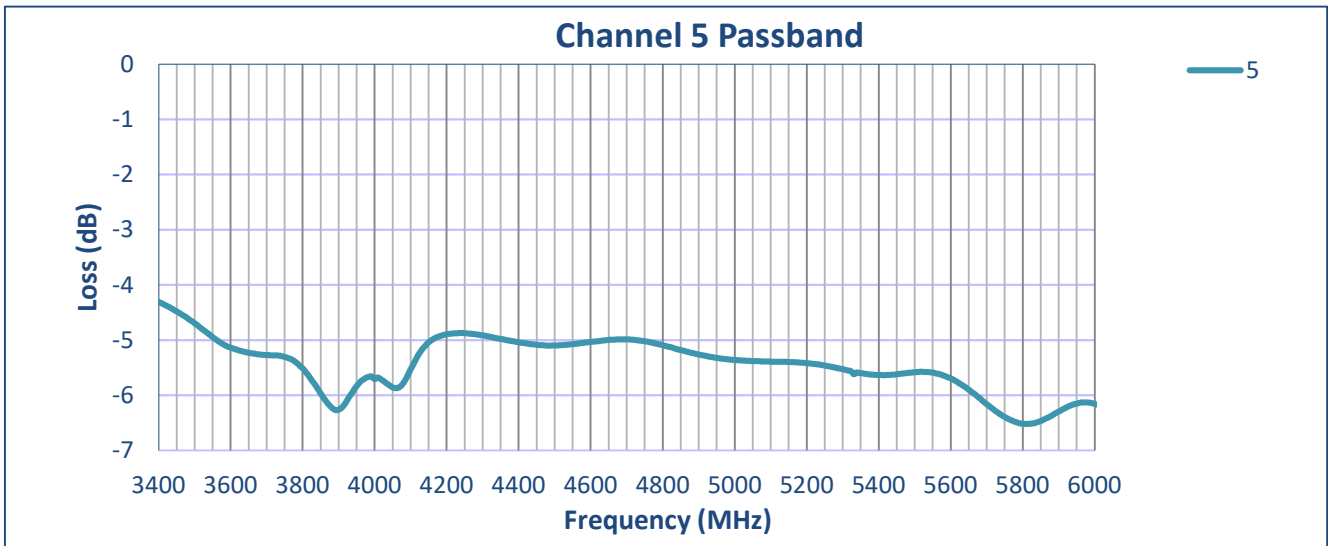
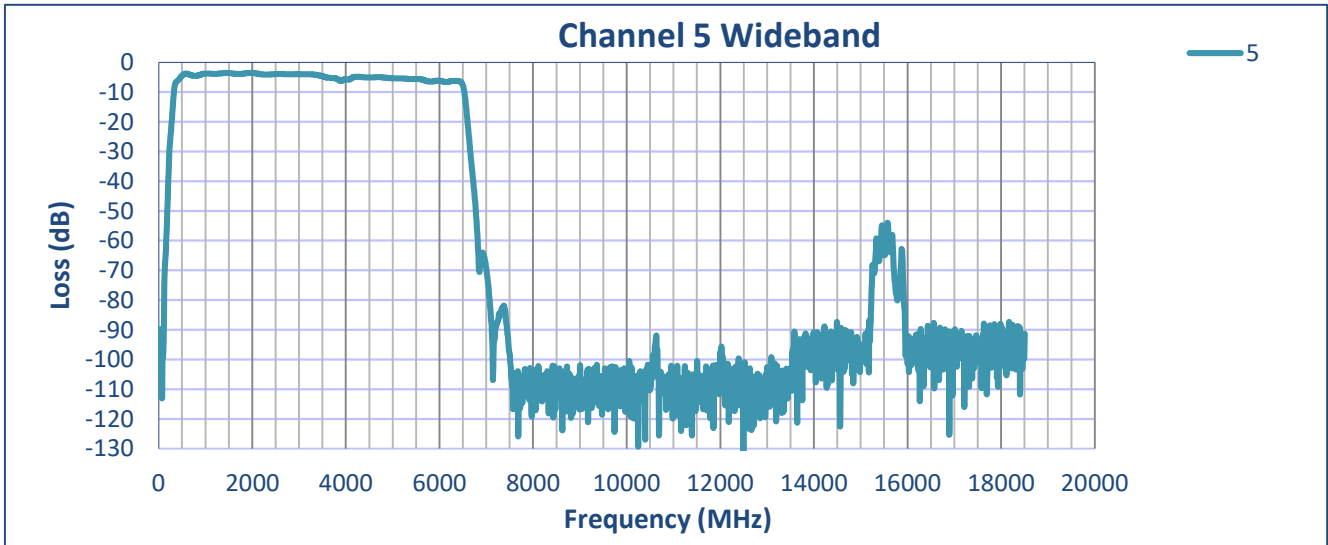


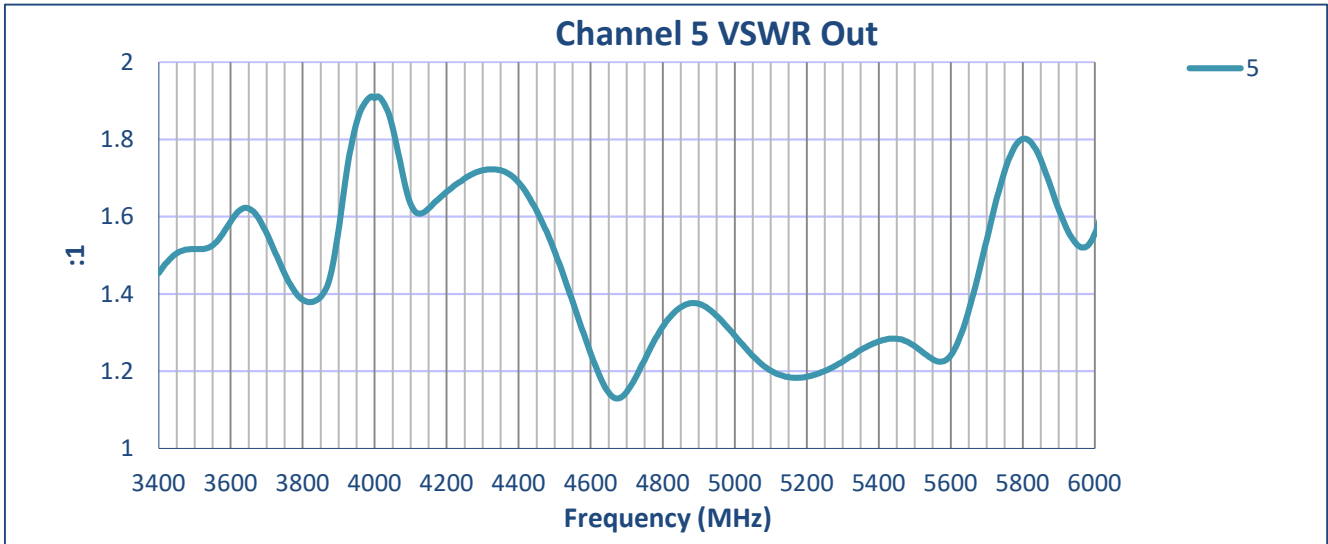
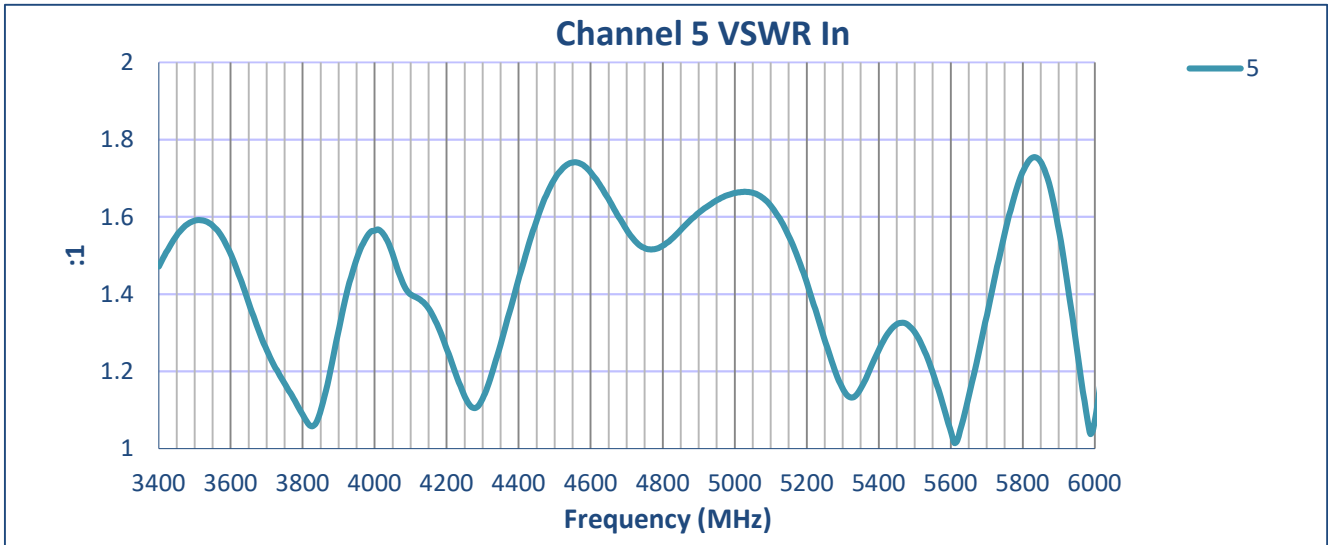
**SUMMARY TEST DATA
ON
7SFB9500-18G-CD-SFF**

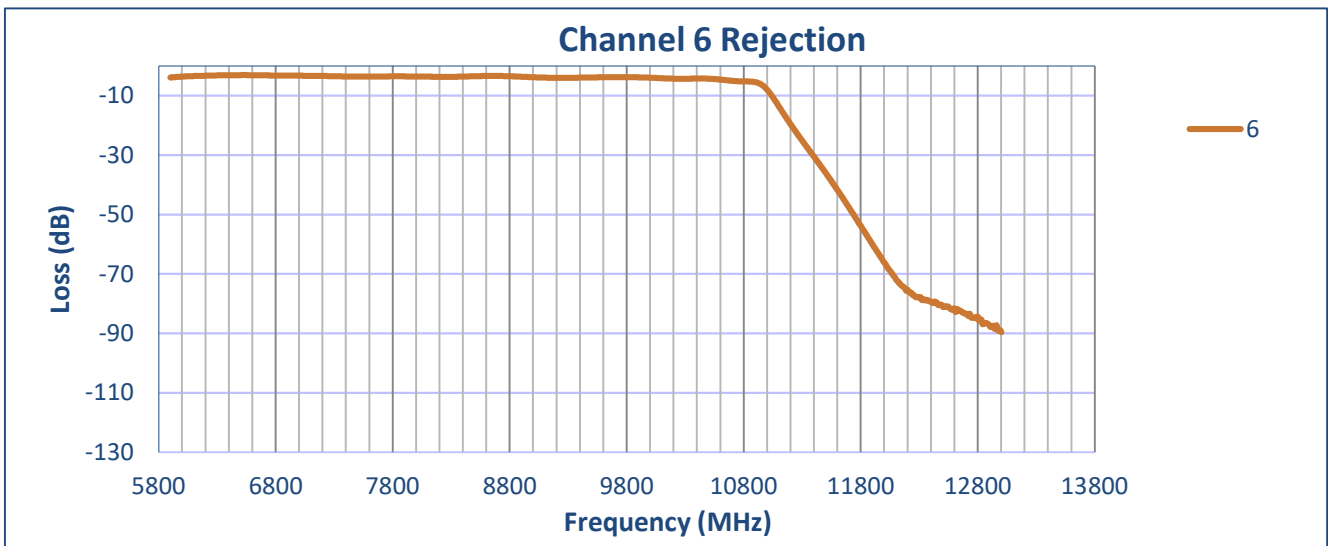
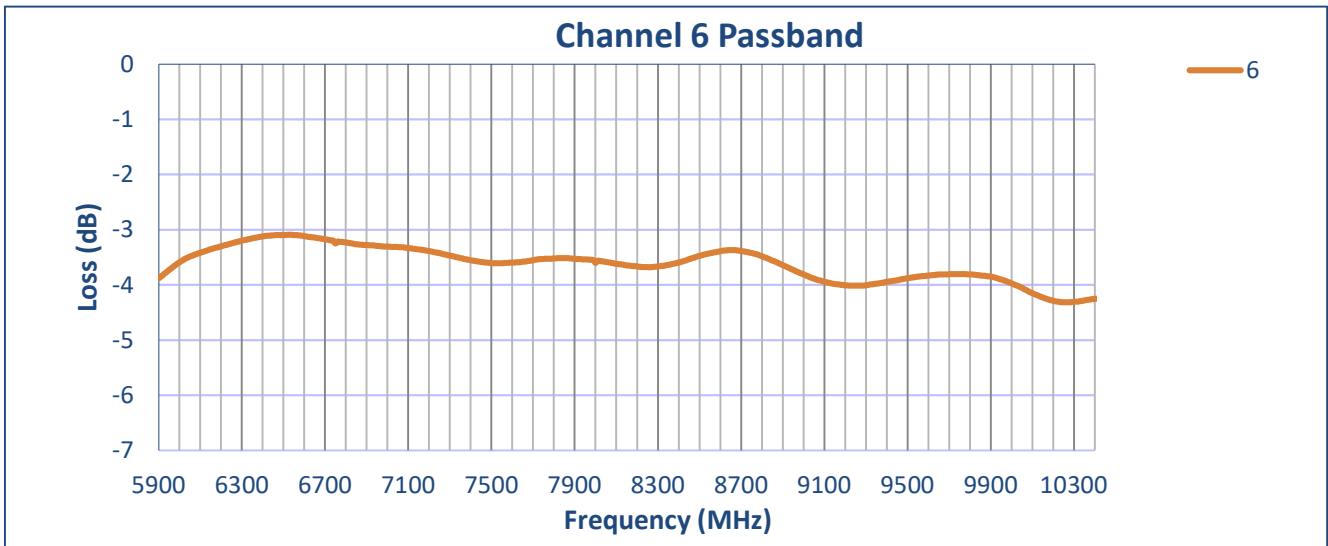
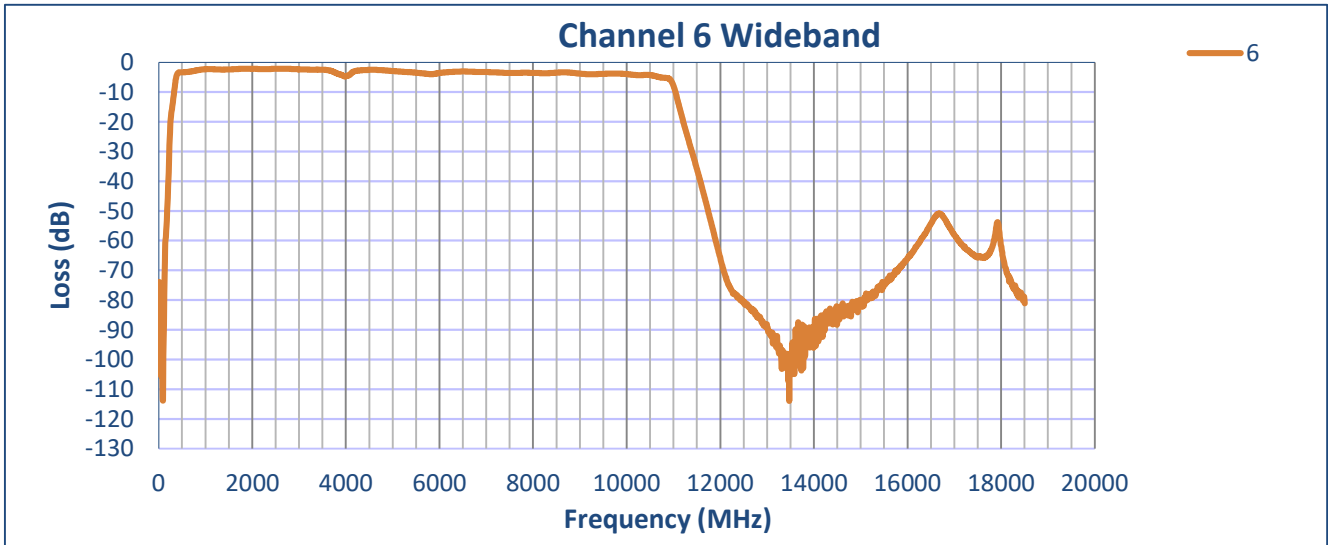


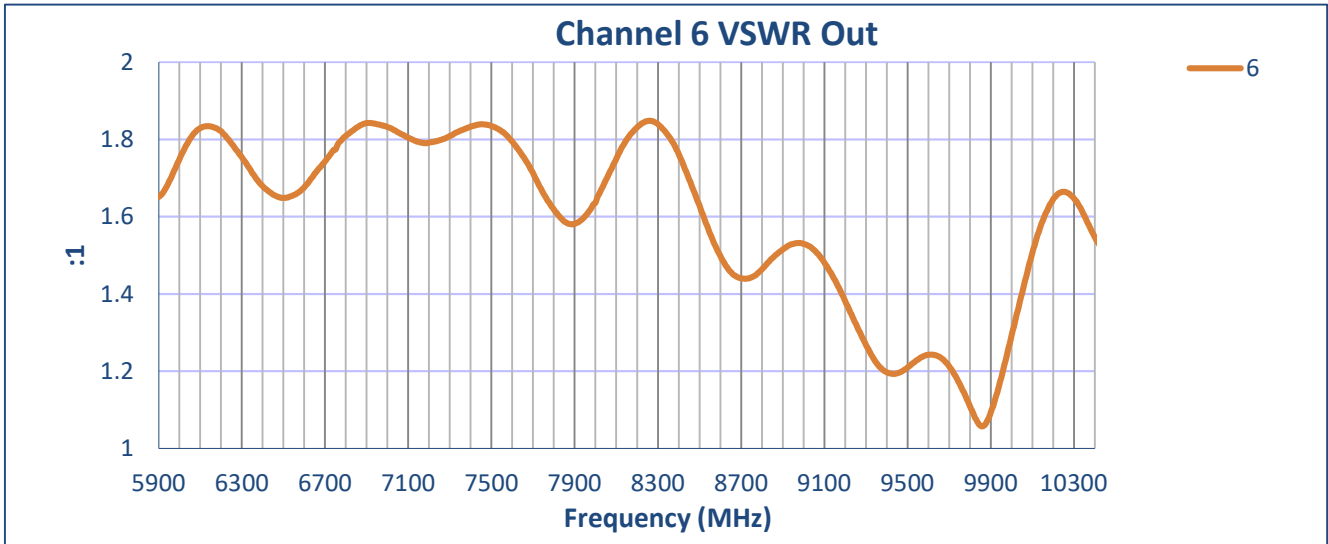
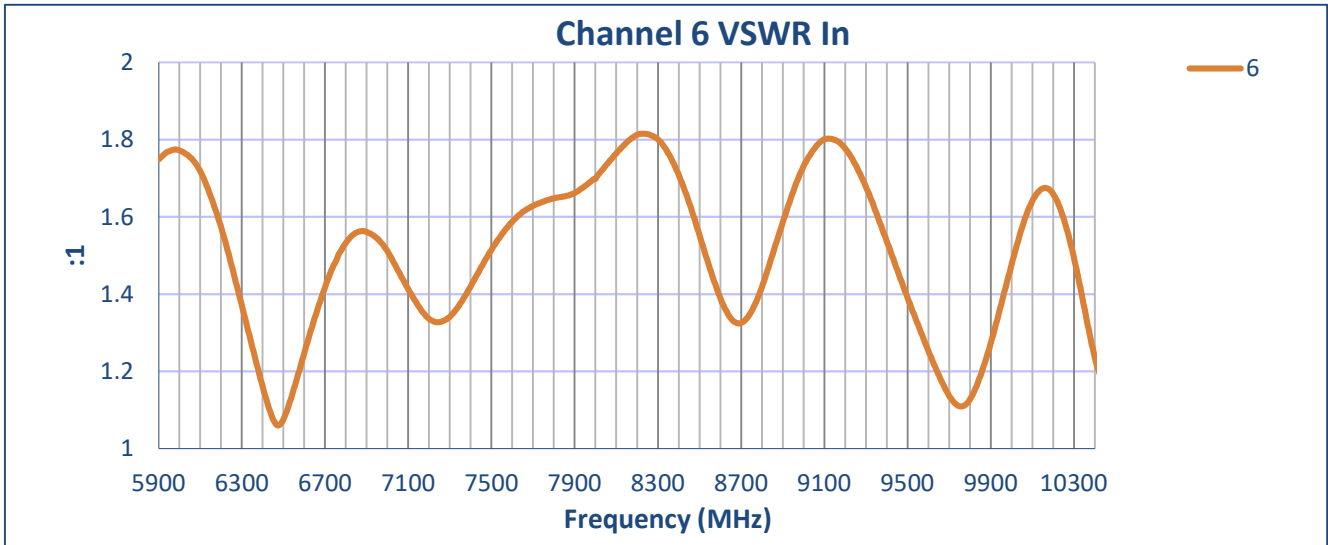


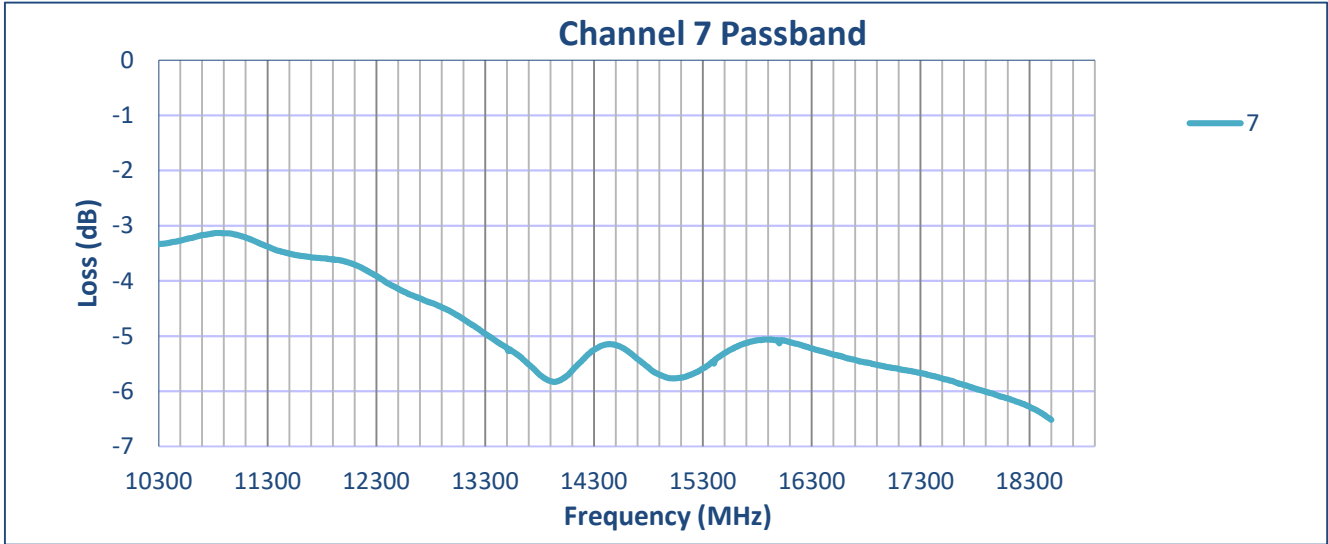
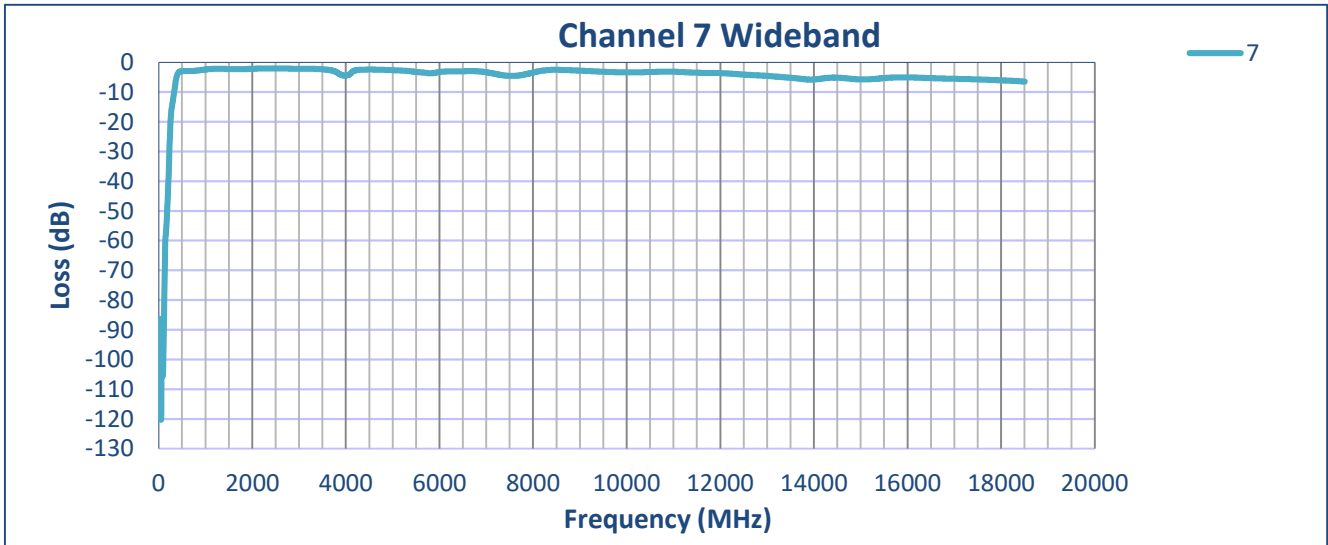


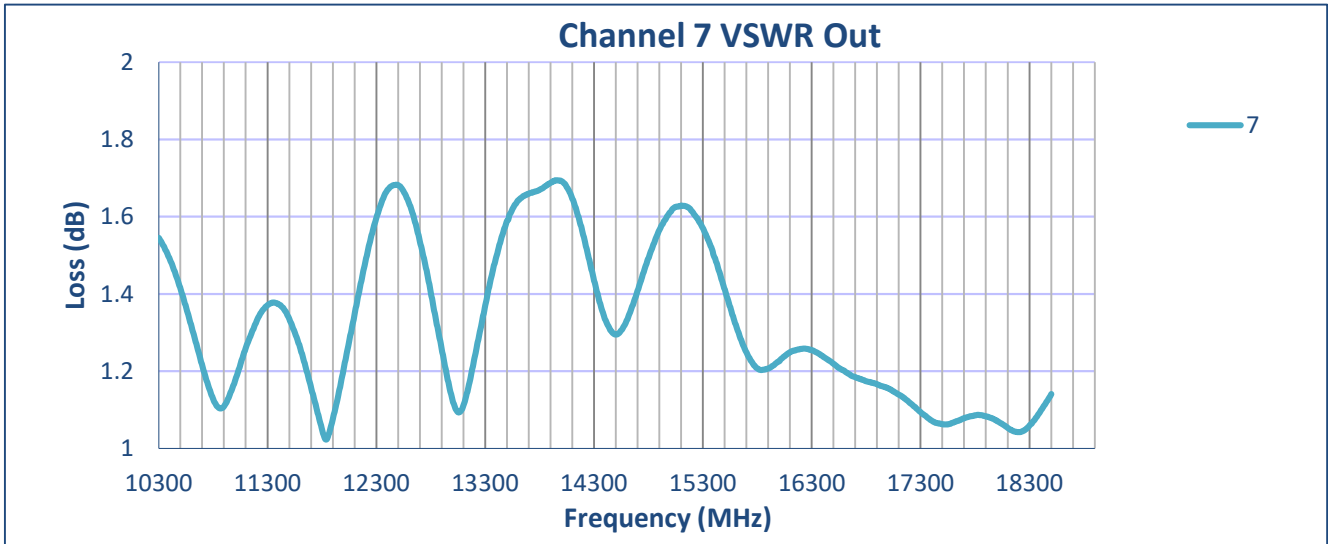
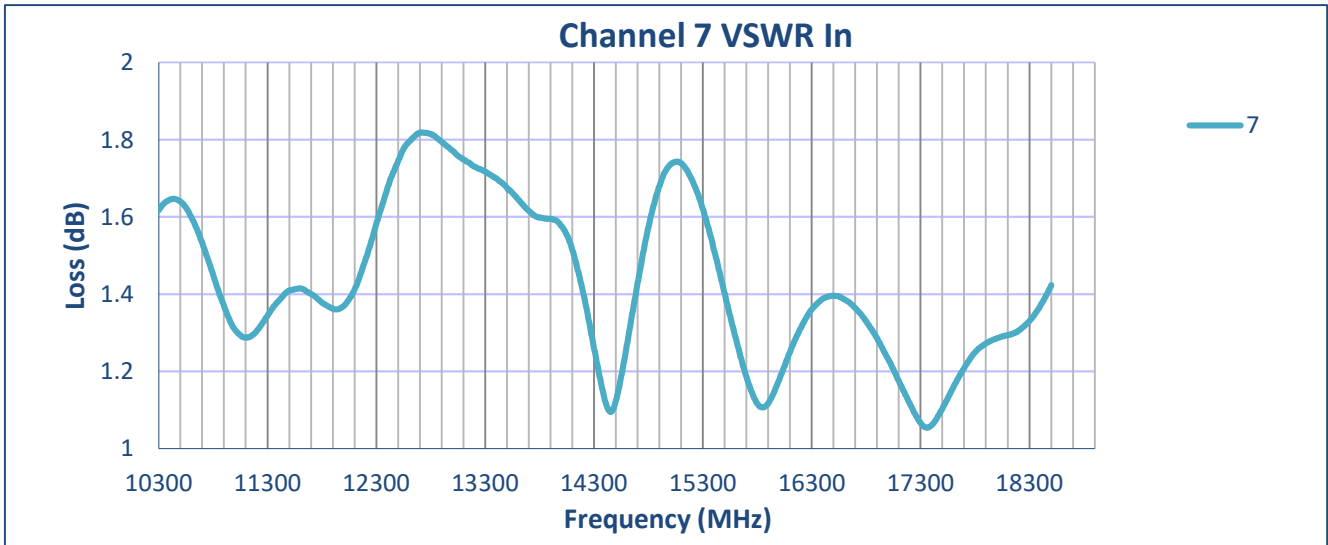


