



**TYPICAL CHARACTERISTICS
ON
6SFB-55185-SMA**

PMI MODEL: 6SFB-55185-SMA IS A SIX CHANNEL SWITCH FILTER BANK (SFB) THAT OPERATES OVER THE 5.5 GHz TO 18.5 GHz FREQUENCY RANGE. THIS MODEL OFFERS FAST SWITCHING SPEEDS OF 200 ns.



3/24/2022

TESTED & REPORTED BY: E. Kretz



TYPICAL CHARACTERISTICS ON 6SFB-55185-SMA

OUTLINE DRAWING

DESCRIPTION

PMI MODEL: 6SFB-55185-SMA IS A SIX CHANNEL SWITCH FILTER BANK (SFB) THAT OPERATES OVER THE 5.5 GHz TO 18.5 GHz FREQUENCY RANGE. THIS MODEL OFFERS FAST SWITCHING SPEEDS OF 200 ns.

SPECIFICATIONS

- FREQUENCY RANGE: 5.5 GHz TO 18.5 GHz
- VSWR: 1.7:1 TYPICAL / 2.0:1 MAXIMUM
- SWITCHING SPEED: 200 ns MAXIMUM
- INSERTION LOSS: 4.0 dB TYPICAL / 6.0 MAXIMUM
- POWER SUPPLY: +5 VDC @ 550 mA MAXIMUM
-5 VDC @ 100 mA MAXIMUM
- INPUT POWER: 1W MAXIMUM
- RIPPLE - 1GHz BANDWIDTH: 1 dB
- CHANNEL ISOLATION: 50 dB
- IMPEDANCE: 50 OHMs
- RF CONNECTORS: SMA Female
- SIZE: 3.55" x 3.15" x 1.10"
- FINISH: Nickel Plated
- Weight: 19.4oz/ 550g

FILTER CHARACTERISTICS						
PARAMETER	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6
PASSBAND	5.5 - 7.5 GHz	8.5 - 9.7 GHz	8.7 - 11.2 GHz	10.0 - 14.5 GHz	13.5 - 16.2 GHz	15.2 - 18.5 GHz
Lower Rejection	DC-3.25-30dB	DC-4.75-30dB	DC-4.85-30dB	DC-55-30dB	DC-65-30dB	DC-150-60dB
	4.2-4.85-10dB	4.7-5.85-10dB	4.8-7.85-10dB	5-105-10dB	4.8-125-10dB	4.8-125-10dB
Upper Rejection	8.7-18.75-60dB	10.55-10dB	115-10dB	18.5-245-60dB	18.5-245-60dB	19.5-205-10dB
	16.7-185-30dB	11.2-205-60dB	13.5-205-60dB	16.5-245-60dB	18-245-60dB	20-245-30dB

LOGIC TABLE			
PIN	C3	C2	C1
Channel 1	0	0	0
Channel 2	0	0	1
Channel 3	0	1	0
Channel 4	0	1	1
Channel 5	1	0	0
Channel 6	1	0	1

ENVIRONMENTAL RATINGS

- TEMPERATURE: -45 °C TO +85 °C (OPERATING)
-55 °C TO +125 °C (STORAGE)
- HUMIDITY: 5 to 85%
- SHOCK: 50G, ½ Sine, 11msec
- VIBRATION: 10G RMS, 20-2000Hz

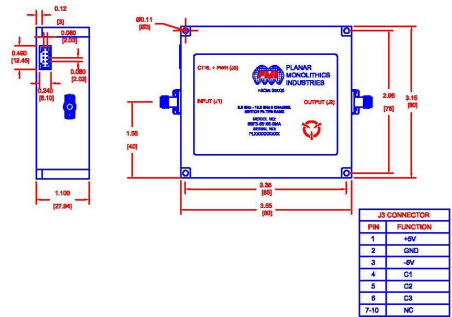
NOTE 1: THE SFB IS DESIGNED TO MEET ALL STATED ENVIRONMENTAL SPECIFICATIONS.
NOTE 2: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

PMI CONFIDENTIAL AND PROPRIETARY

ALL DIMENSIONS
ARE IN INCHES (mm)
TOLERANCES:
XXX .010
XXXX .010

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	3/31/21	
	A2	ECN # 22-0040	3/18/22	

MECHANICAL OUTLINE



PLANAR MONOLITHICS INDUSTRIES, 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
AS	3/31/21	PRODUCT FEATURE 6SFB-55185-SMA 5.5 GHz TO 18.5 GHz SIX CHANNEL SWITCH FILTER BANK
DRAWN		SIZE FROM NO. A 05XQ0
REVISION		DWG NO. 27043820
ISSUED		SCALE N:S SHEET 1 OF 1



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