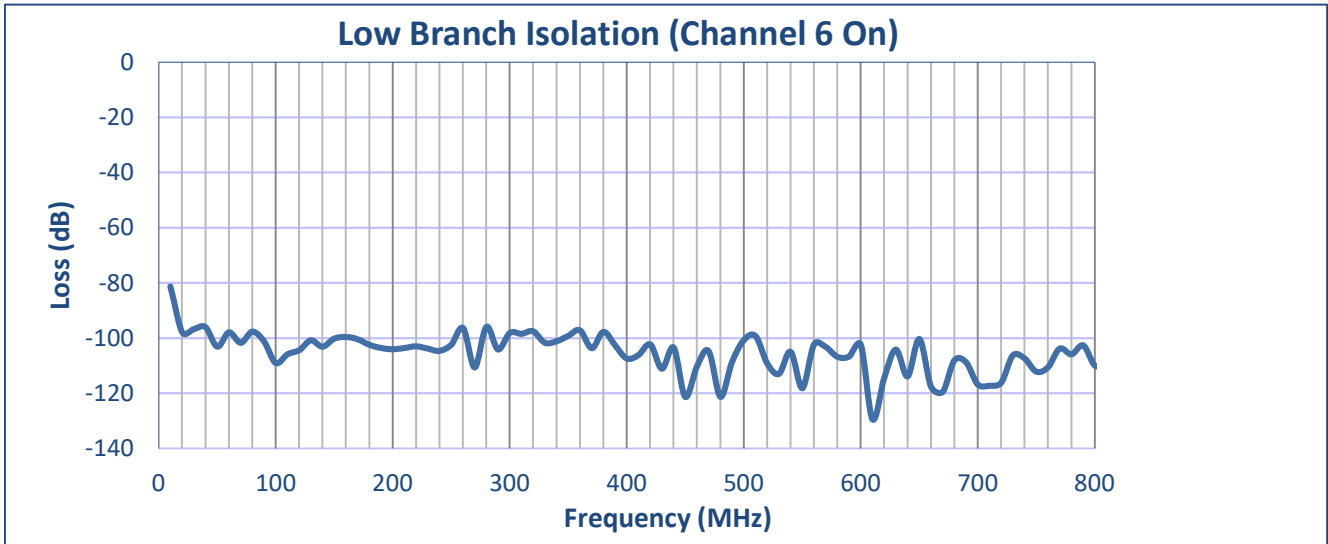
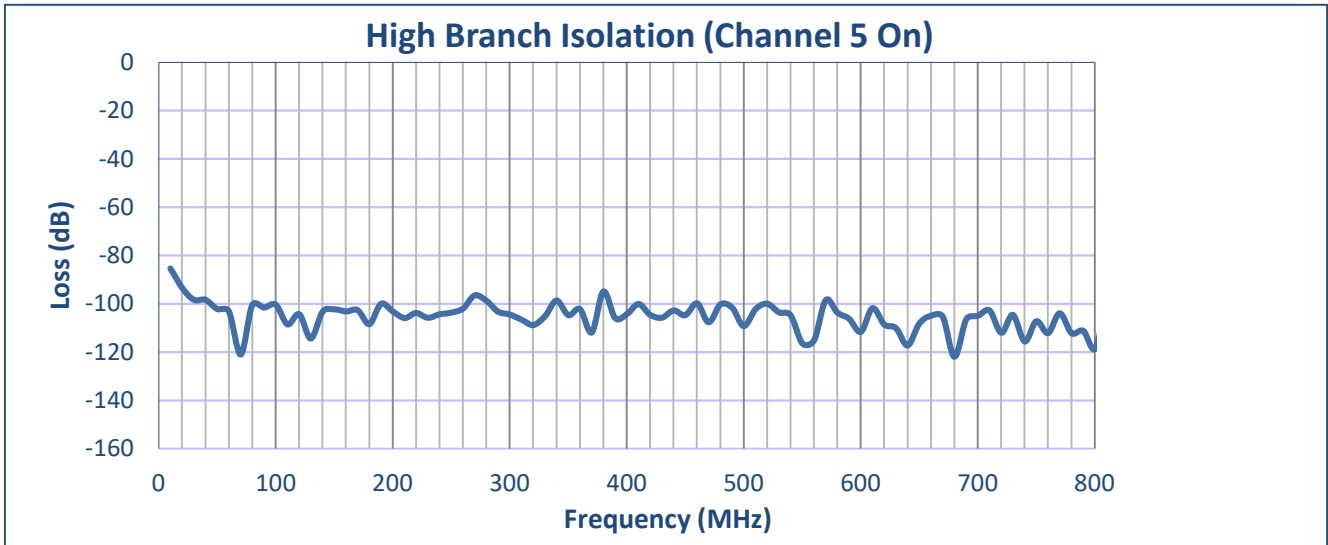


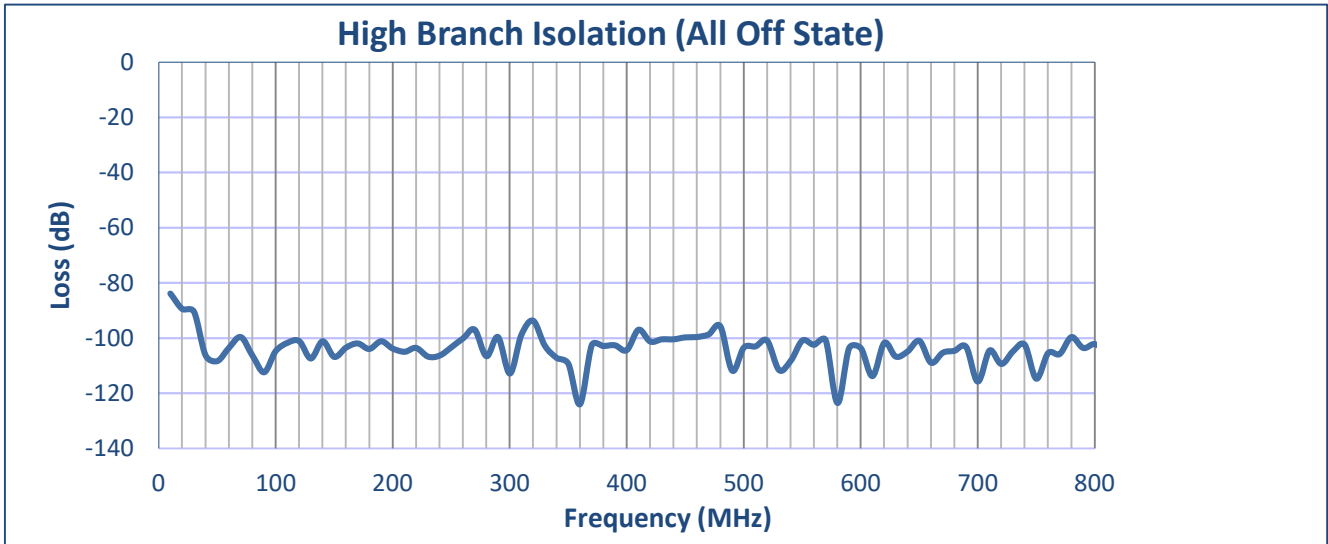
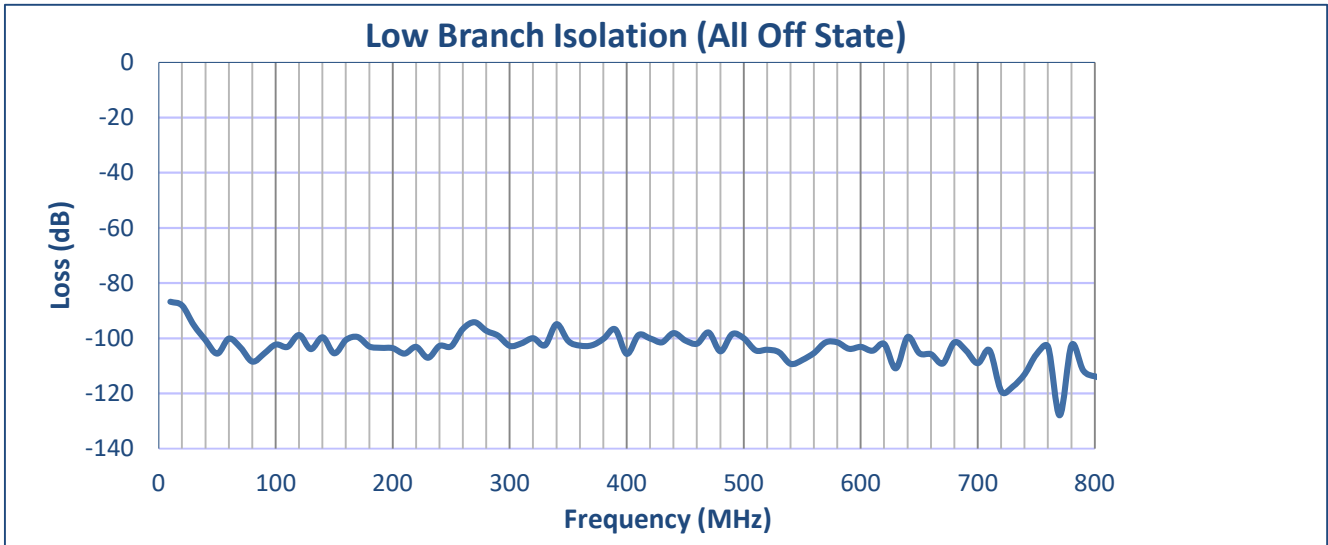














**SUMMARY TEST DATA
ON
7SFB9500-18G-CD-SFF**

Model No: 7SFB9500-18G-CD-SFF

Tested By: Y Li
Temperature: -40°C

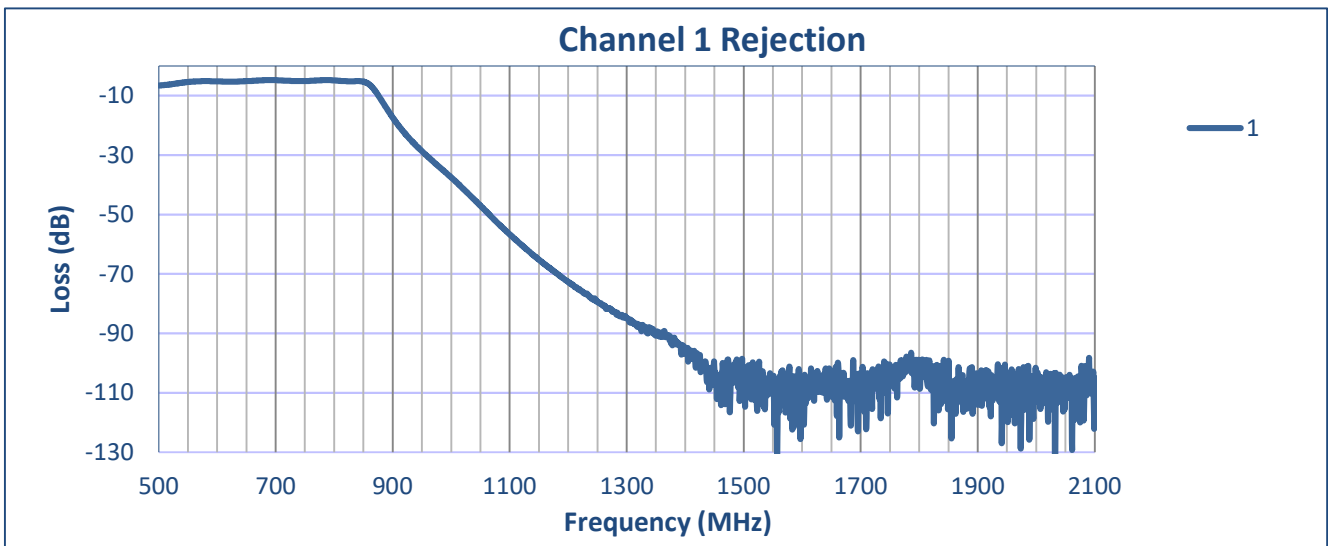
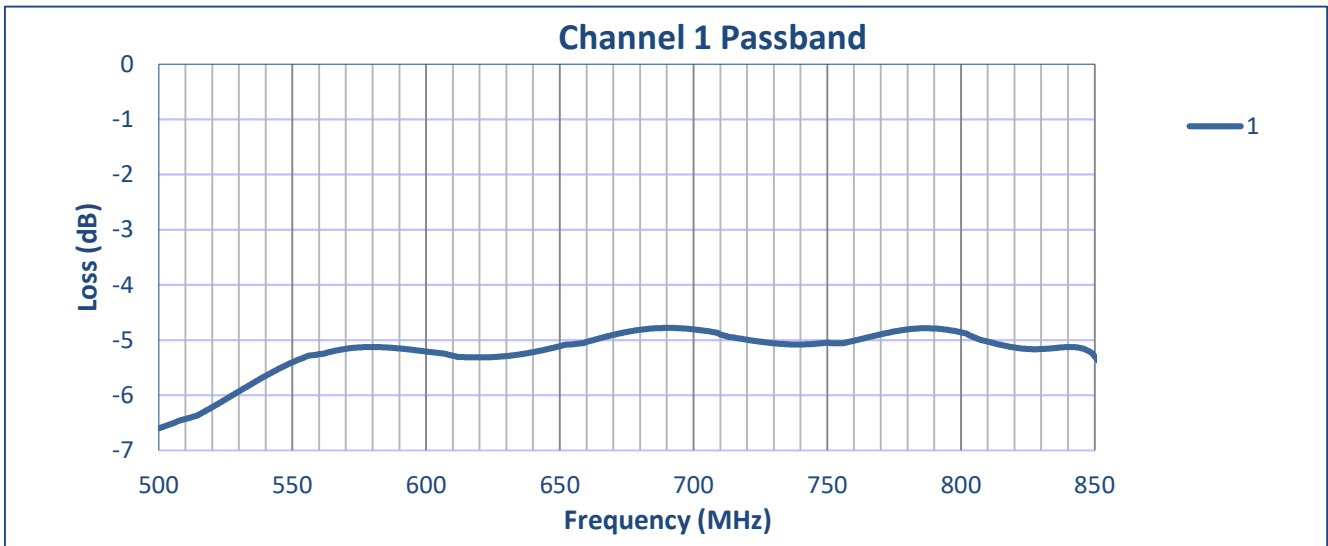
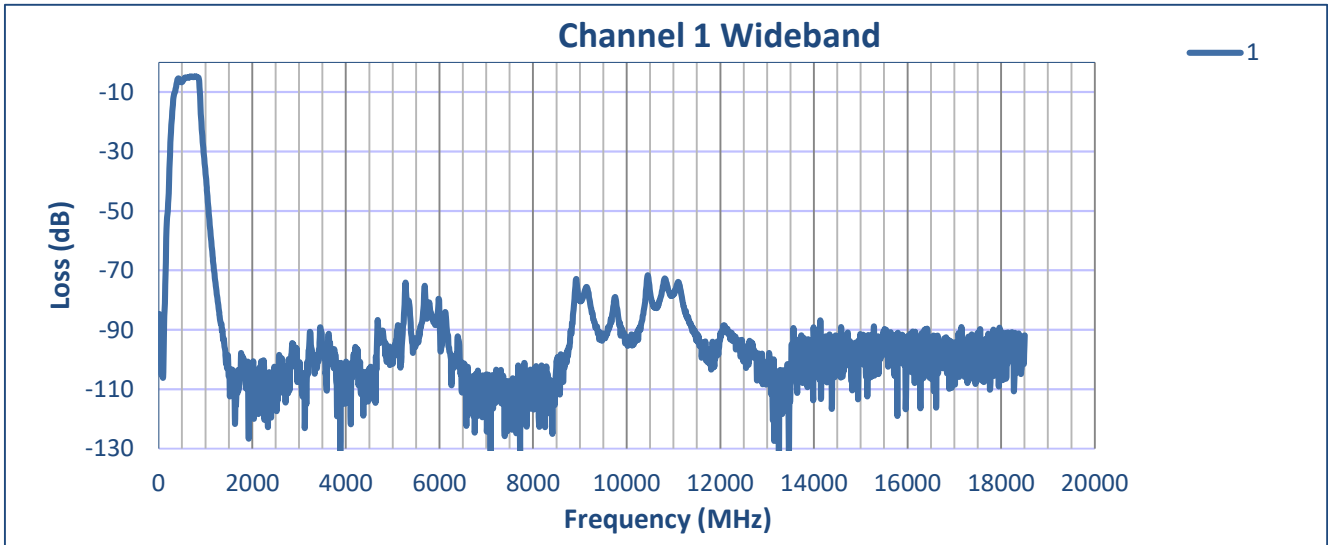
Date: 4/29/2023

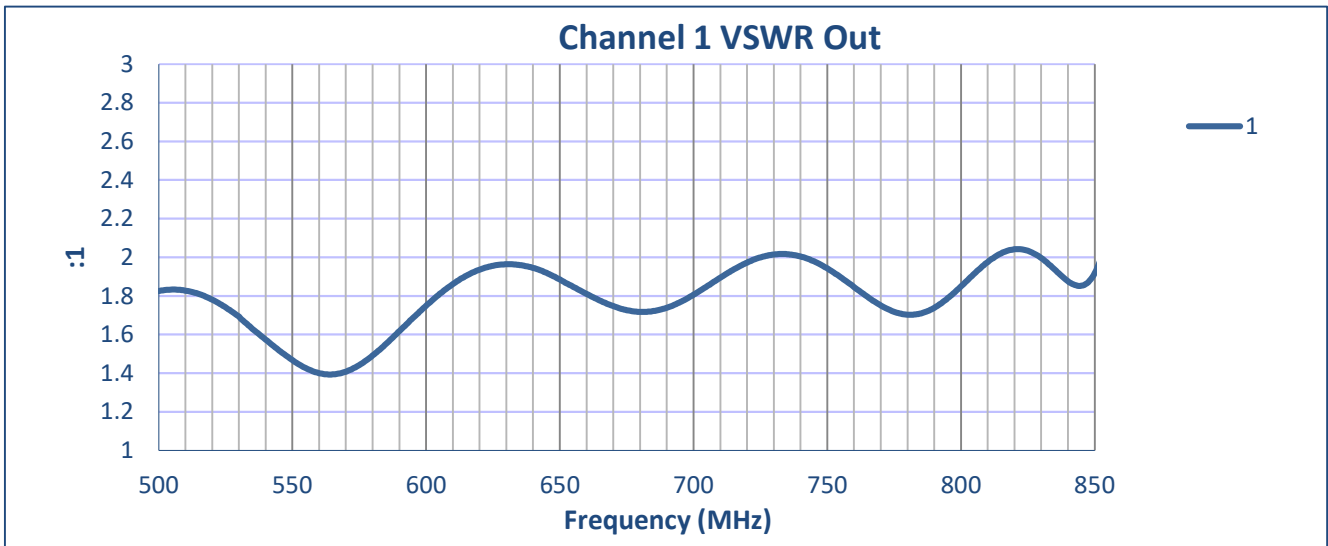
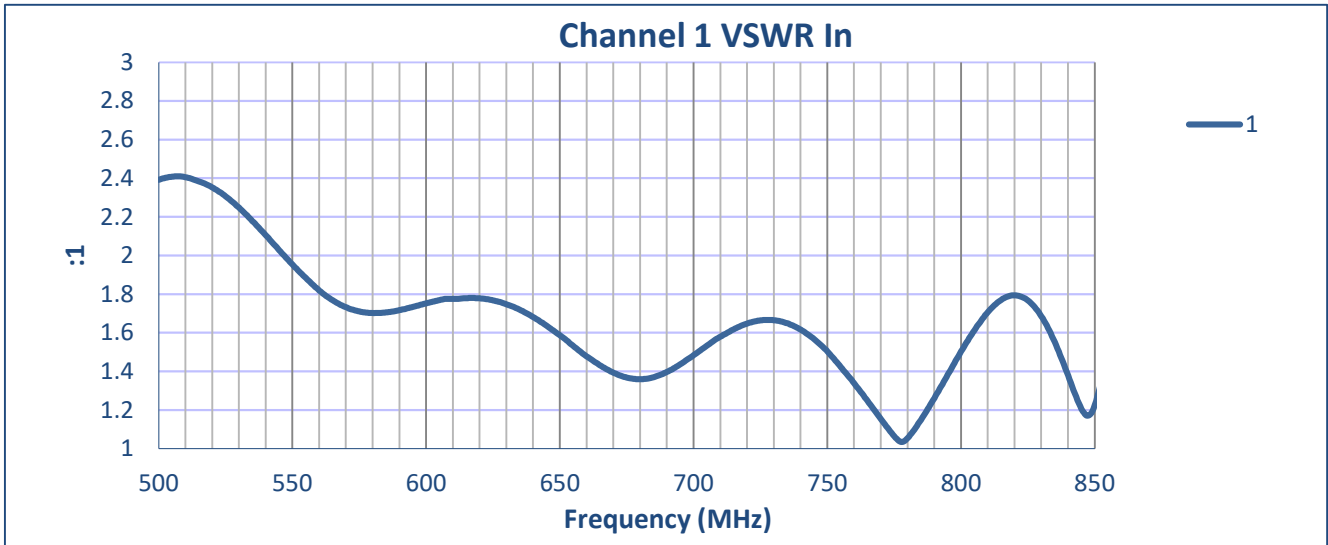
Drawing No: 27644500 Rev: A1

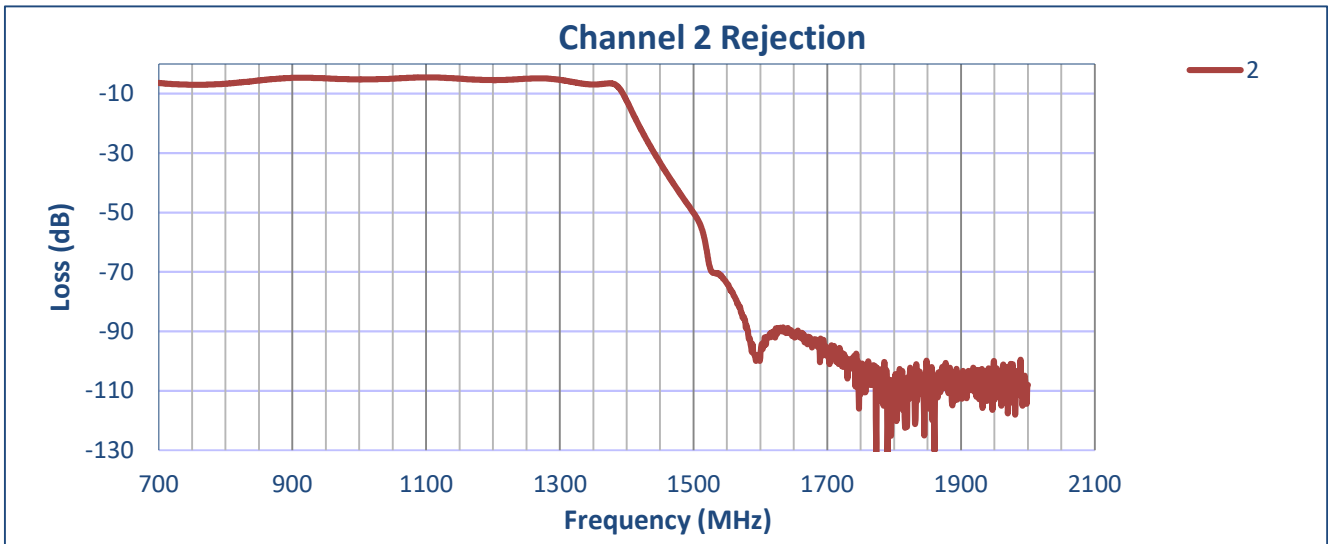
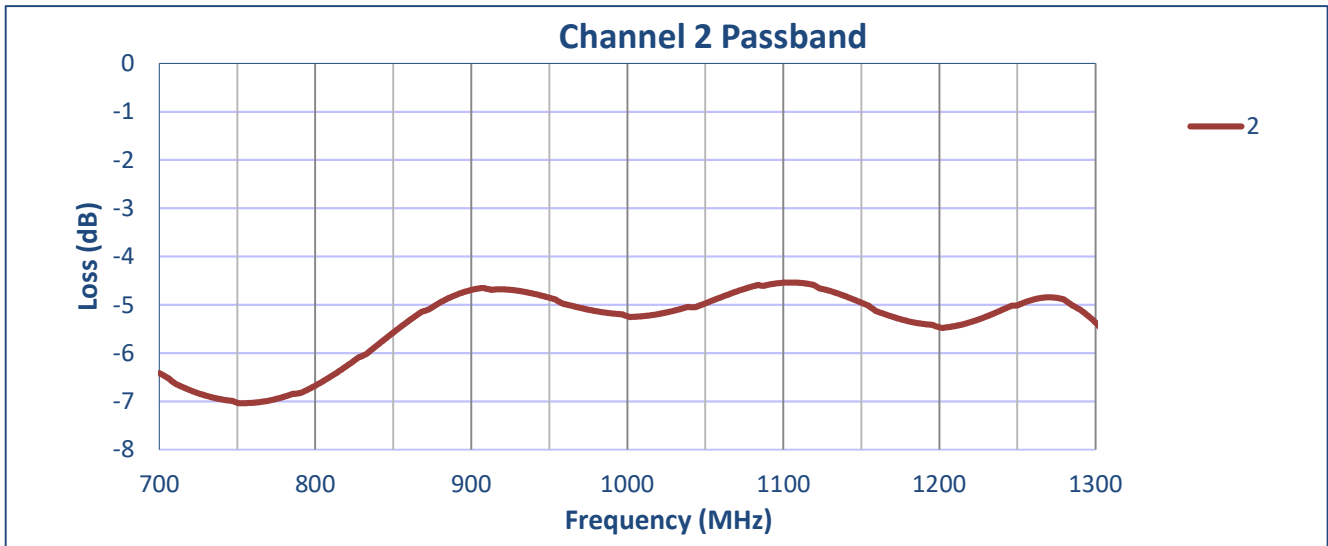
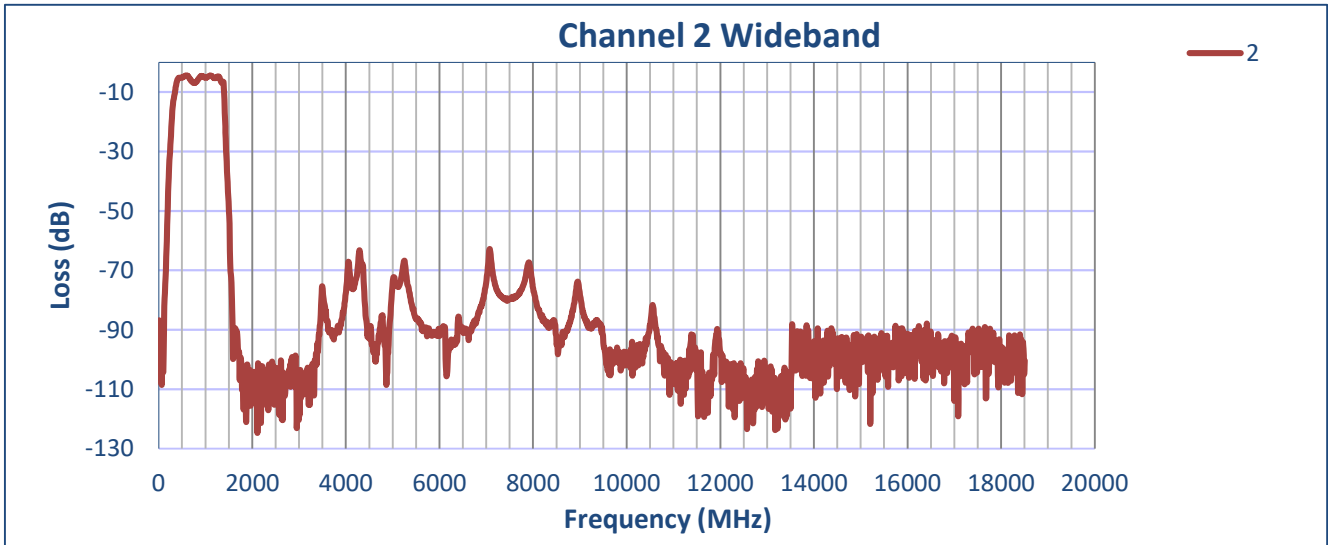
TEST ITEM	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range	0.5 GHz to 18.5 GHz	0.5 GHz to 18.5 GHz	
2	Insertion Loss (Passband)	7 dB Max	Channel 1: 6.6 dB Channel 2: 7 dB Channel 3: 5.7 dB Channel 4: 5.6 dB Channel 5: 6.7 dB Channel 6: 4.3 dB Channel 7: 6.4 dB	
3	VSWR: In/Out	2.2:1 Max	Channel 1: 2.4 Channel 2: 3.2 Channel 3: 2.1 Channel 4: 1.8 Channel 5: 2.1 Channel 6: 2 Channel 7: 1.9	
4	Amplitude Ripple (Passband)	+ - 2 dB Max	Channel 1: 0.9 dB Channel 2: 1.3 dB Channel 3: 0.6 dB Channel 4: 0.7 dB Channel 5: 1.2 dB Channel 6: 0.6 dB Channel 7: 1.7 dB	
5	Switching Speed	500 ns Max.	Pass See Data At Room	
6	Video Transients	500 mV Pk-Pk Max	Pass See Data At Room	
7	DC Supply	+5VDC @ 175 mA Max -12VDC @ 100 mA Max	5V @ 63 mA -12V @ 49 mA	

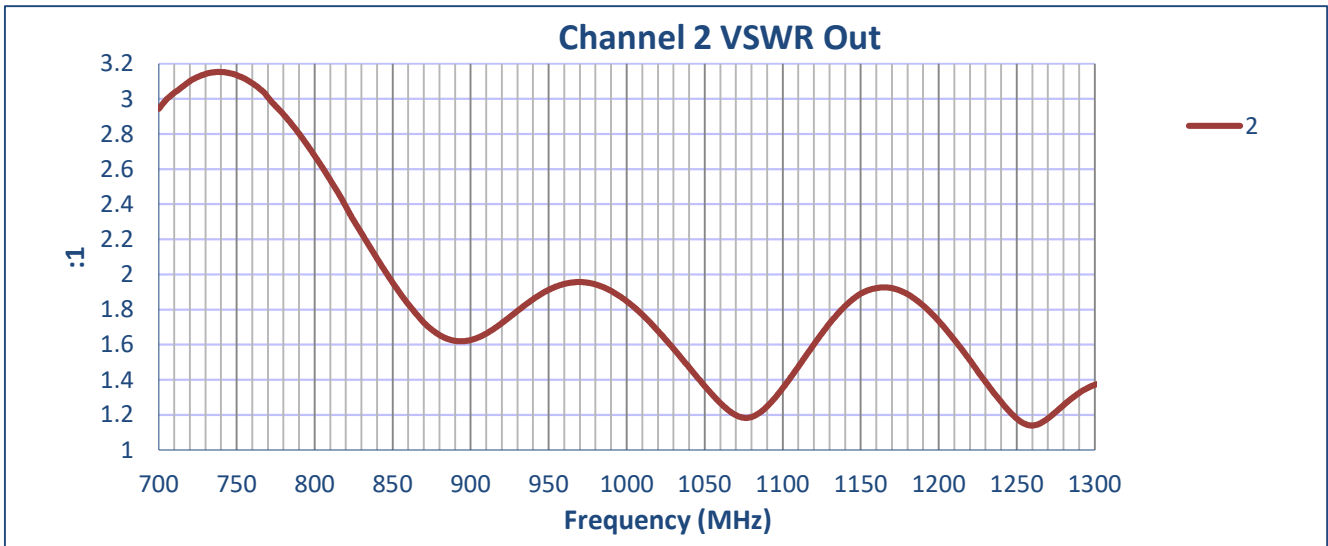
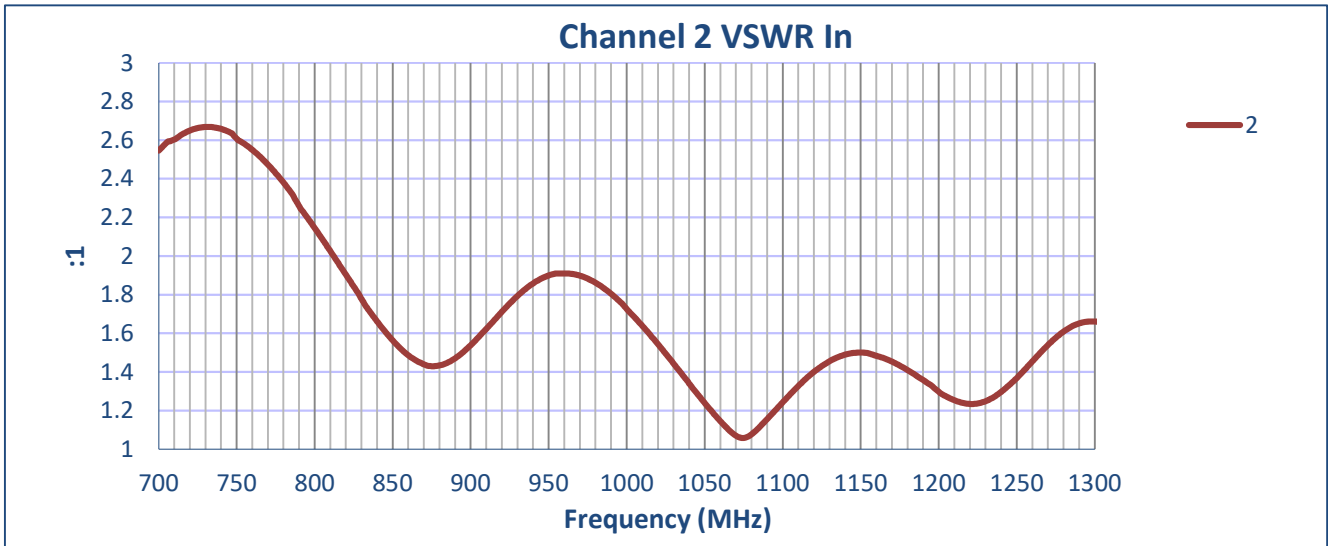
QA/QC Approval: _____

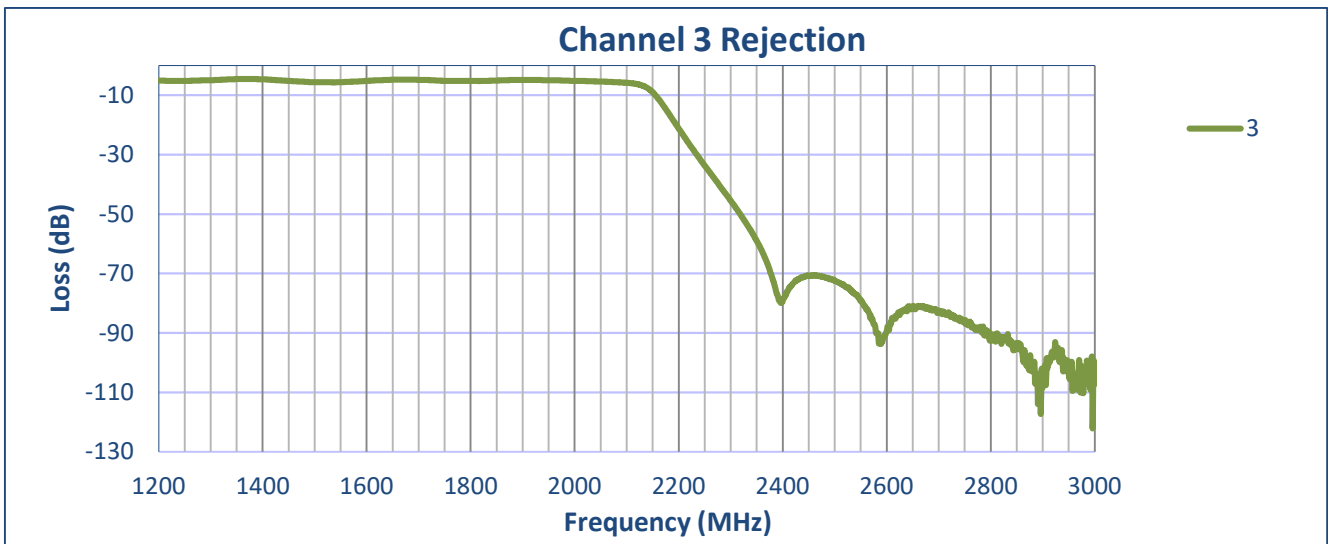
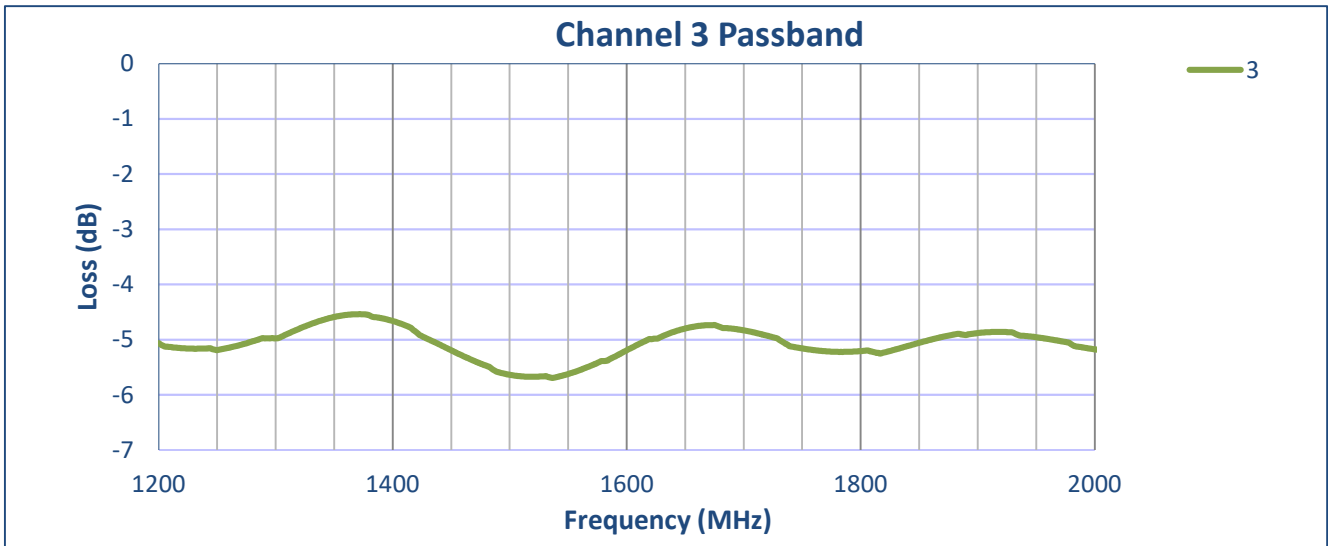
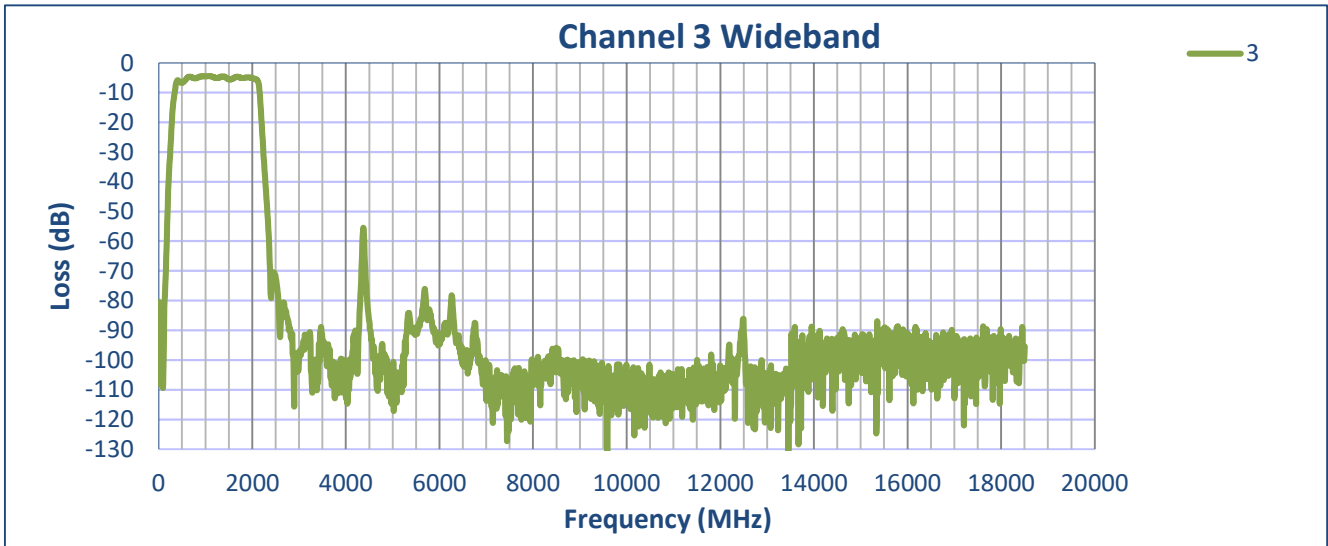
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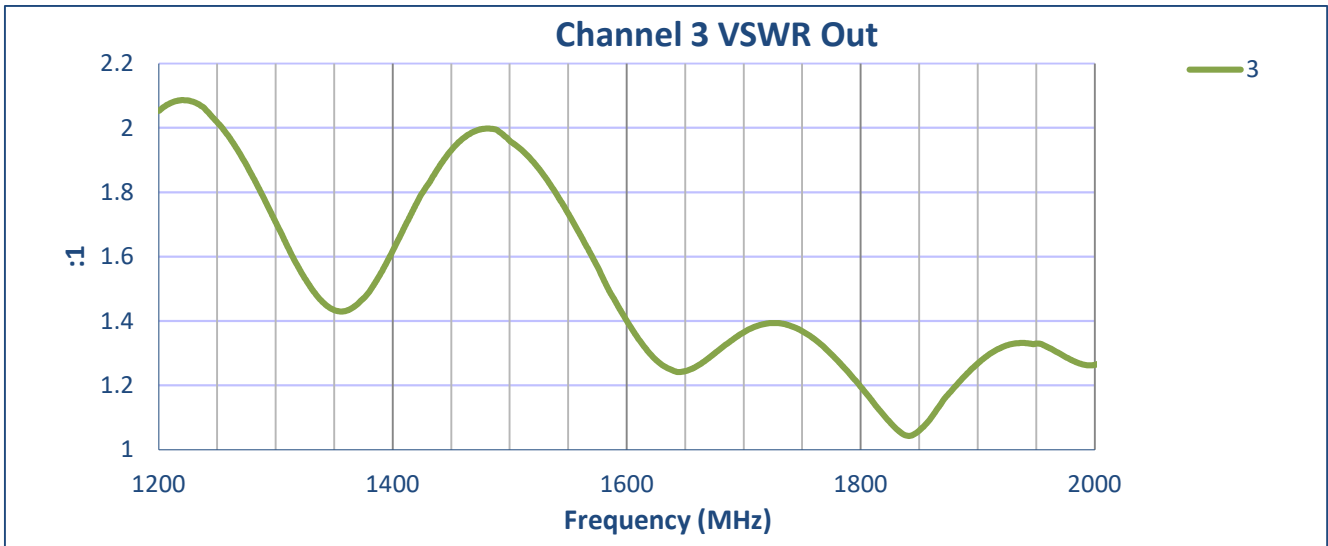
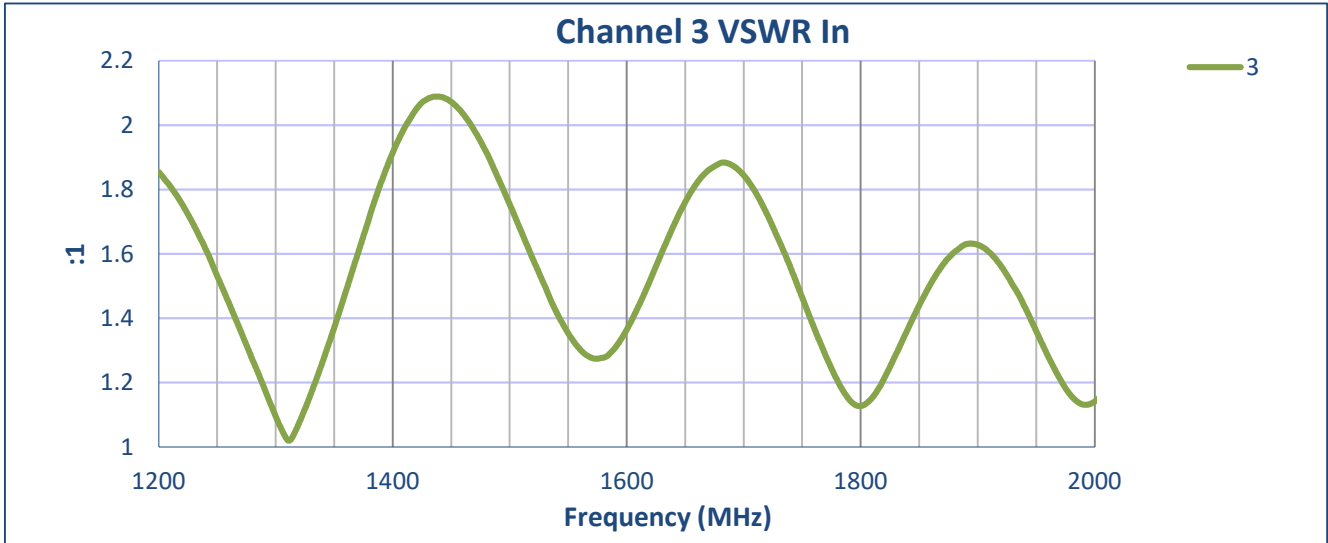


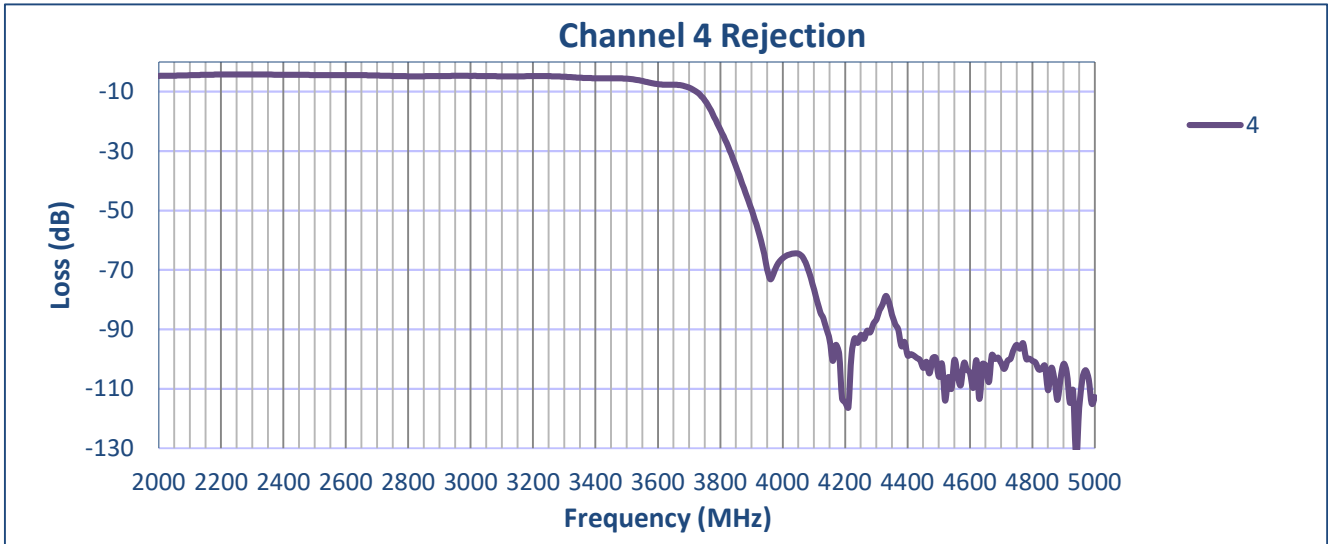
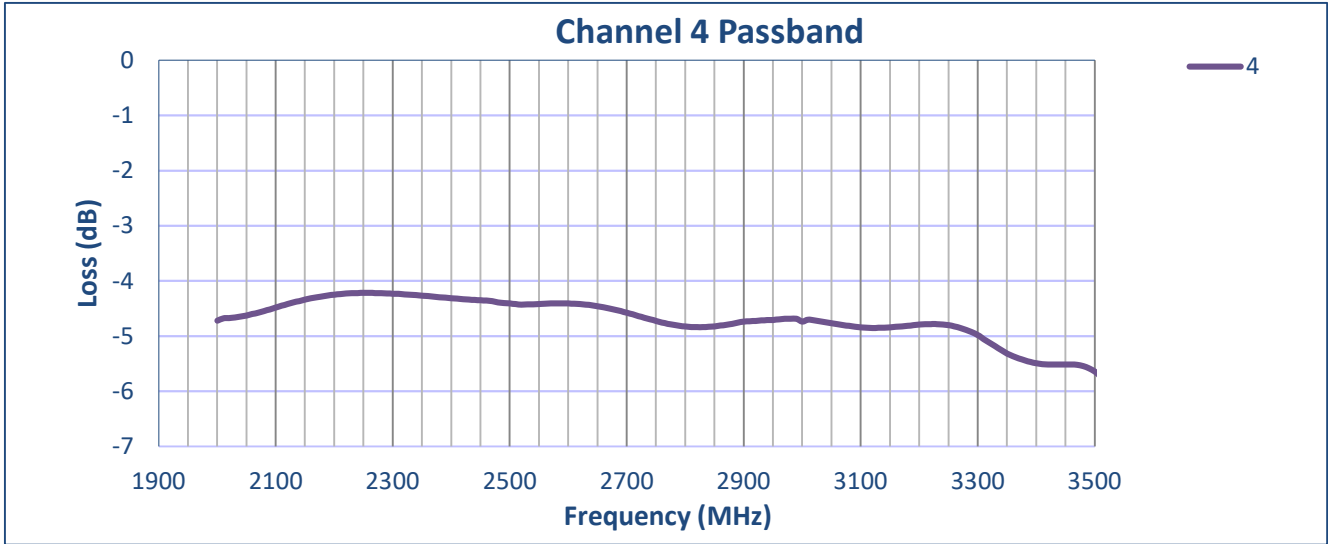
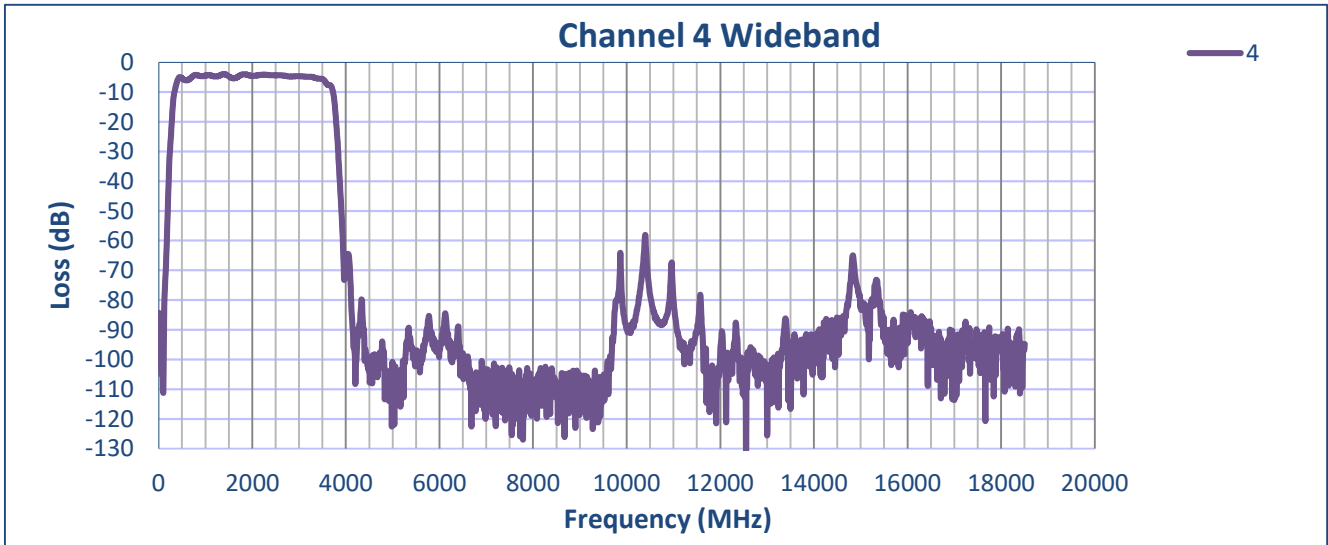


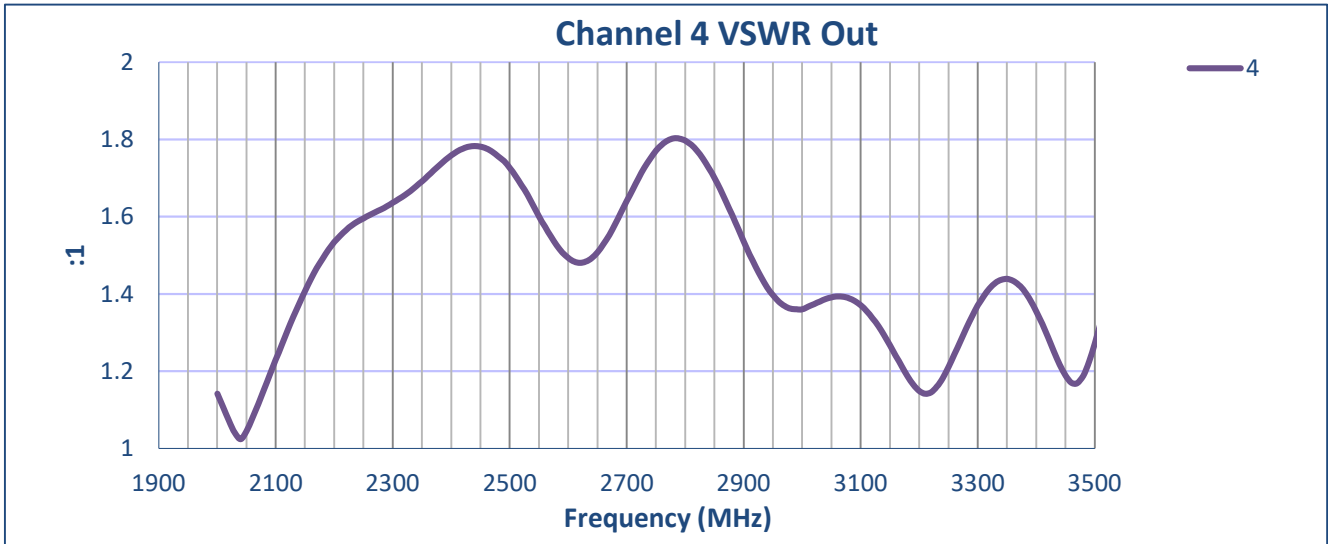
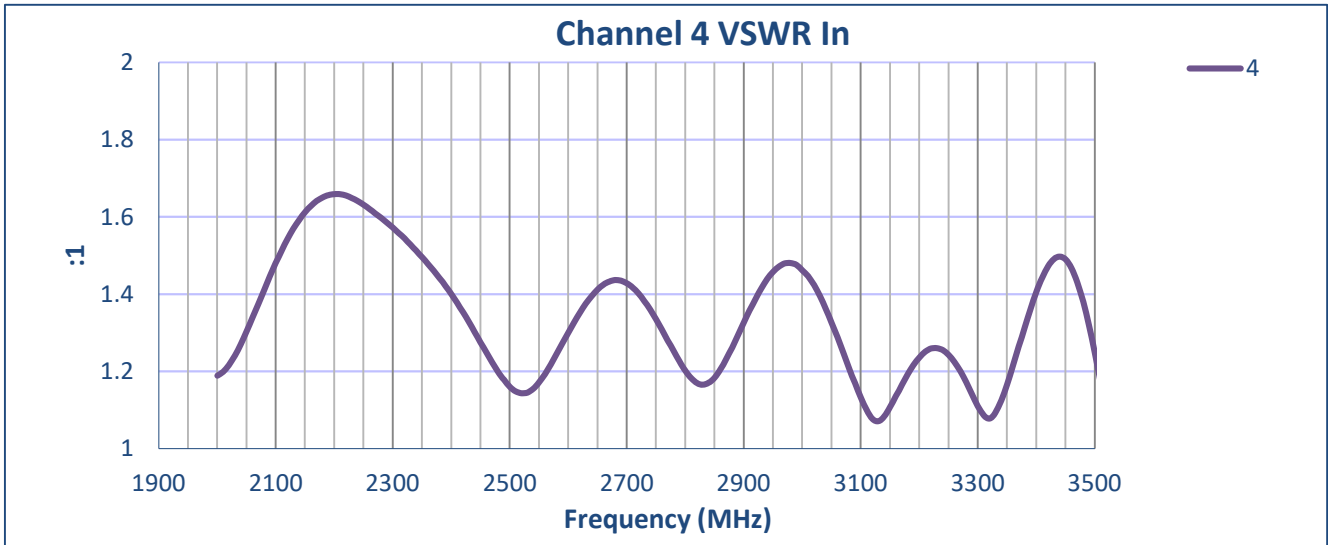


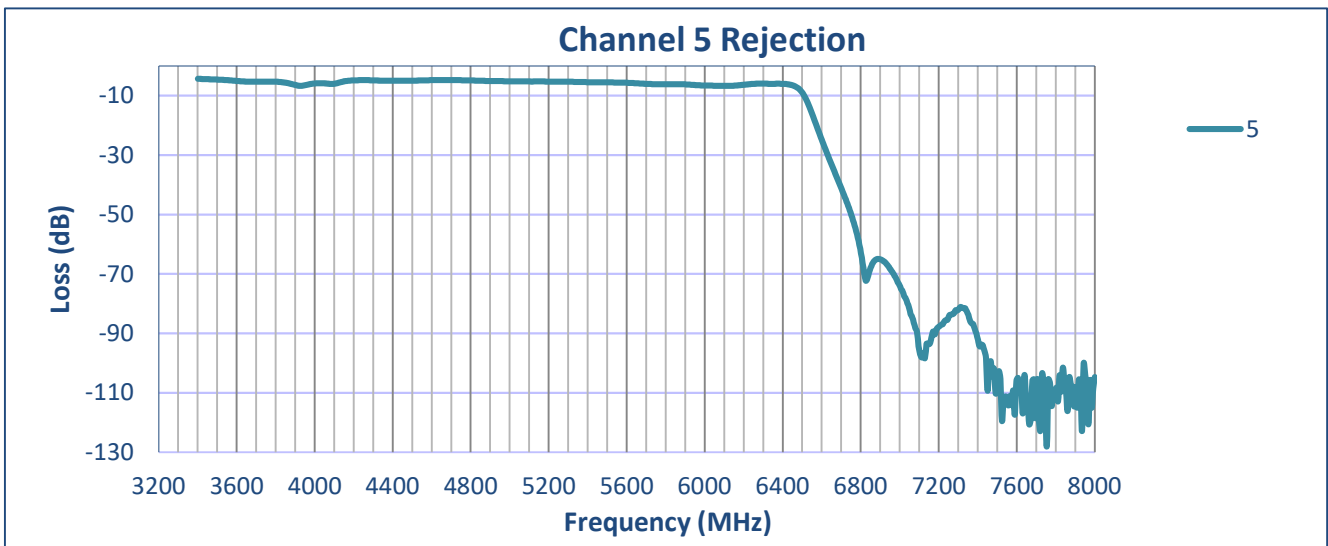
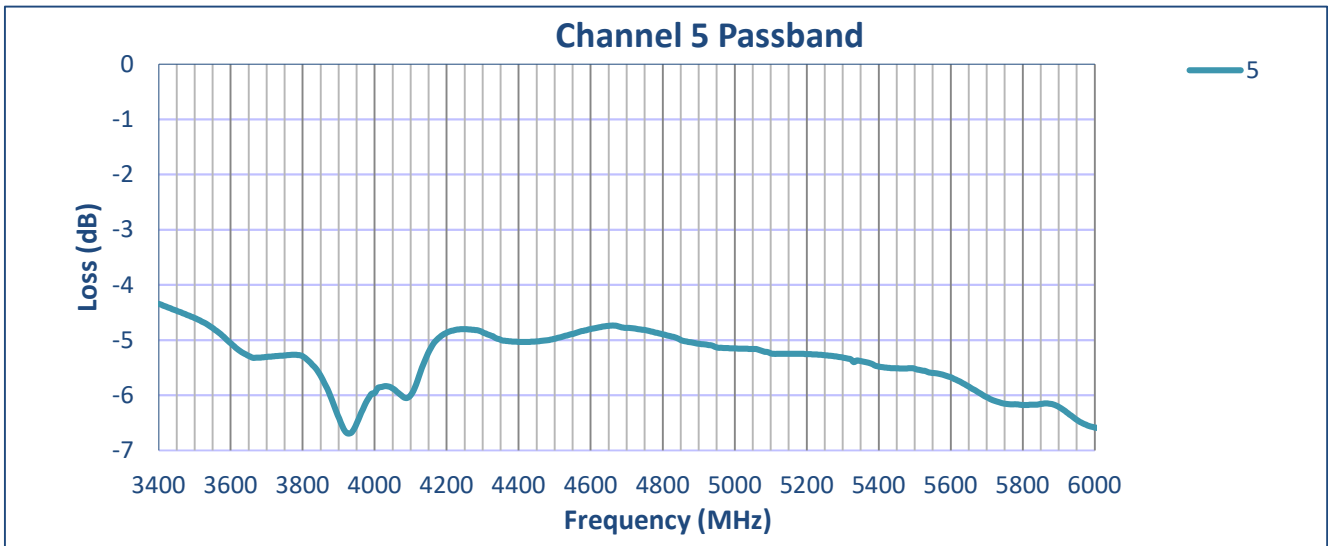
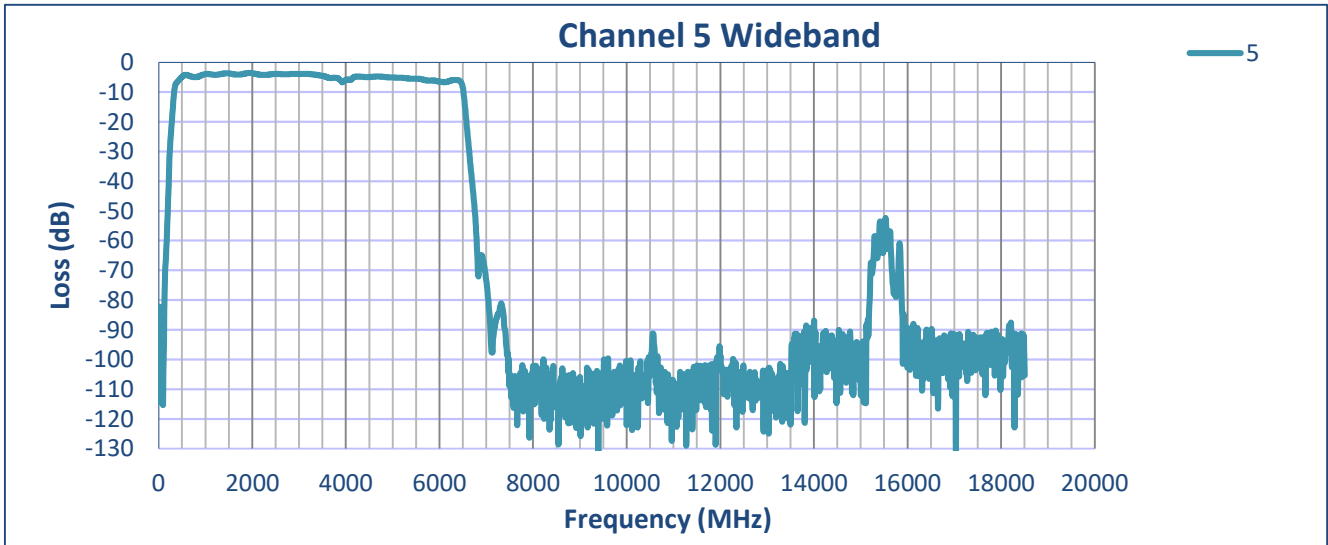


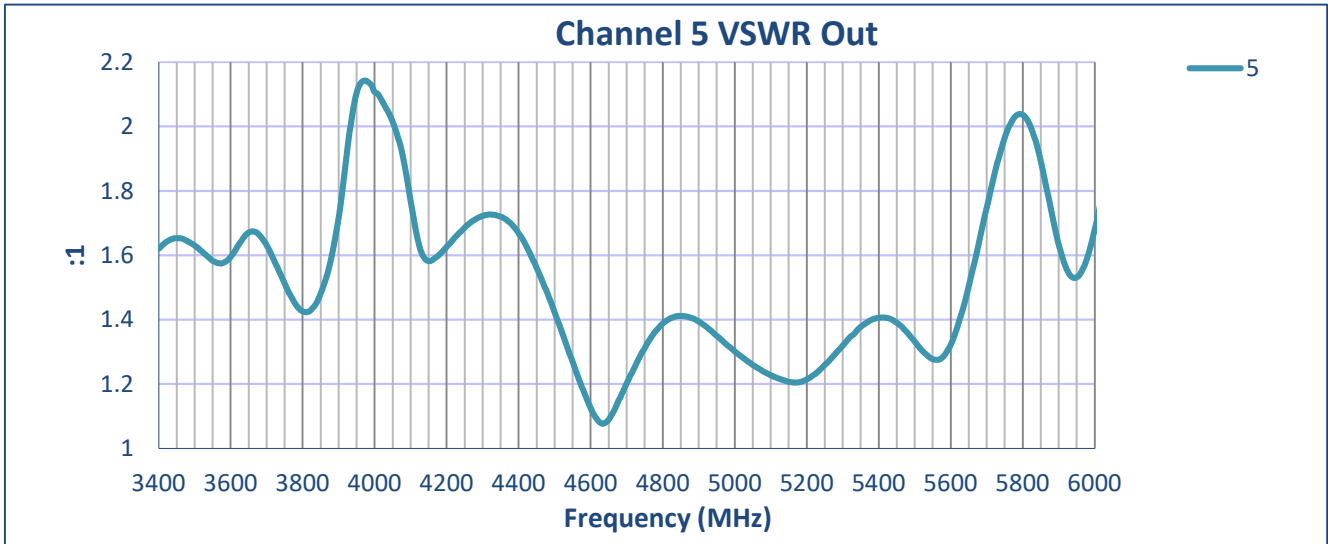
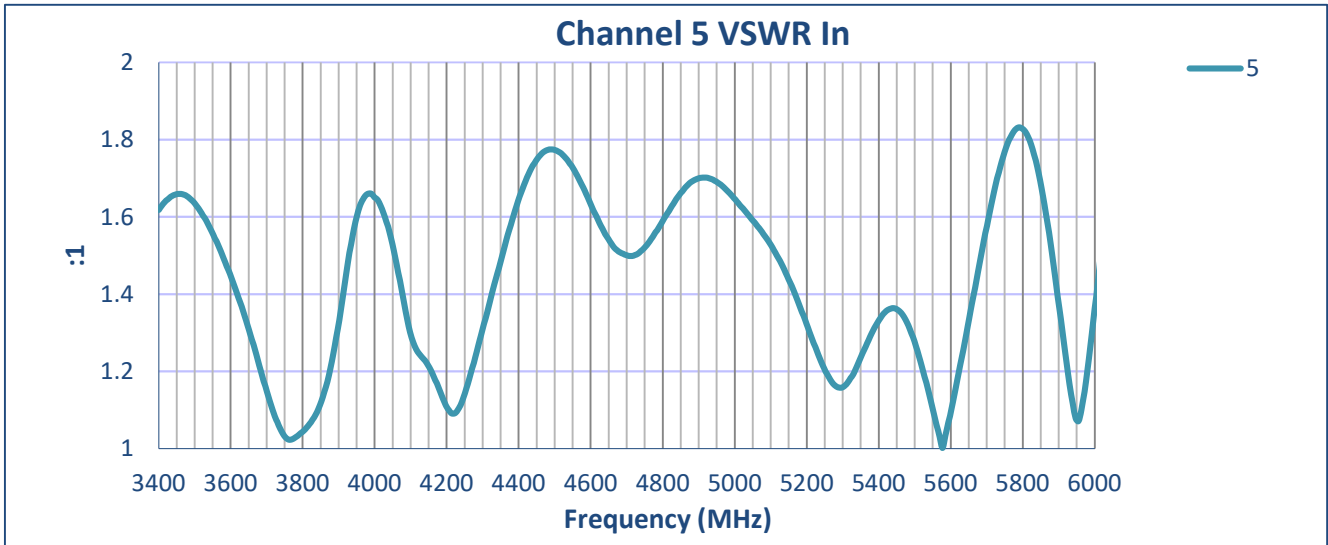
**SUMMARY TEST DATA
ON
7SFB9500-18G-CD-SFF**

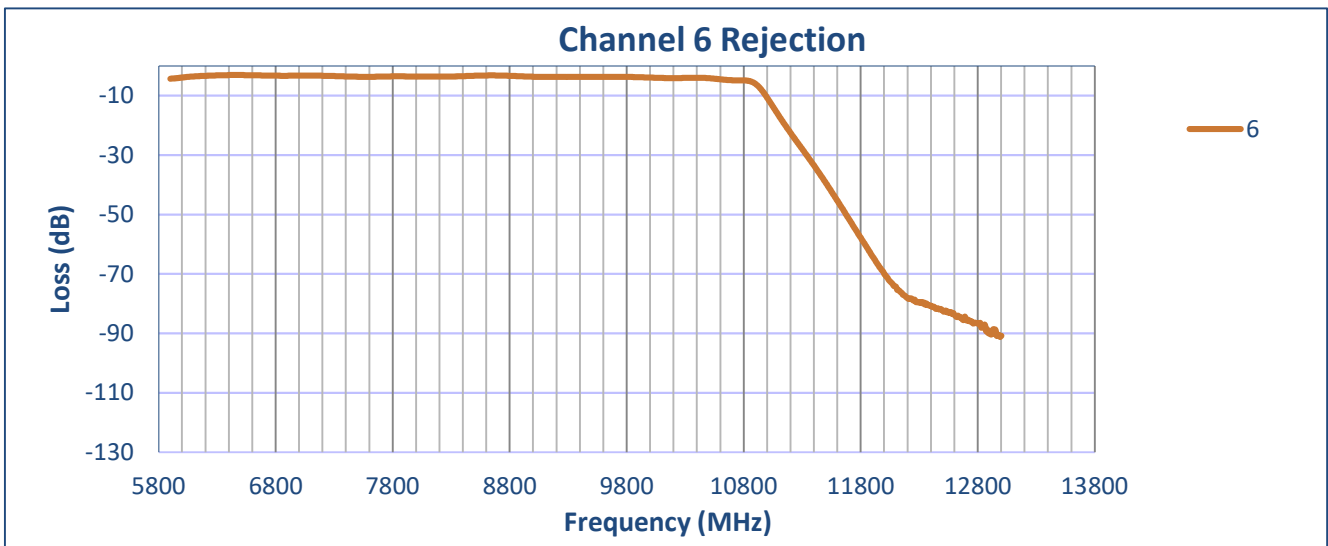
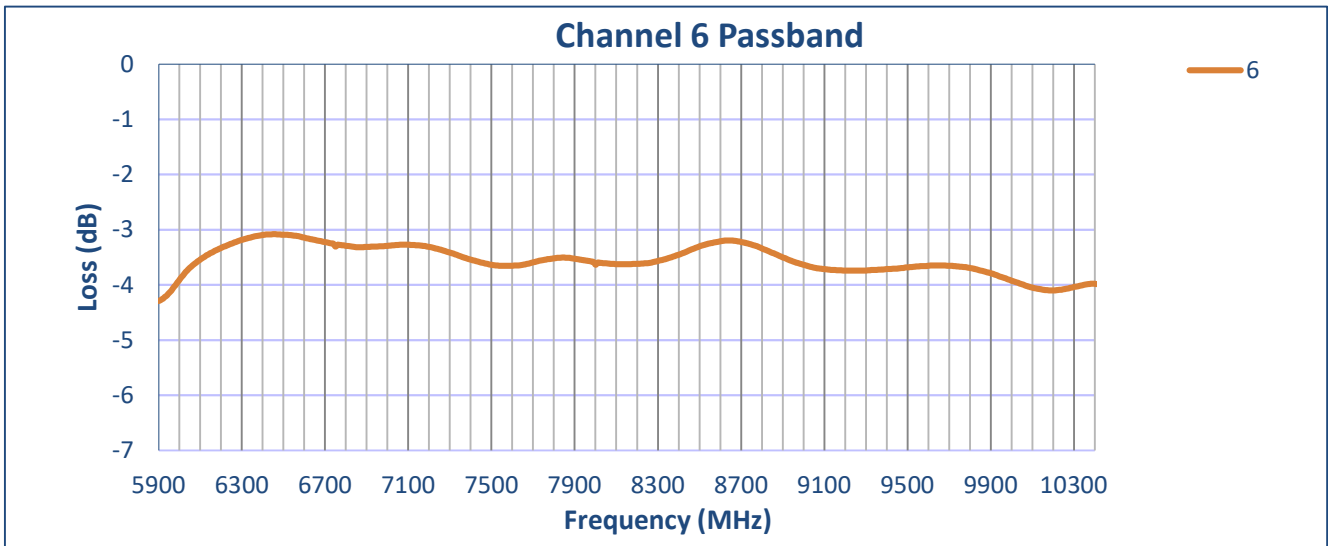
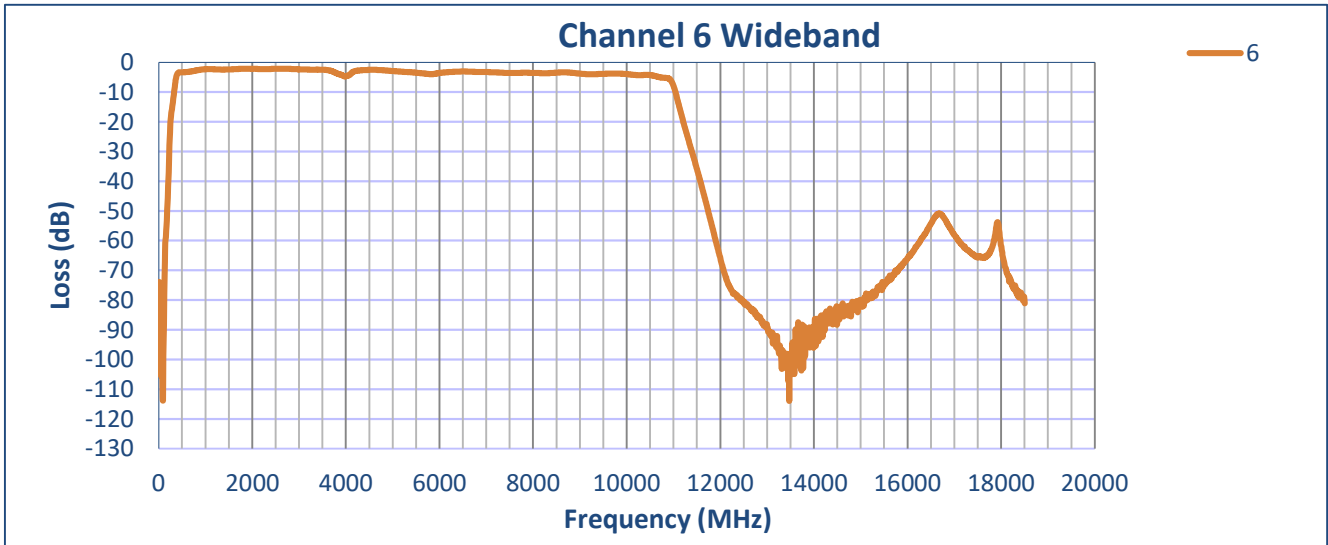


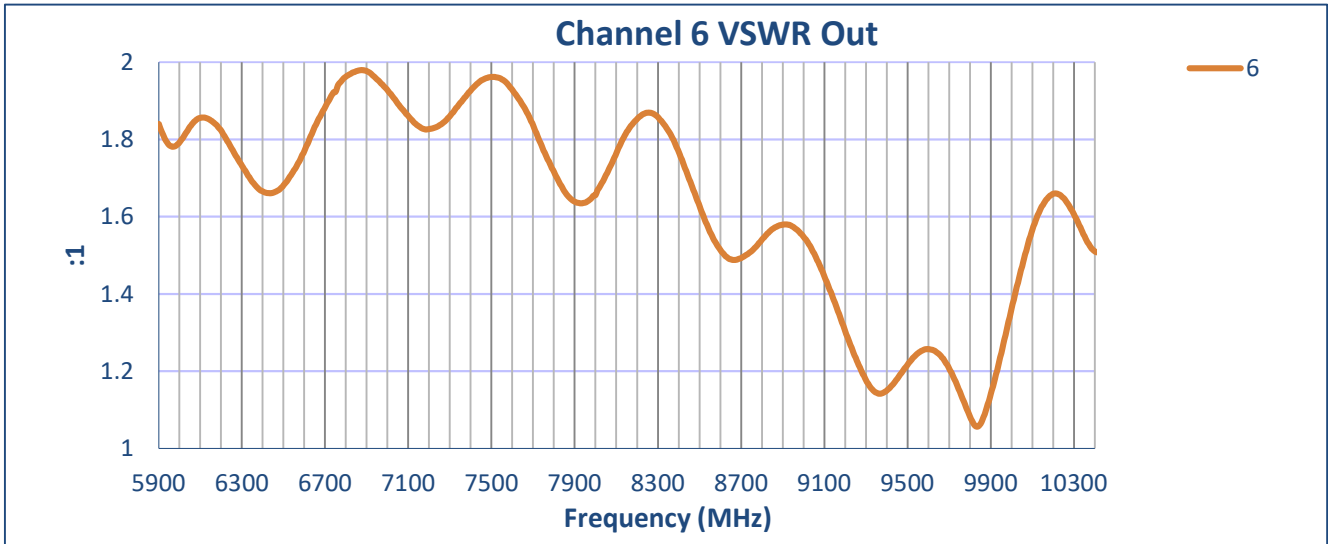
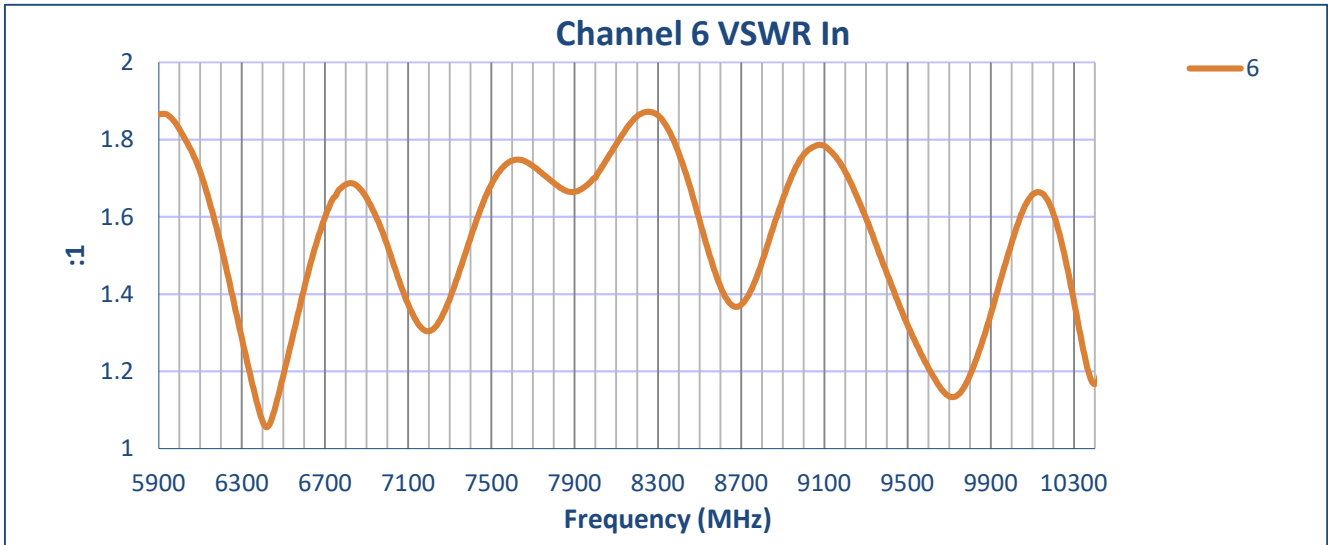


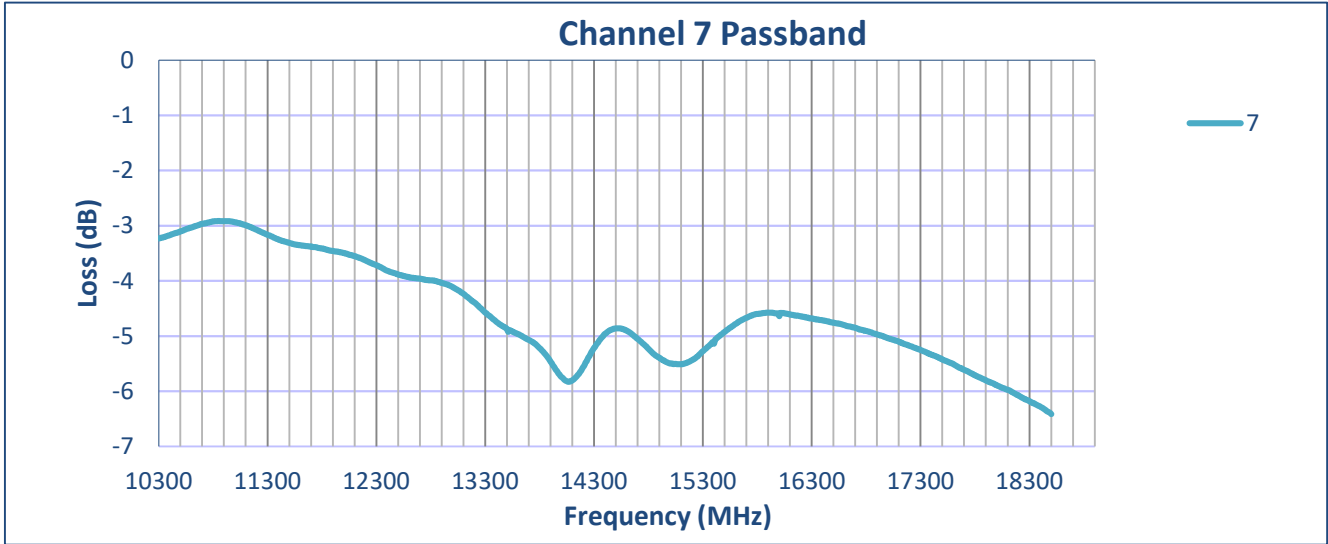
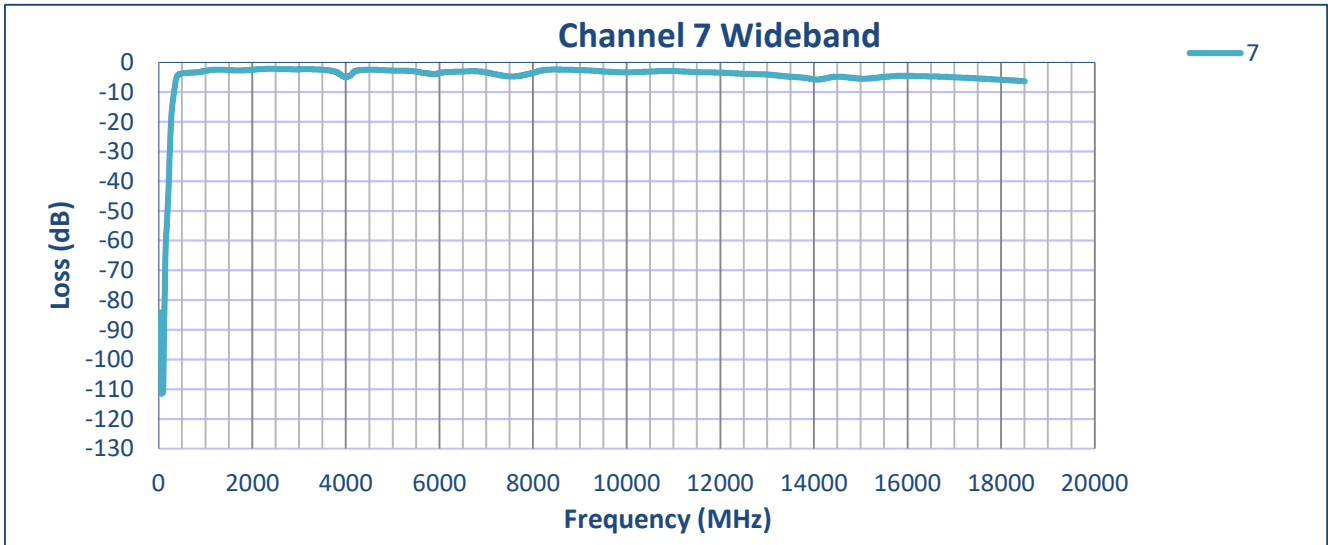


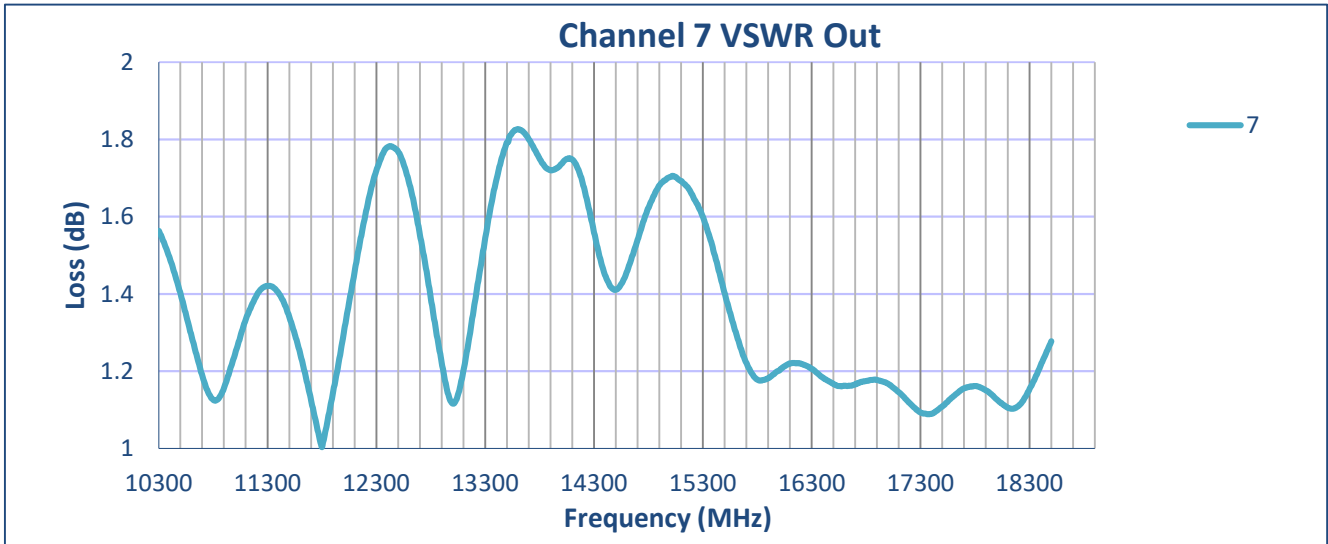
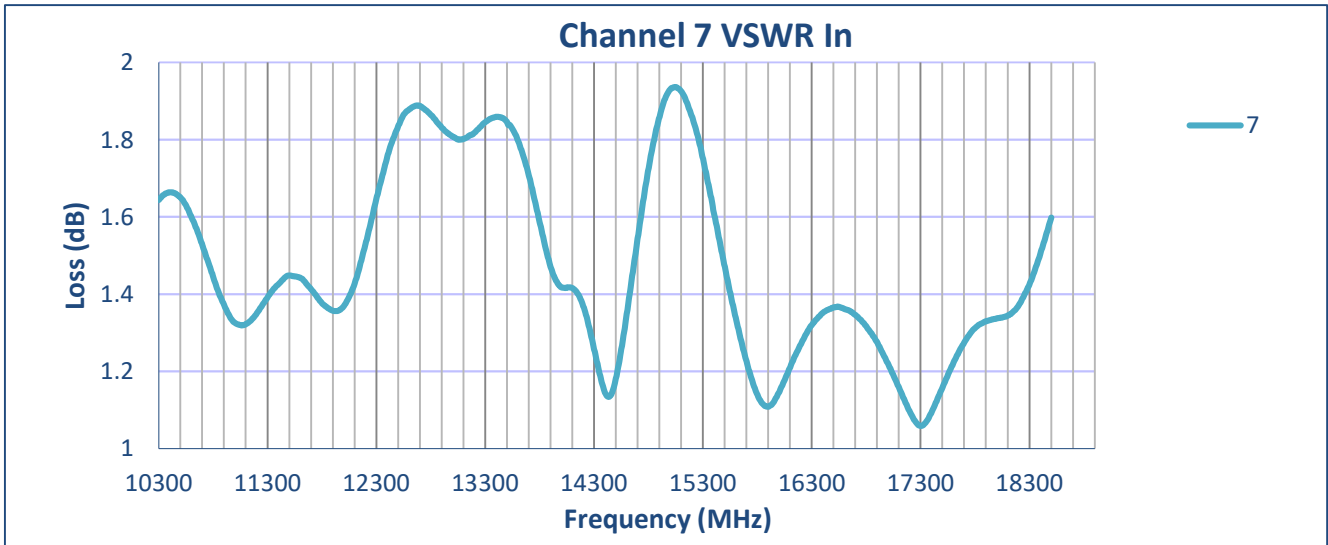


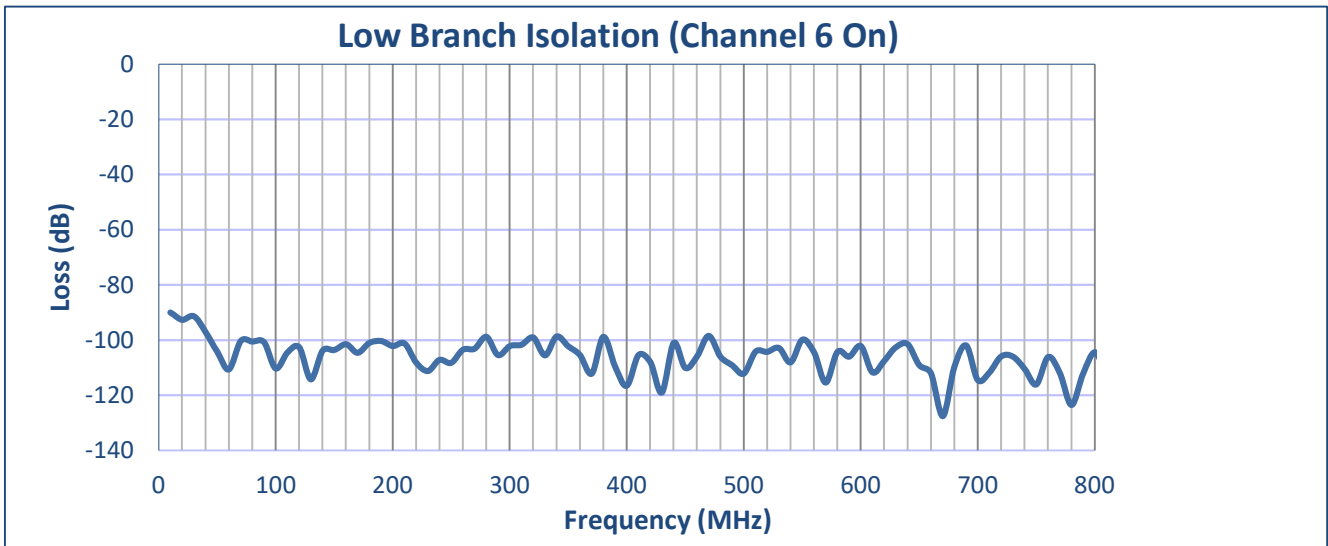
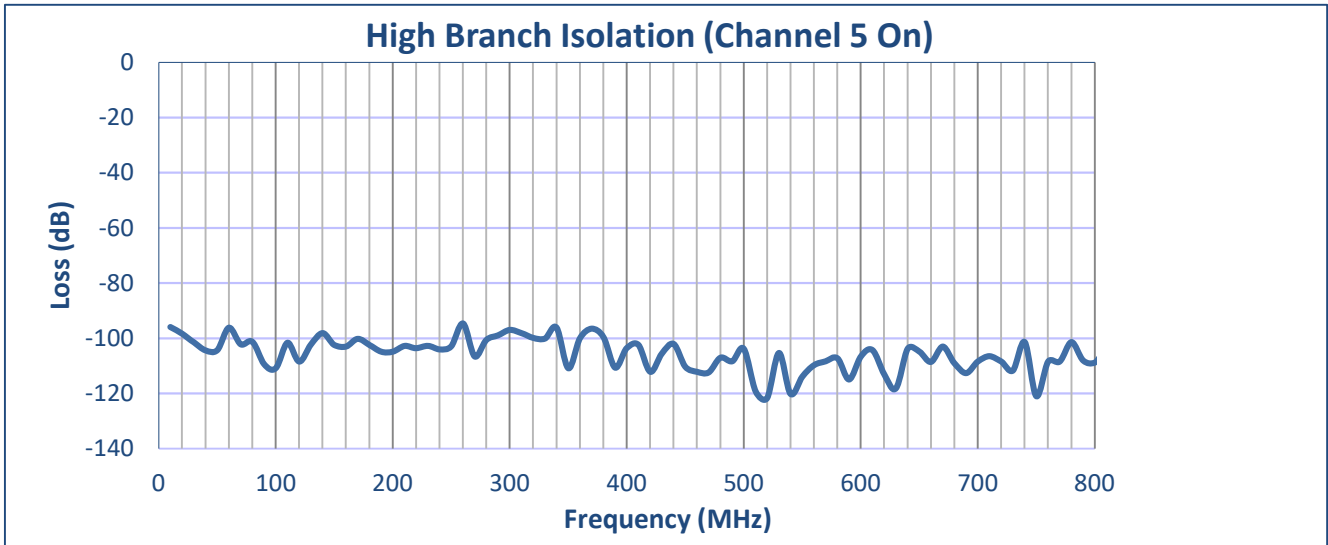


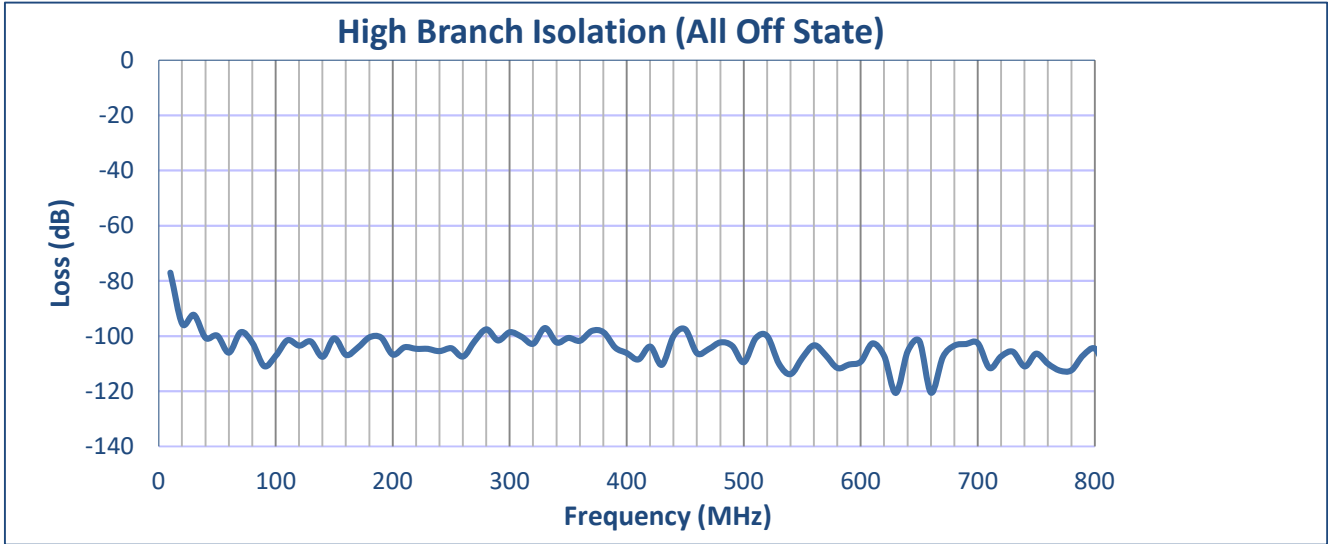
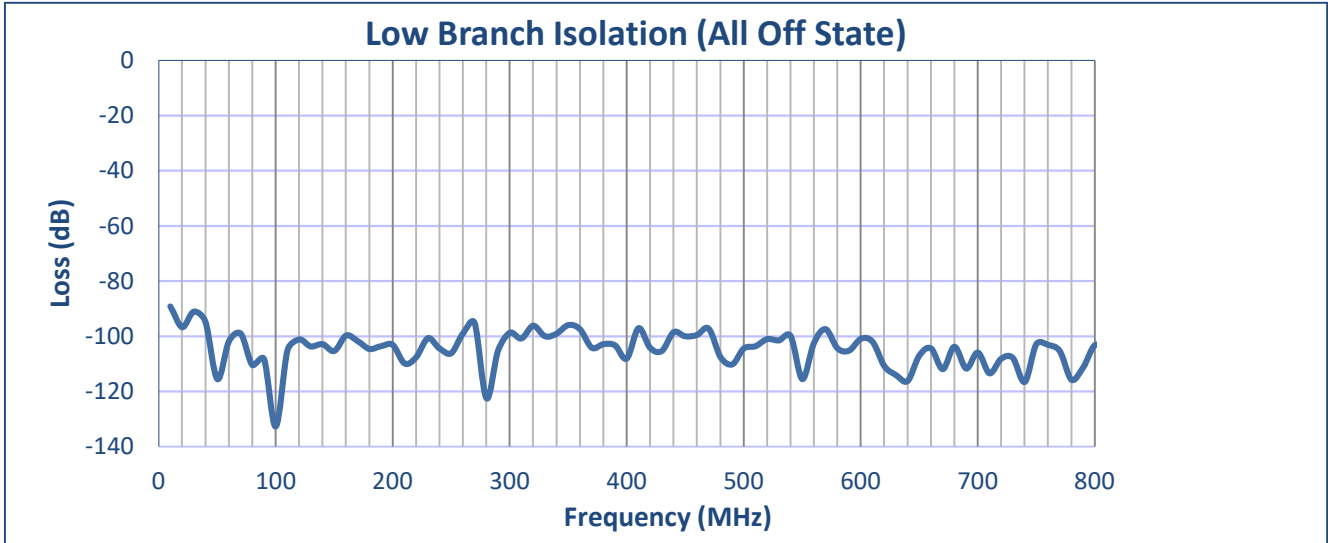














**SUMMARY TEST DATA
ON
7SFB9500-18G-CD-SFF**

Model No: 7SFB9500-18G-CD-SFF

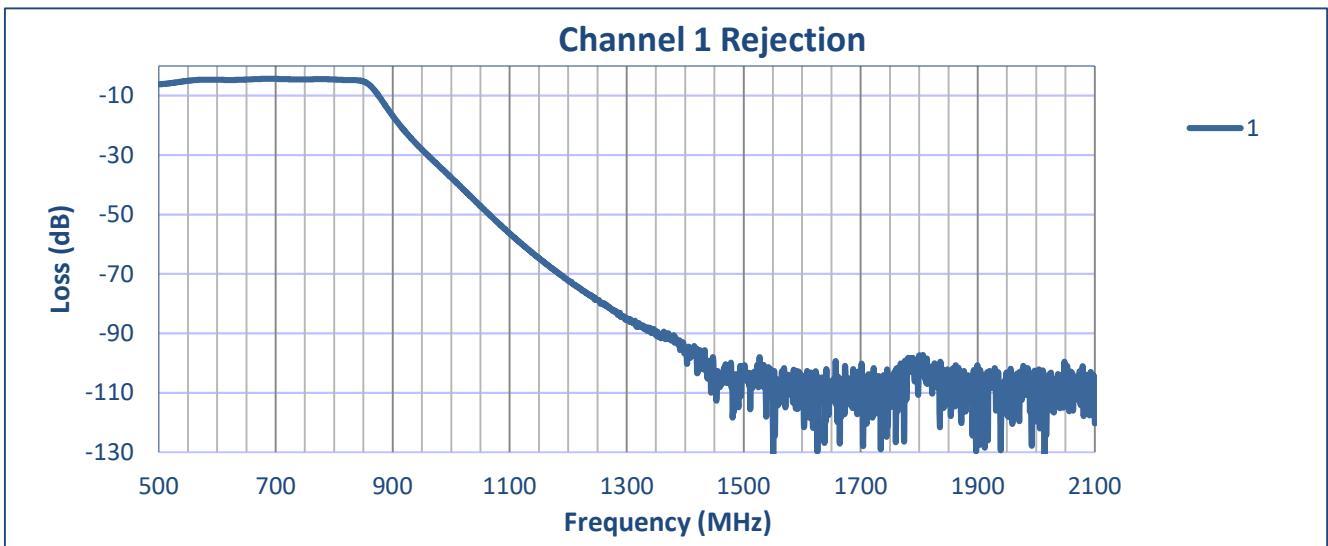
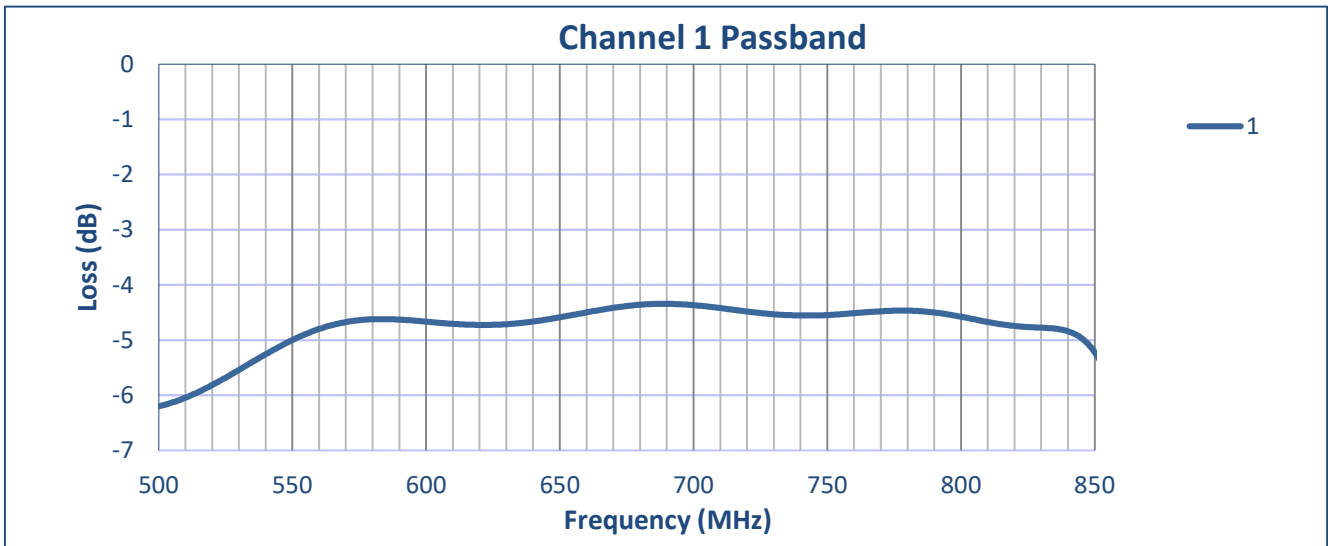
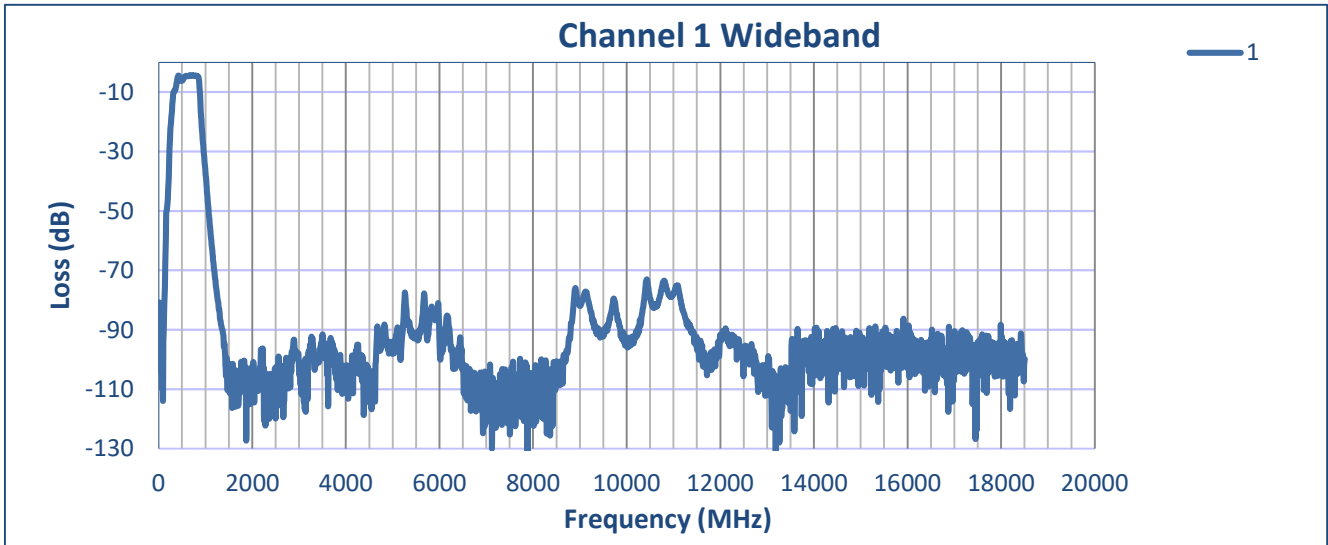
Tested By: Y Li
Temperature: 70°C

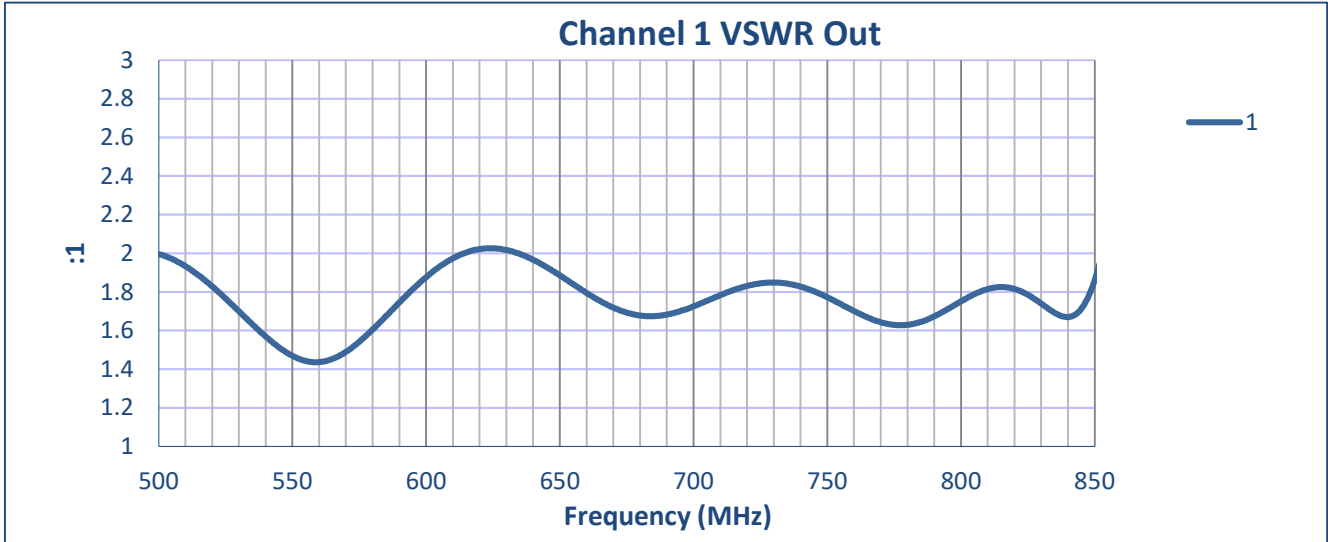
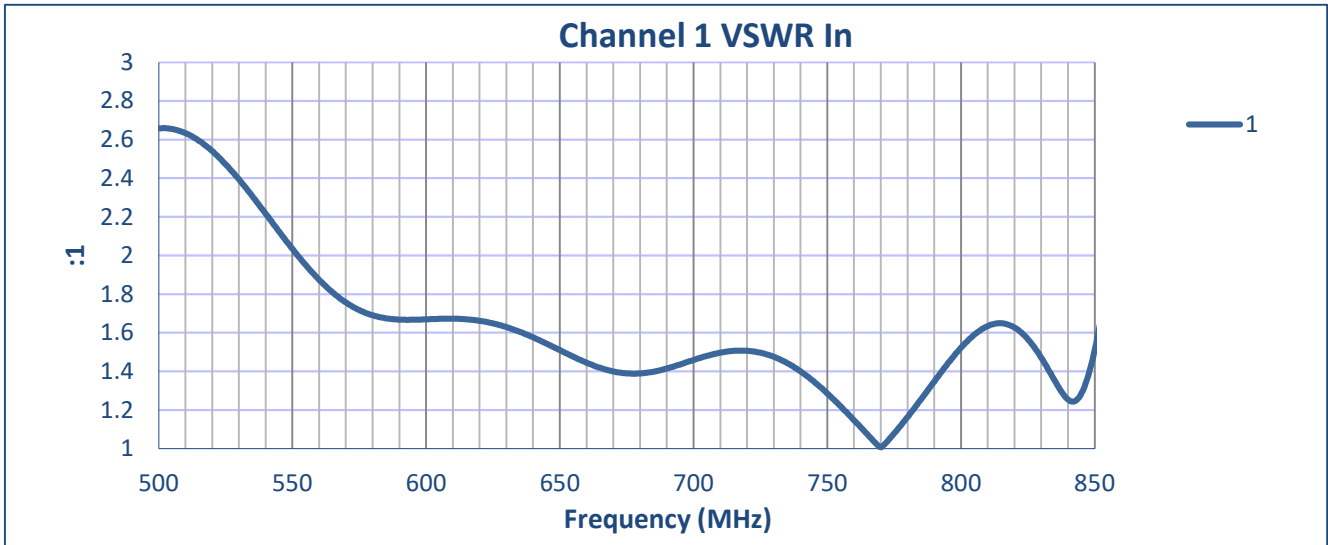
Date: 4/29/2023
Drawing No: 27644500 Rev: A1

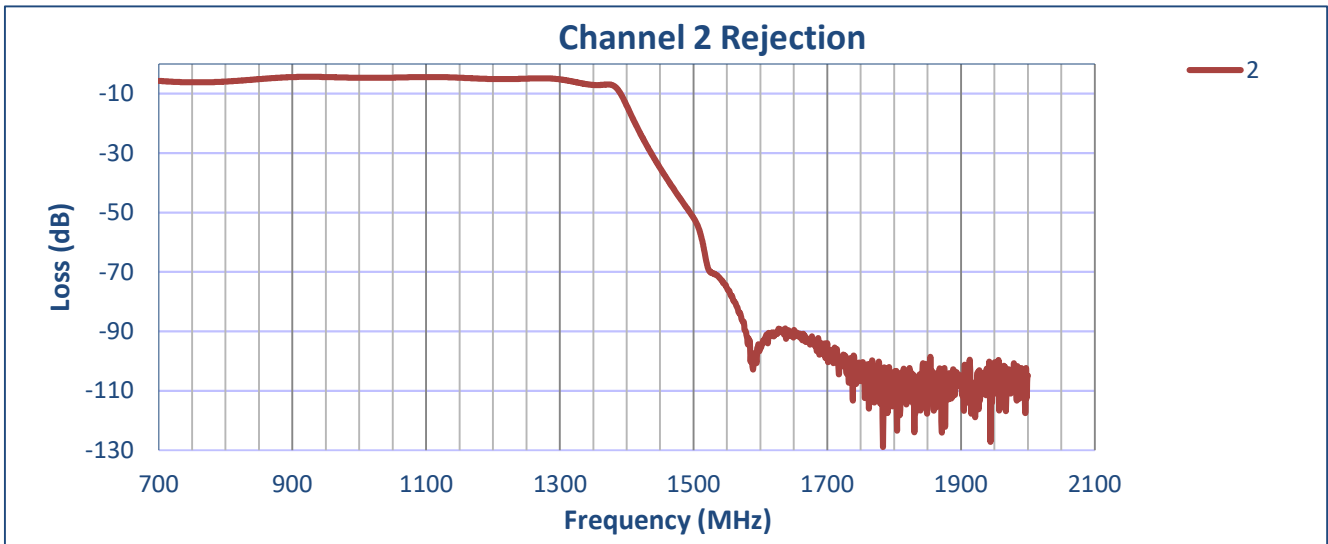
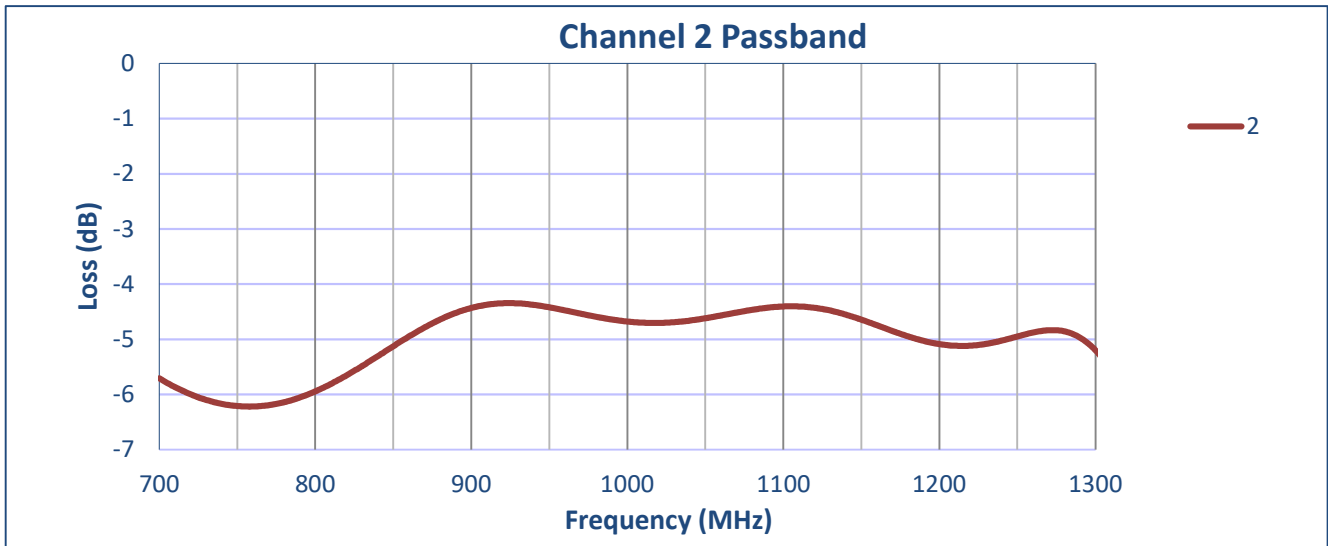
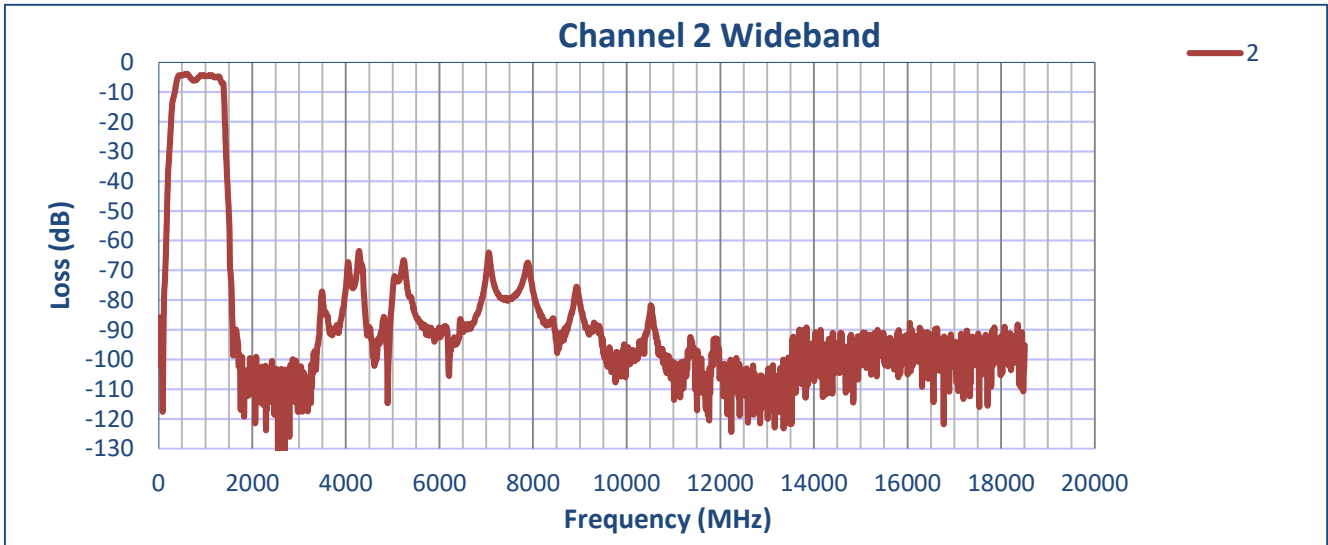
TEST ITEM	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range	0.5 GHz to 18.5 GHz	0.5 GHz to 18.5 GHz	
2	Insertion Loss (Passband)	7 dB Max	Channel 1: 6.2 dB Channel 2: 6.2 dB Channel 3: 5.4 dB Channel 4: 6.2 dB Channel 5: 6.6 dB Channel 6: 4.4 dB Channel 7: 6.5 dB	
3	VSWR: In/Out	2.2:1 Max	Channel 1: 2.7 Channel 2: 3 Channel 3: 1.8 Channel 4: 1.8 Channel 5: 1.9 Channel 6: 1.8 Channel 7: 1.8	
4	Amplitude Ripple (Passband)	+ - 2 dB Max	Channel 1: 0.9 dB Channel 2: 0.9 dB Channel 3: 0.4 dB Channel 4: 1 dB Channel 5: 1.1 dB Channel 6: 0.7 dB Channel 7: 1.7 dB	
5	Switching Speed	500 ns Max.	Pass See Data At Room	
6	Video Transients	500 mV Pk-Pk Max	Pass See Data At Room	
7	DC Supply	+5VDC @ 175 mA Max -12VDC @ 100 mA Max	5V @ 66 mA -12V @ 50 mA	

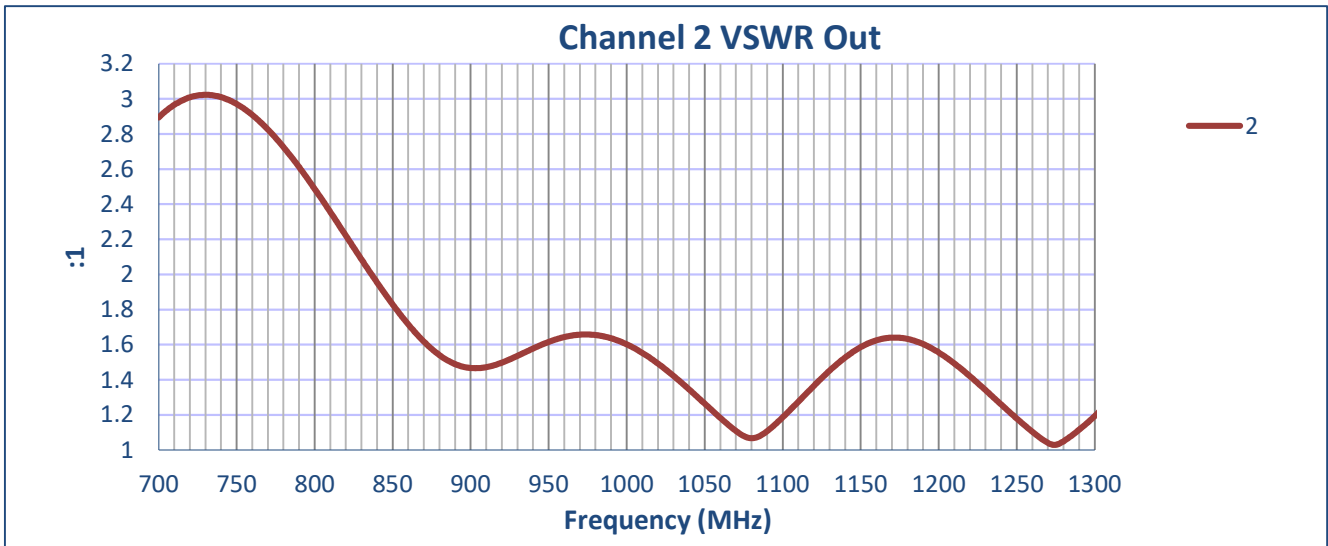
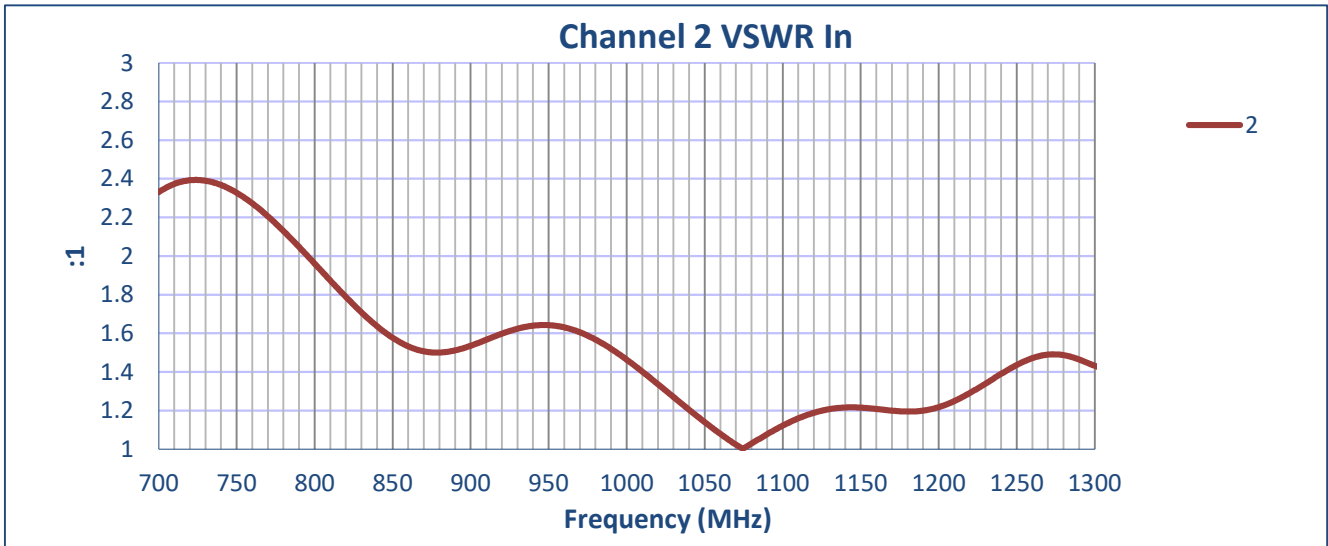
QA/QC Approval: _____

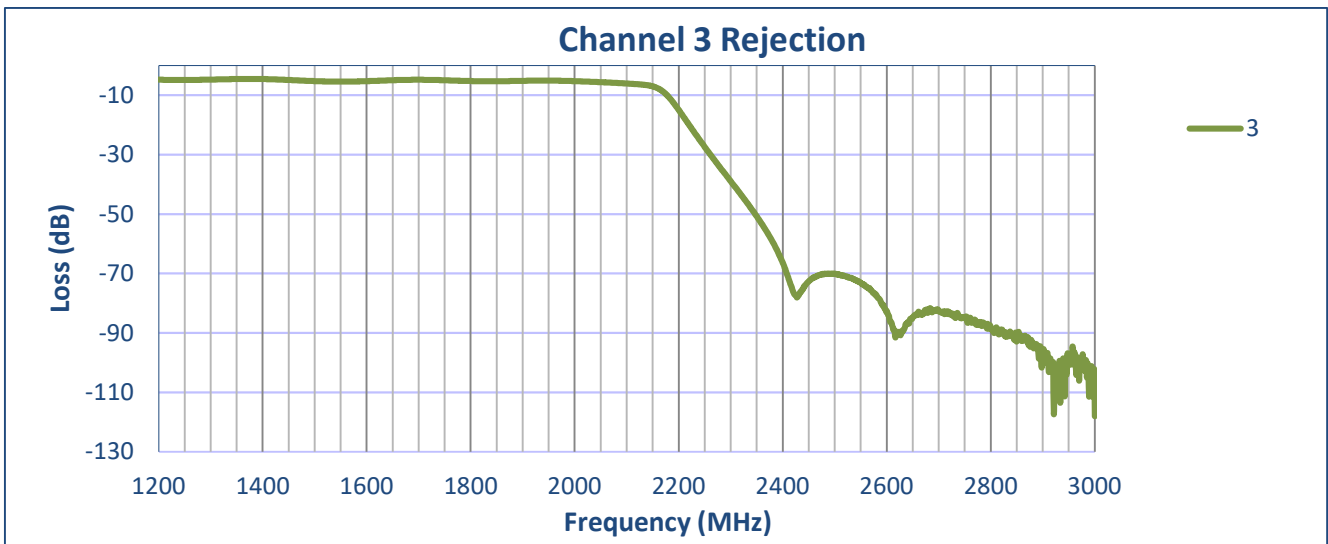
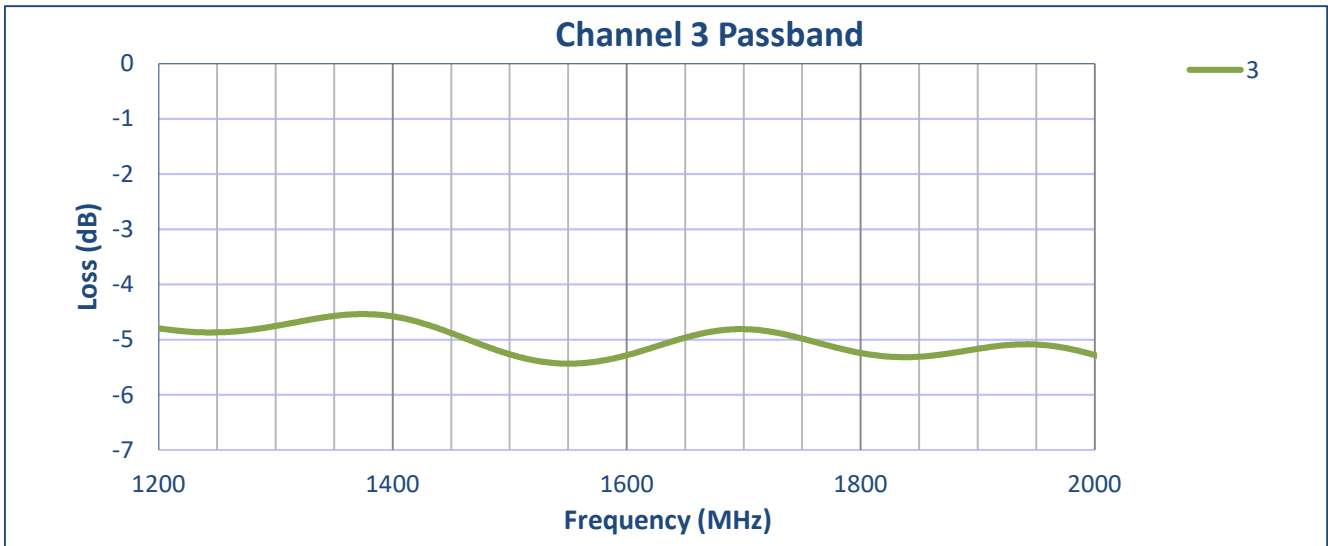
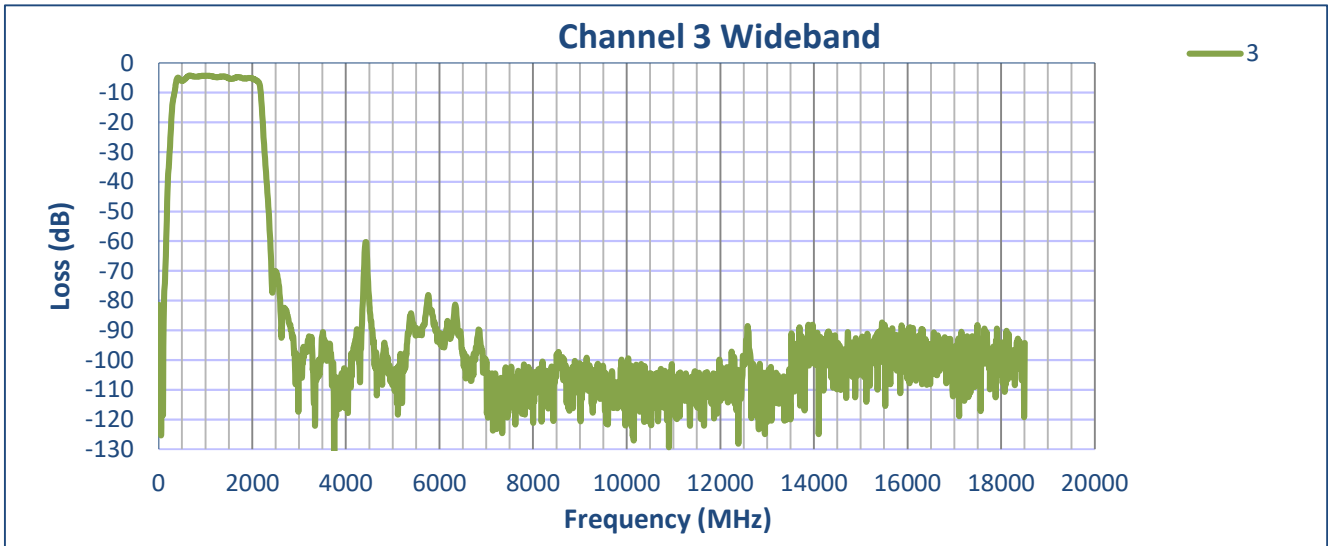
Date: _____



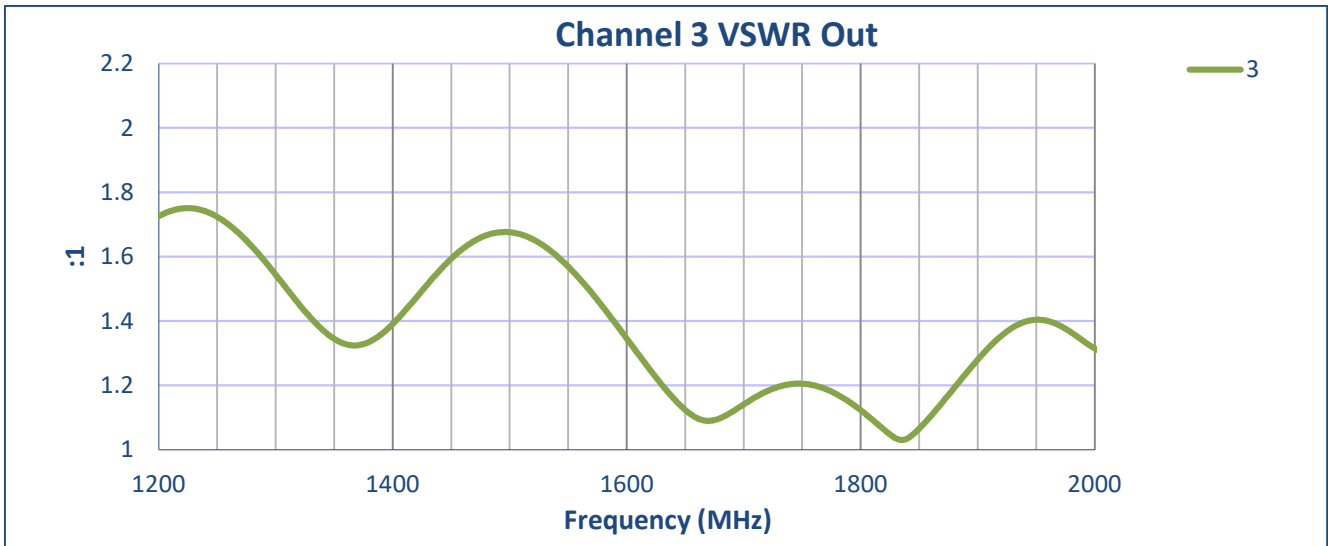
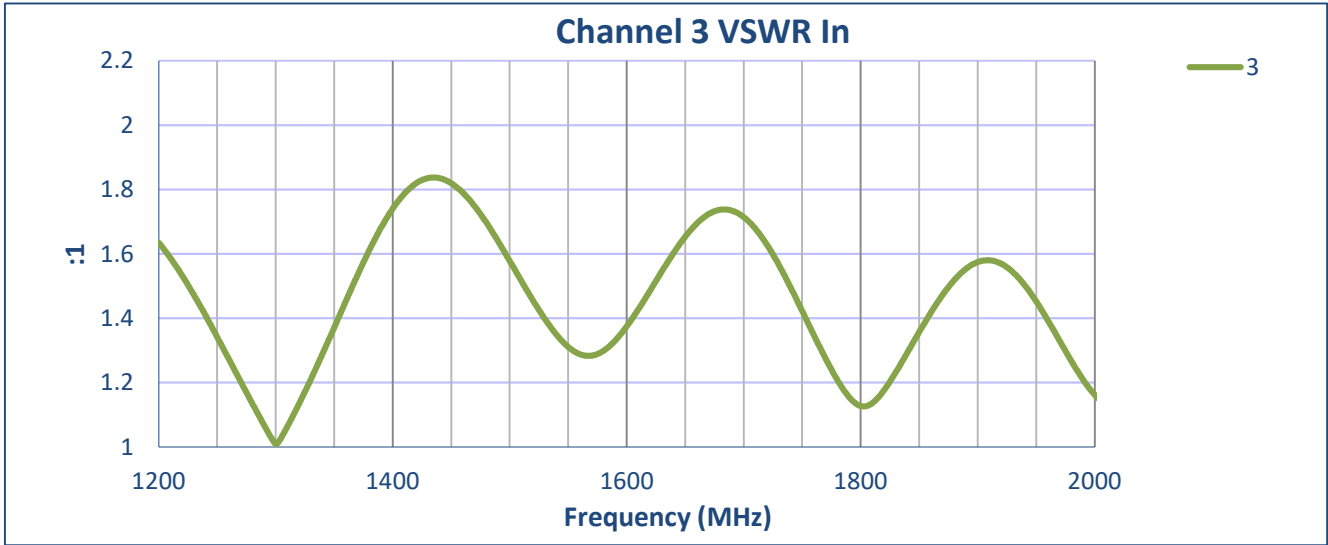


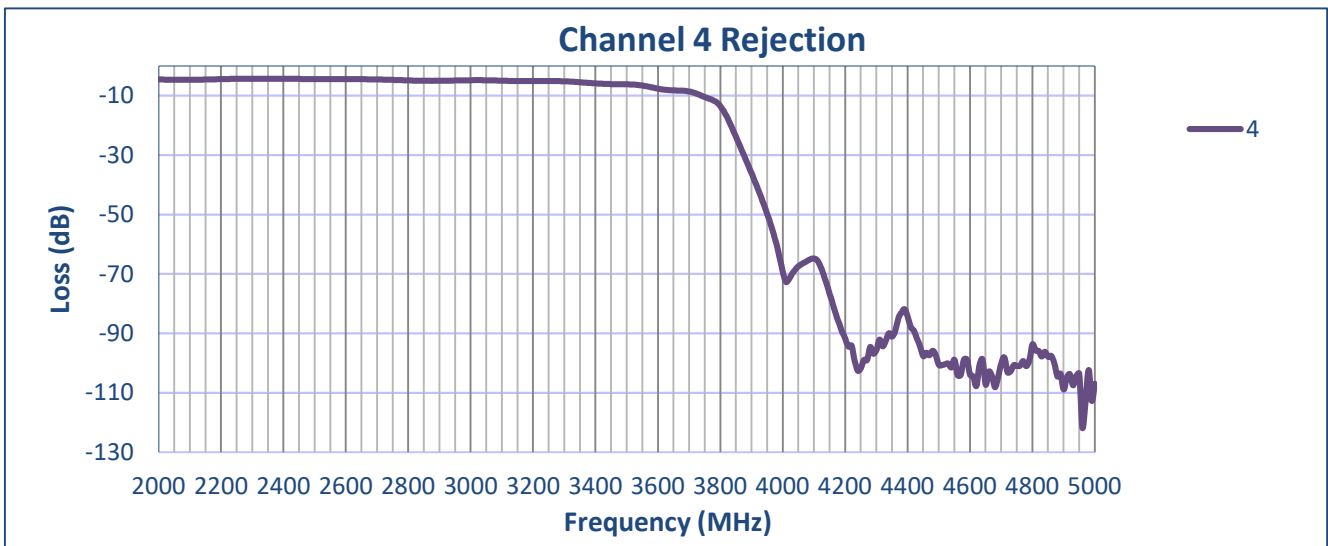
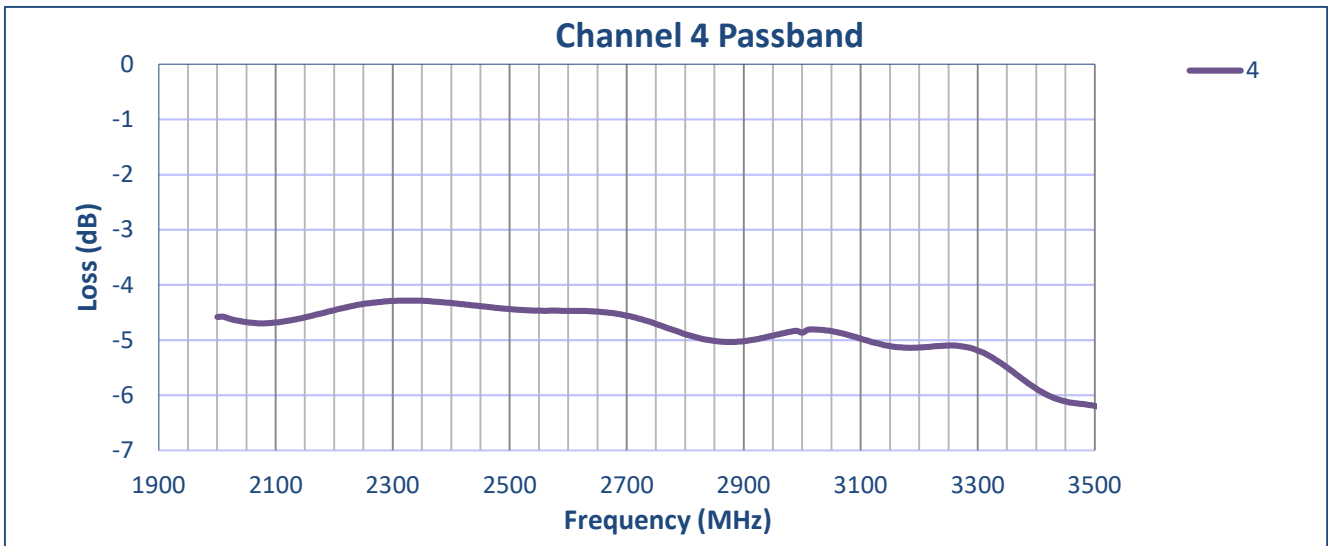
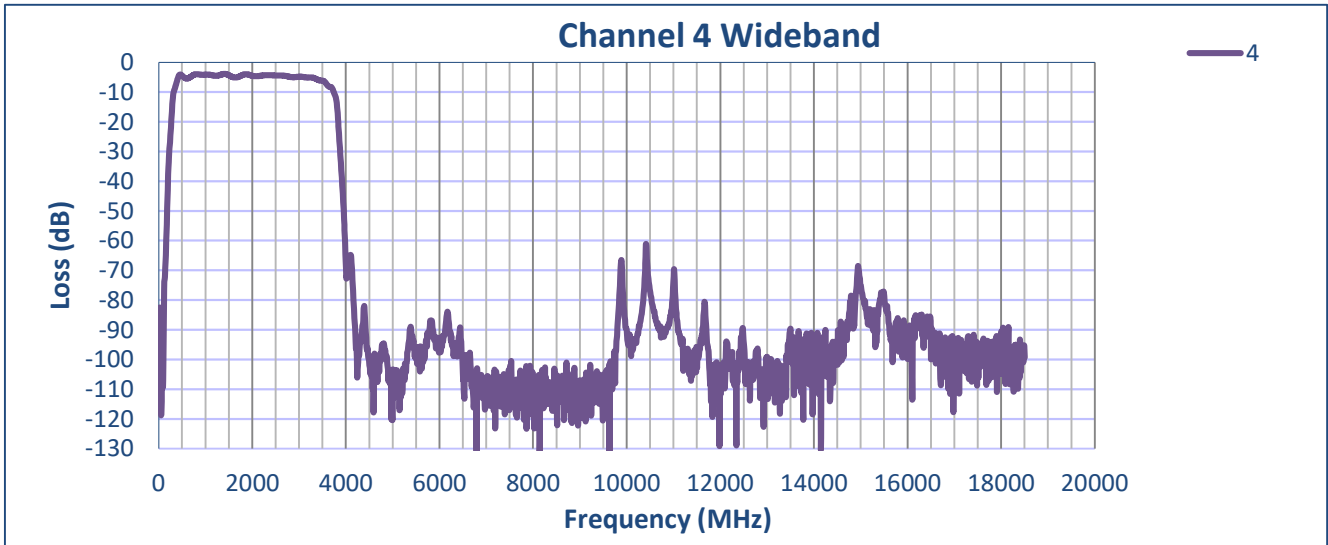


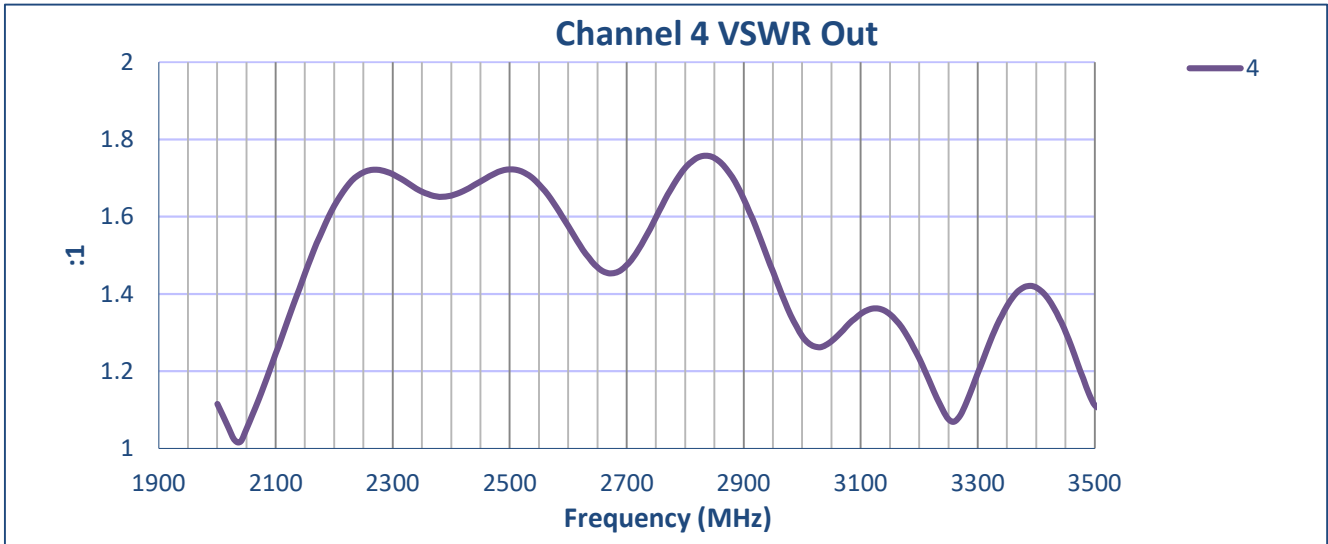
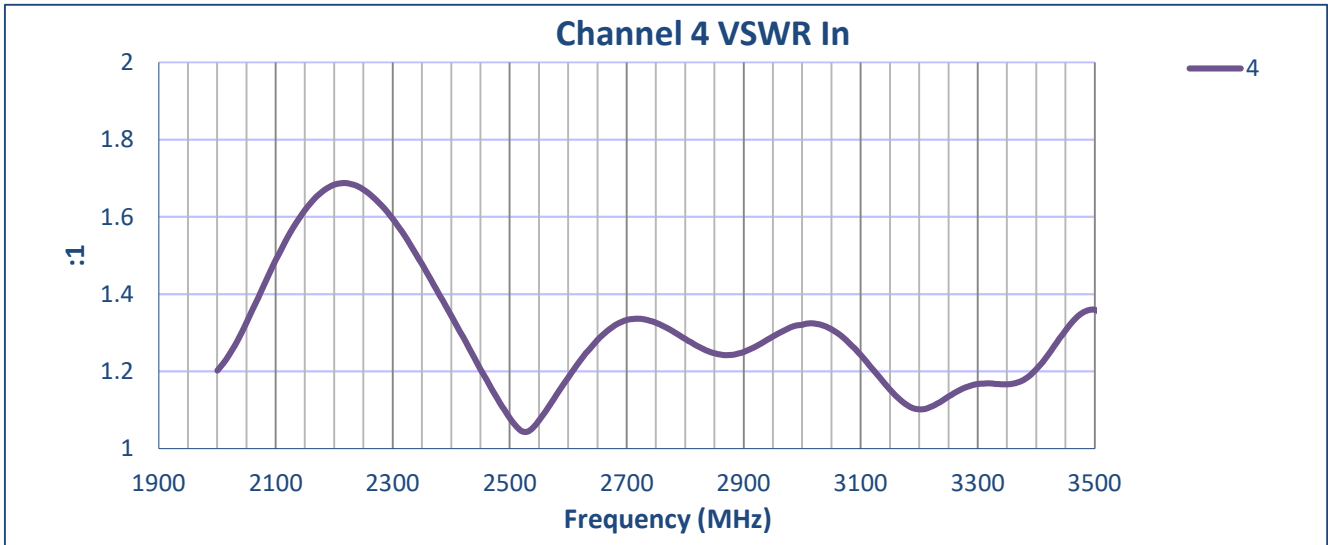


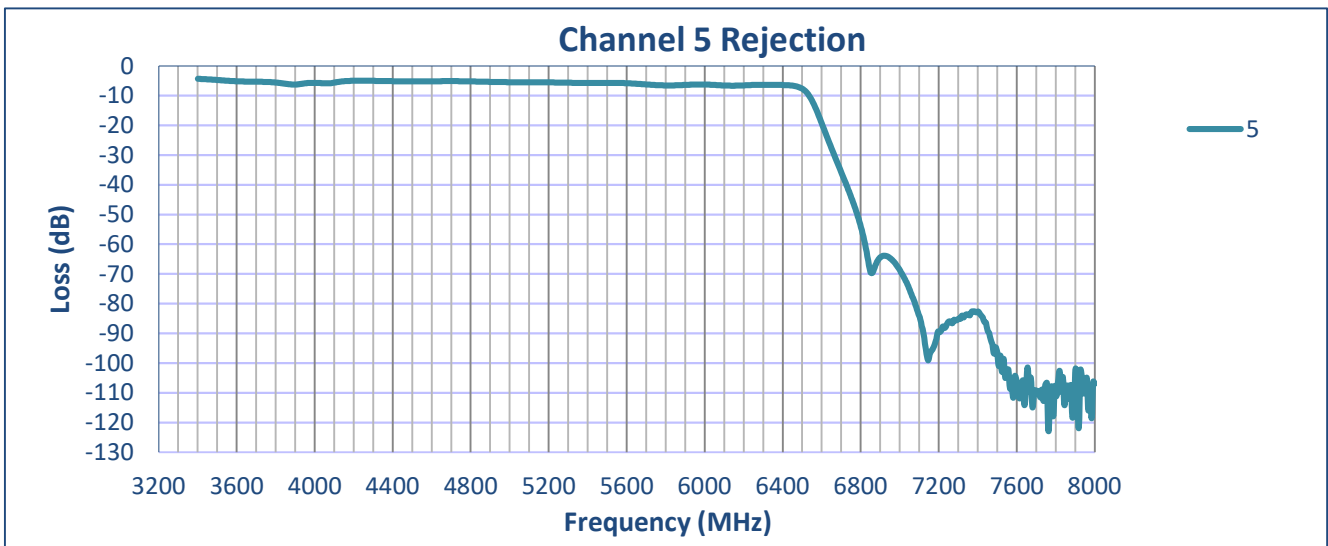
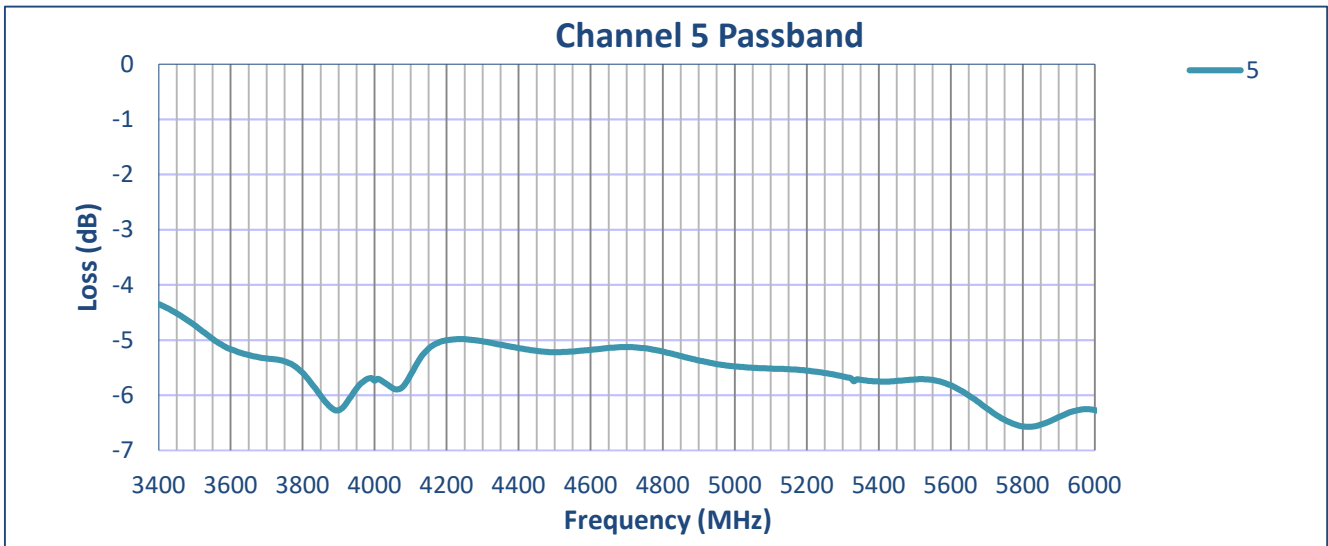
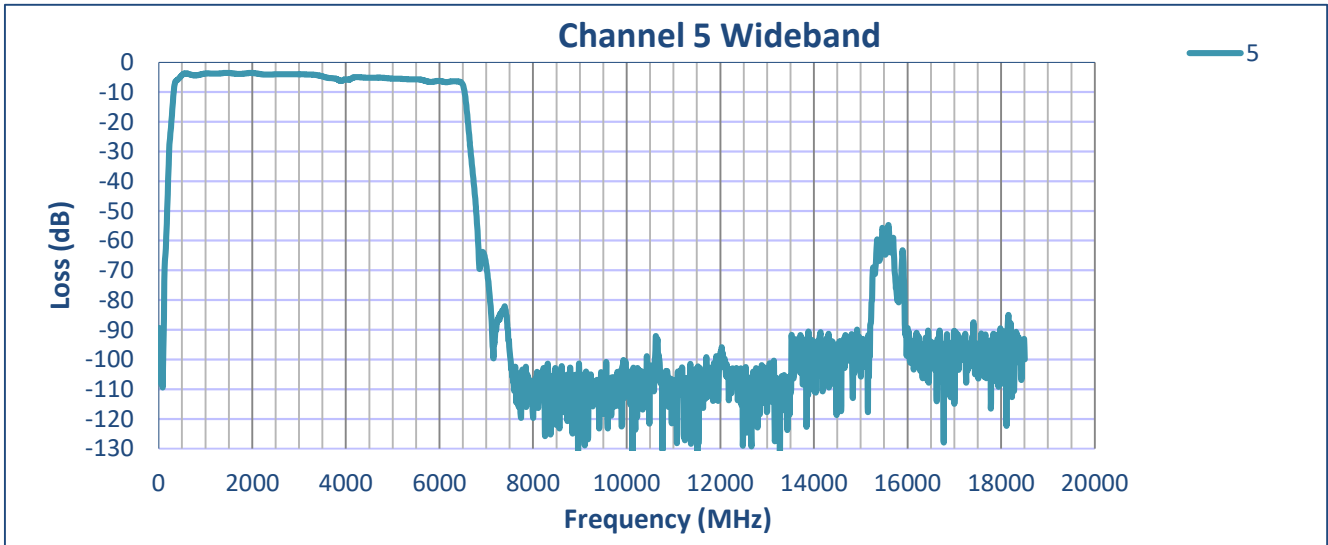


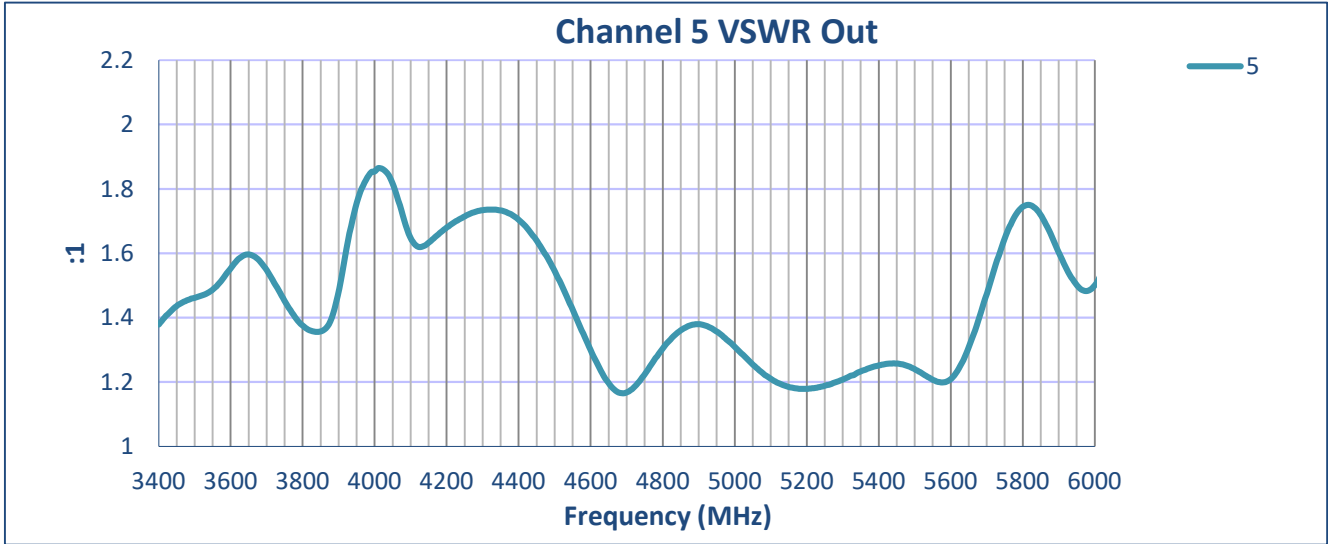
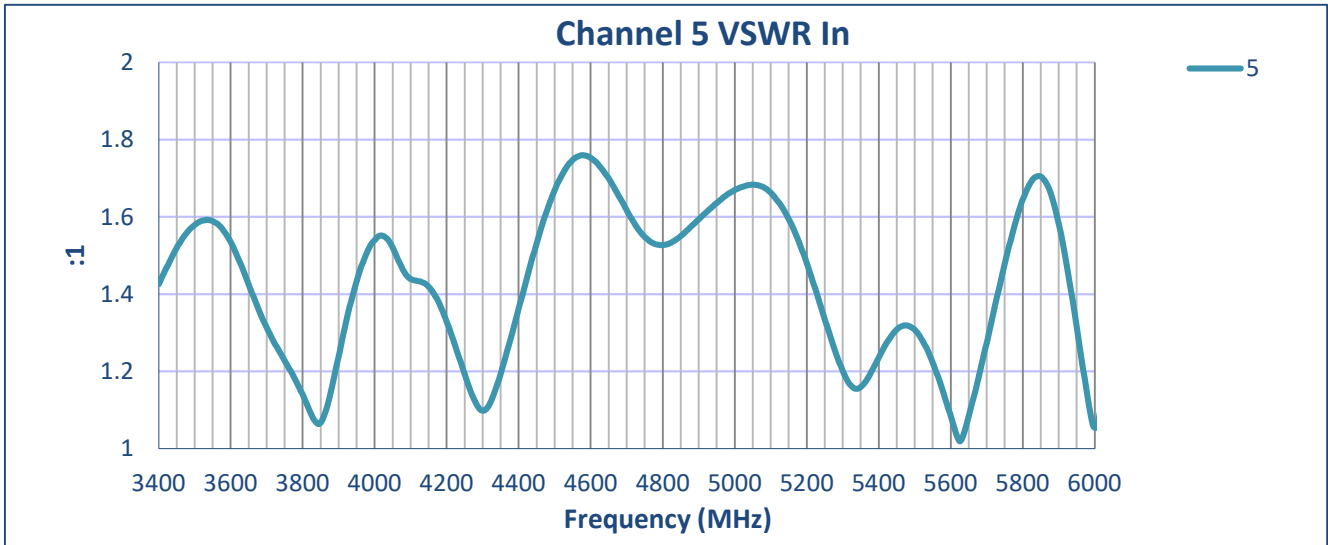
**SUMMARY TEST DATA
ON
7SFB9500-18G-CD-SFF**

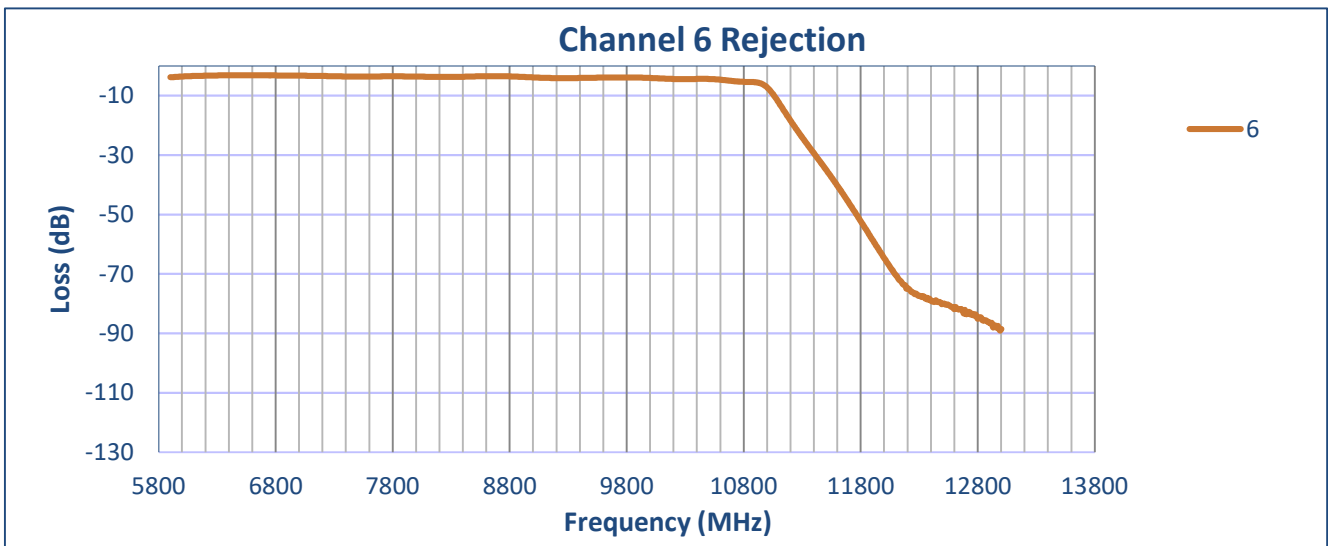
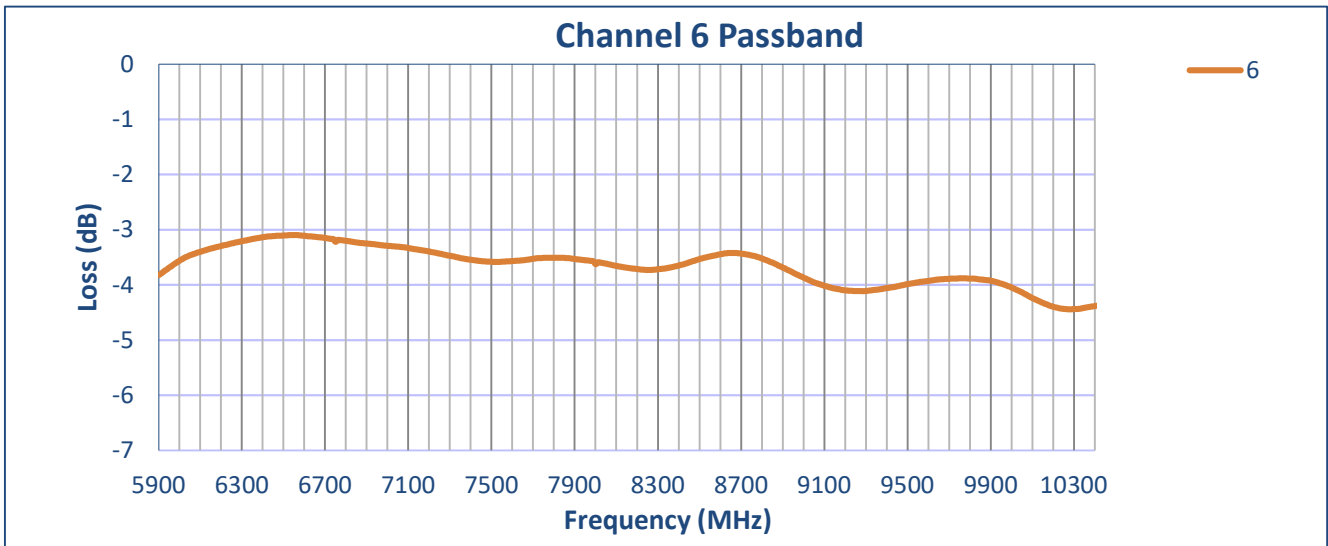
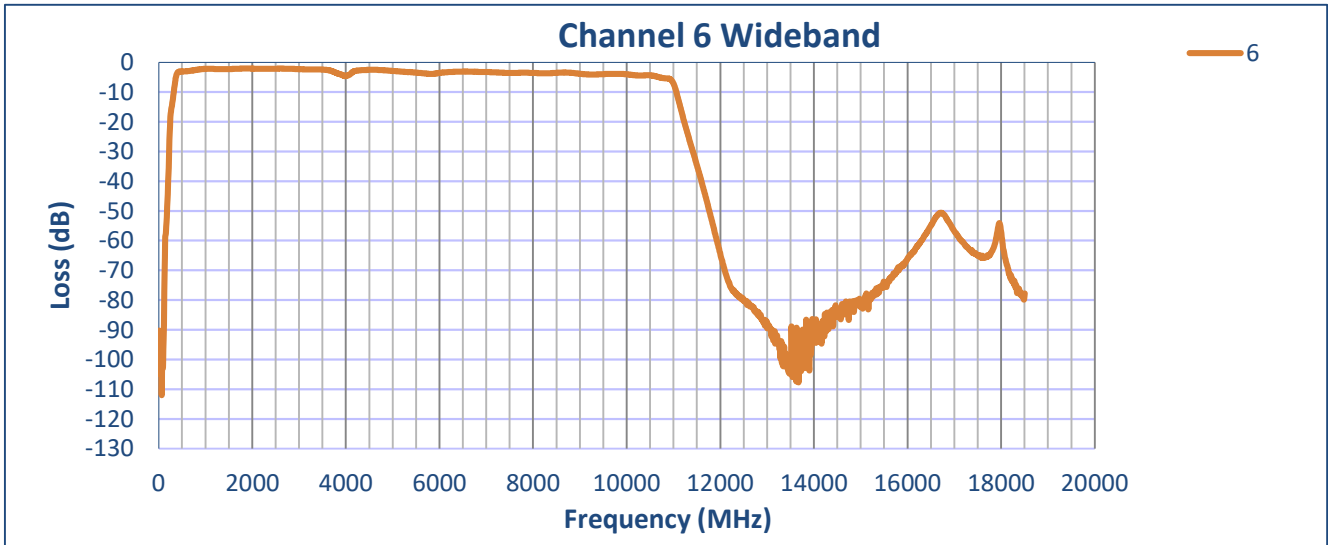


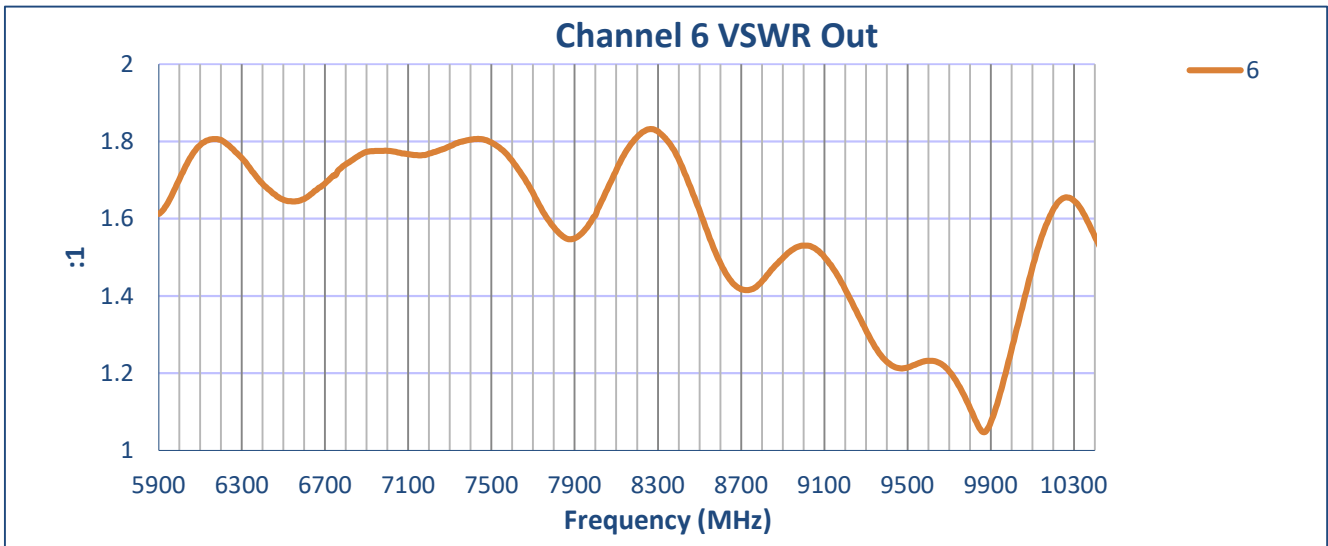
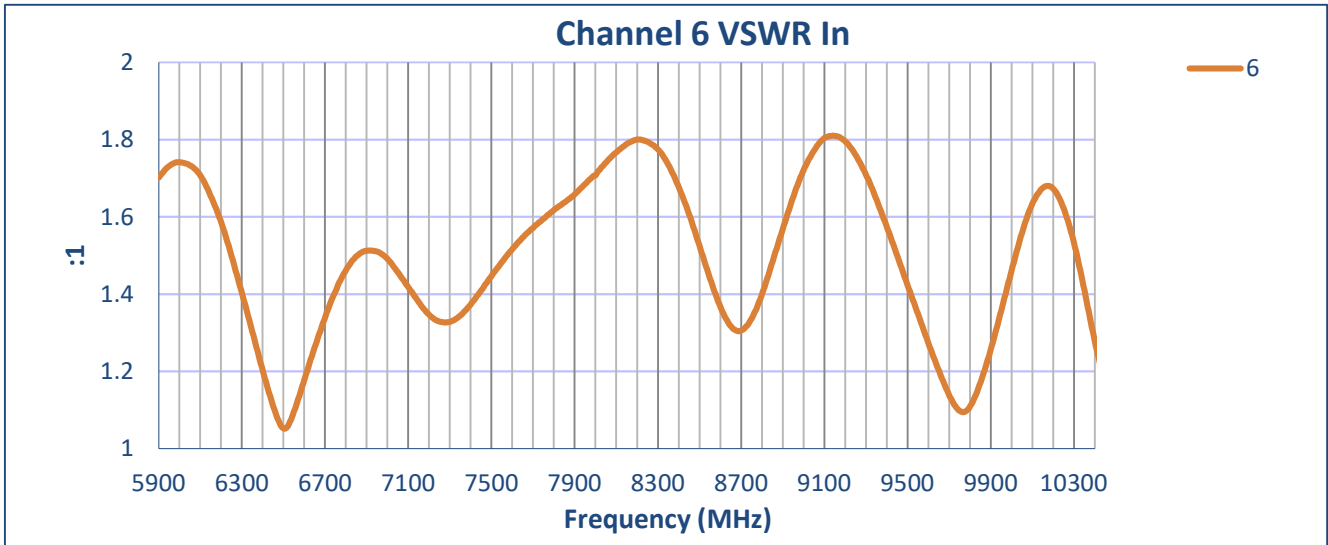


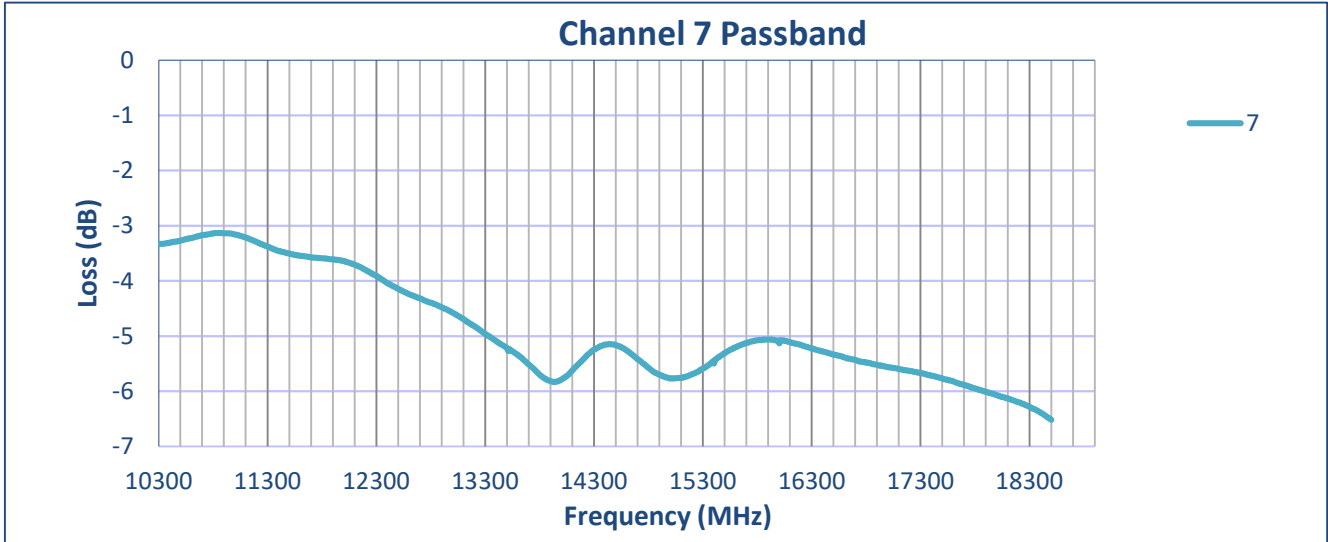
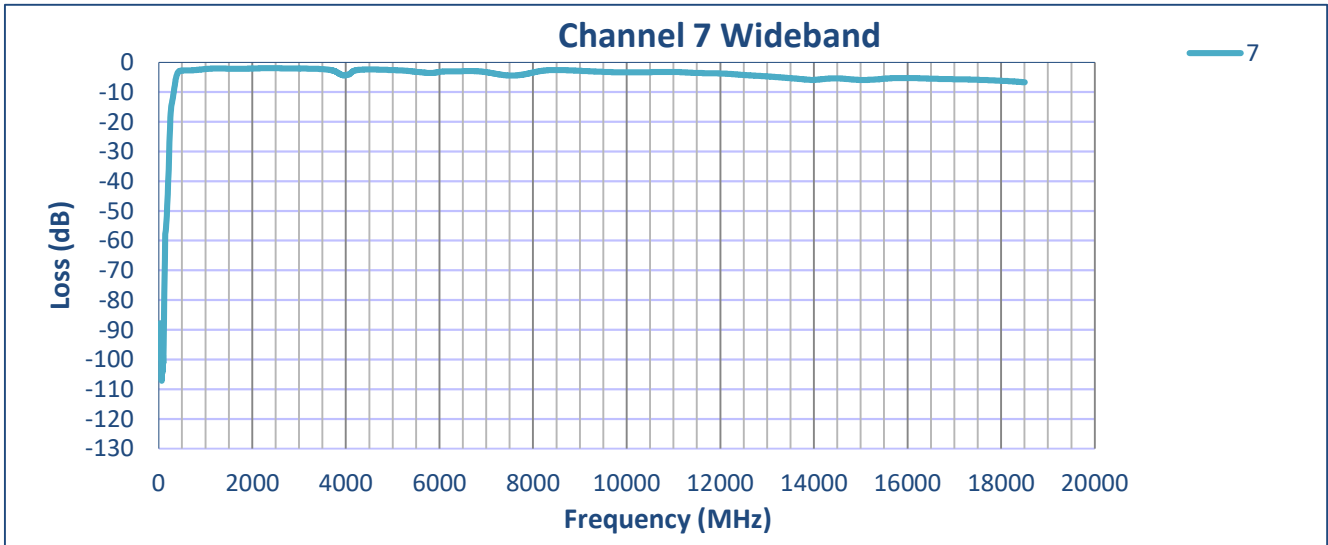


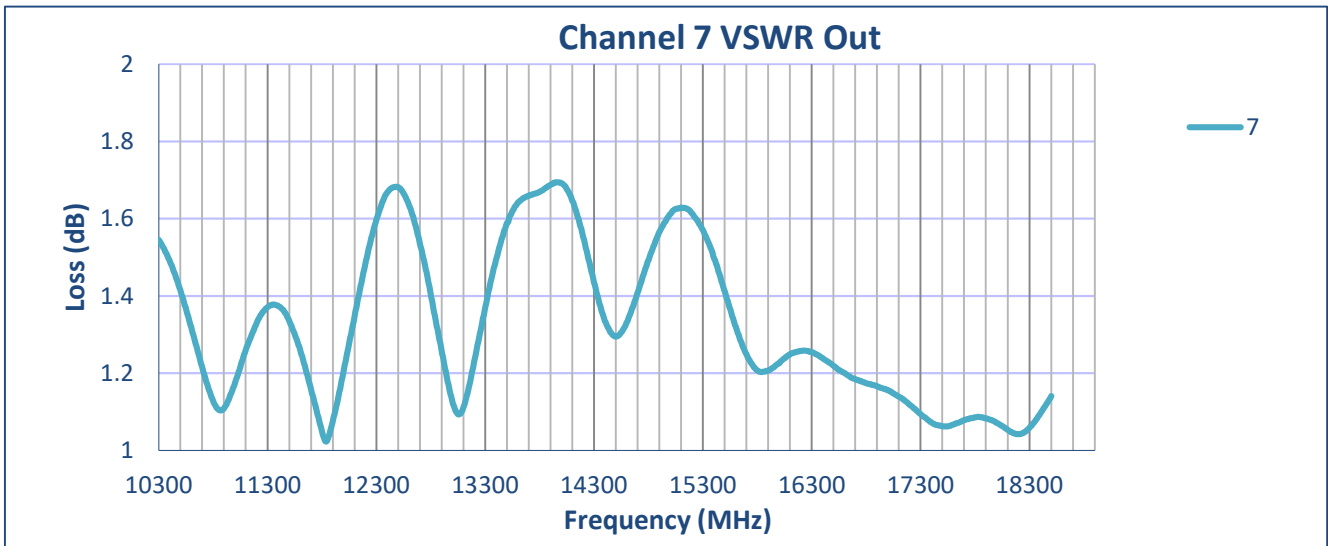
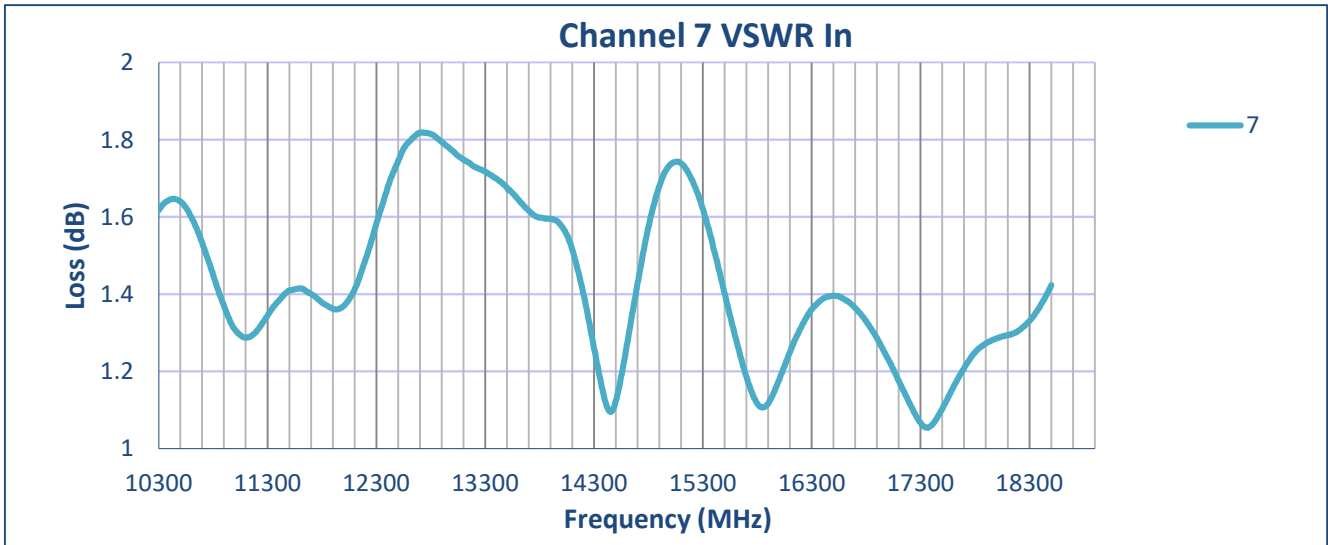


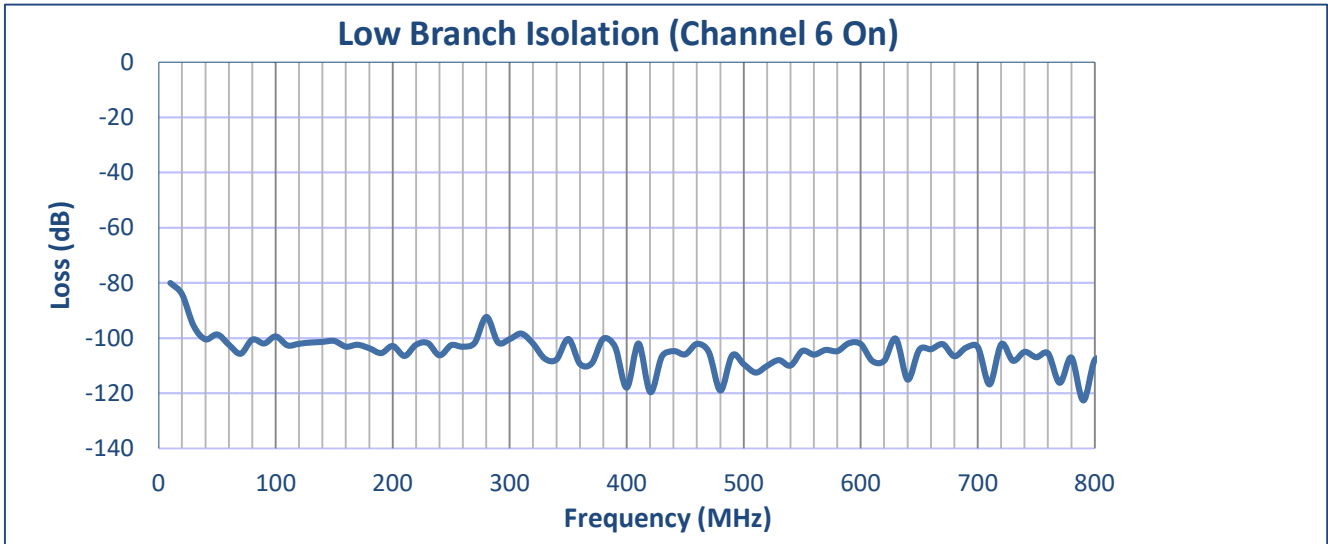
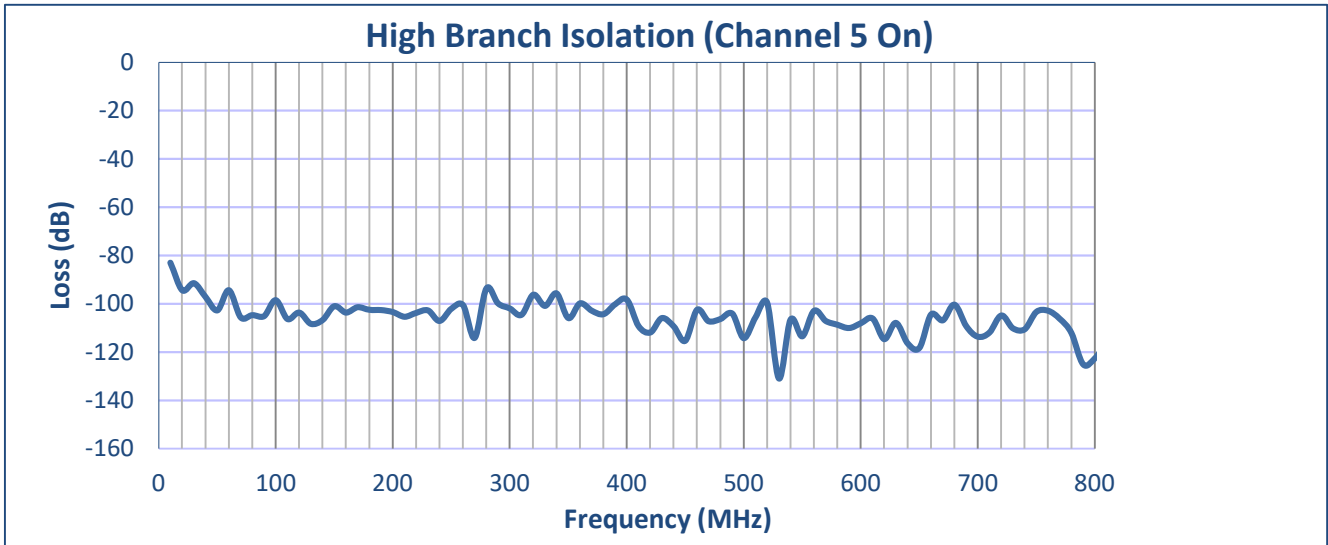


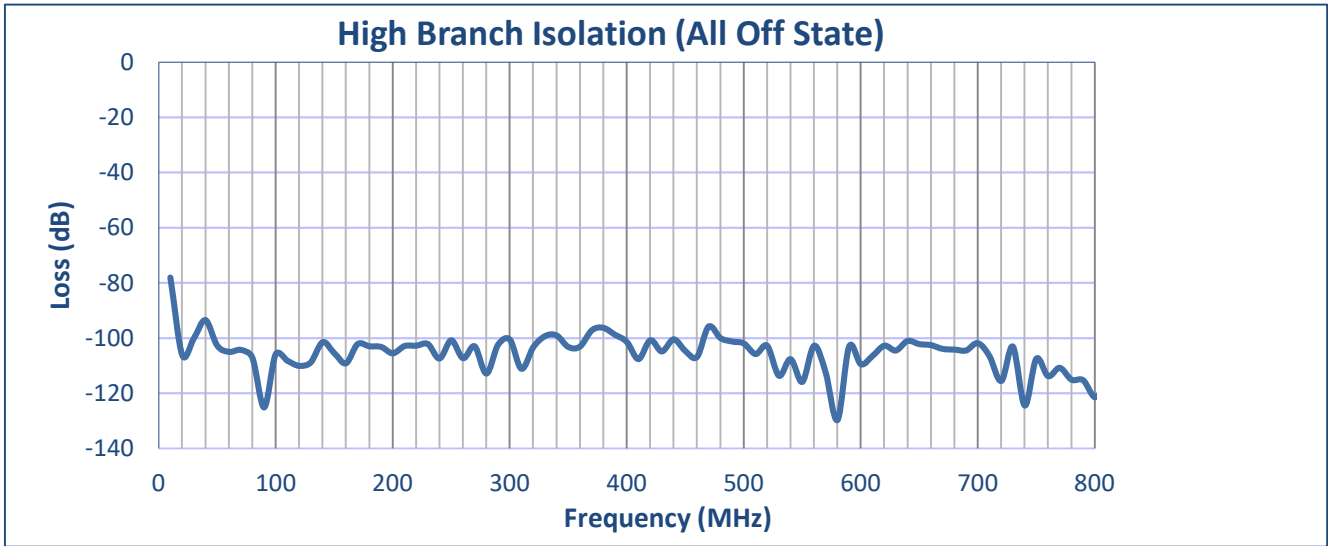
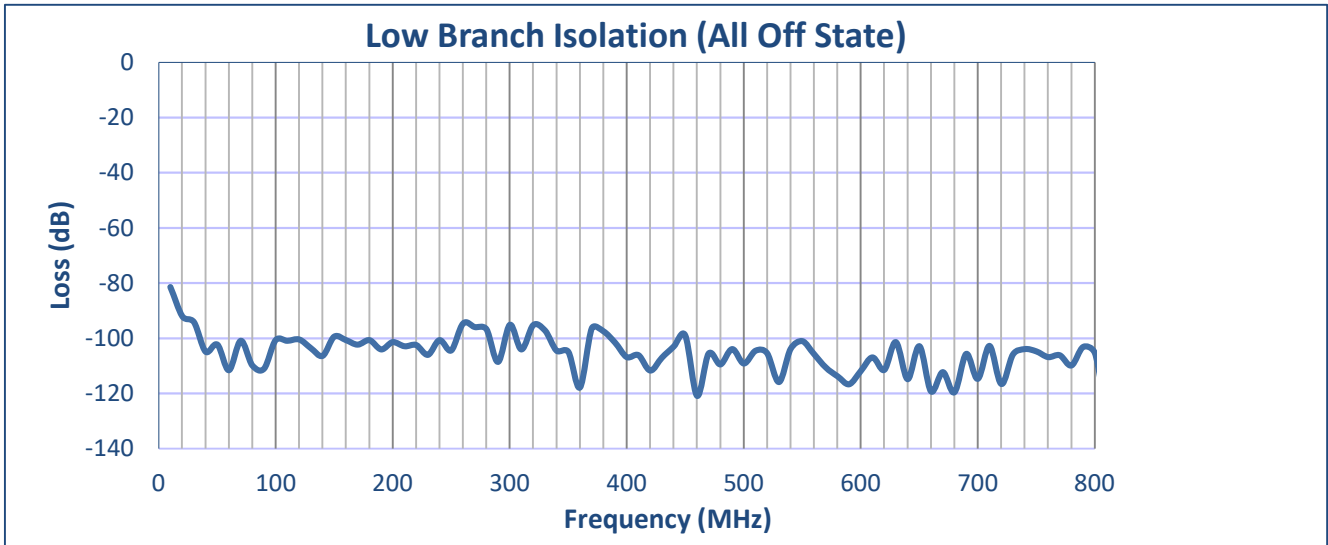






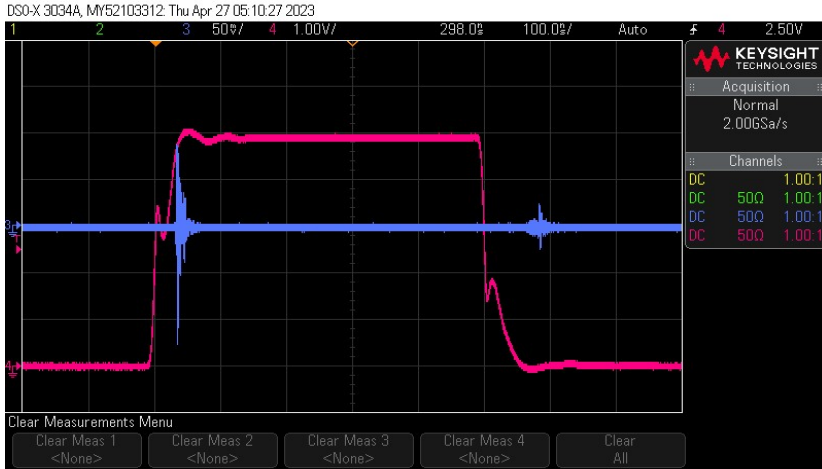






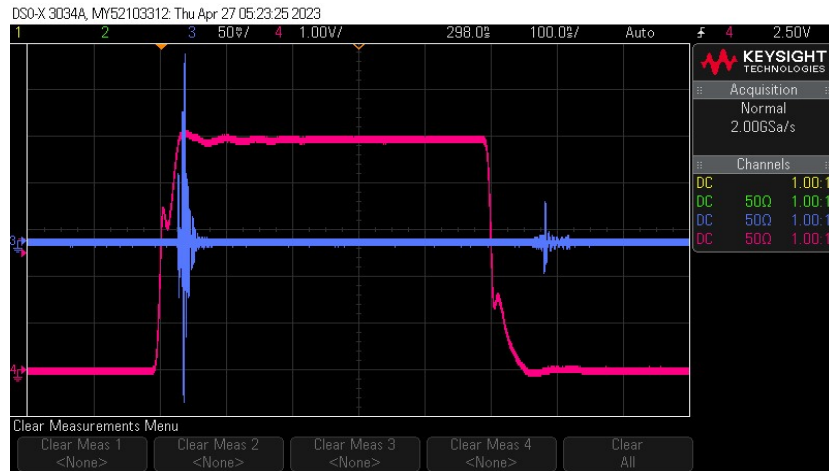
VIDEO TRANSIENTS
350 MHz Scope

Channel 1 On to Isolation state, measured at output port



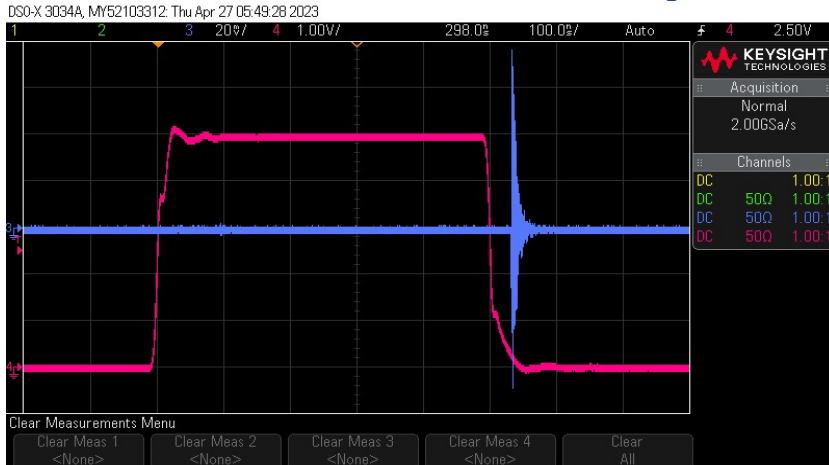
220 mV pk-pk

Channel 1 On to Channel 7 On, measured at high branch input port



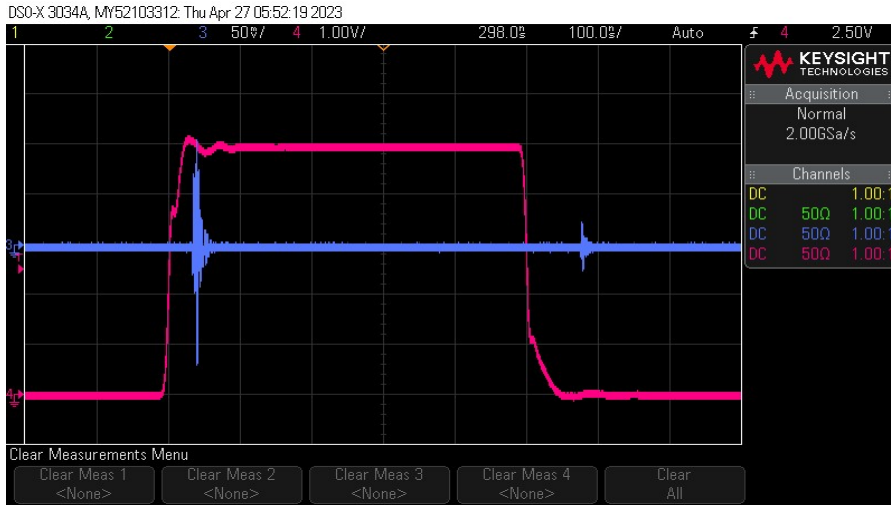
380 mV pk-pk

Channel 7 On to Isolation state, measured at high branch input port



150 mV pk-pk

Channel 6 On to Channel 5 On, measured at output port



220 mV pk-pk

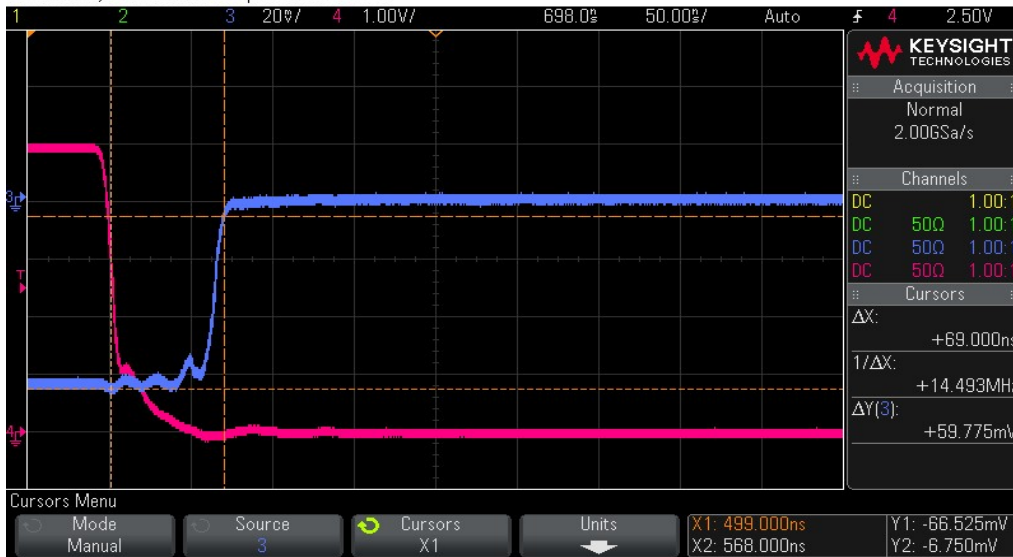
**TYPICAL CHARACTERISTICS
ON
7SFB9500-18G-CD-SFF
SWITCHING SPEED**

DSO-X 3034A, MY52103312: Thu Apr 27 06:09:52 2023



**Channel 1 -> 2
252ns**

DSO-X 3034A, MY52103312: Thu Apr 27 06:11:10 2023



**Channel 2 -> 1
69ns**

**BLUE - RF
RED - TTL**

TYPICAL CHARACTERISTICS
ON
7SFB9500-18G-CD-SFF

SWITCHING SPEED - FULL PULSE

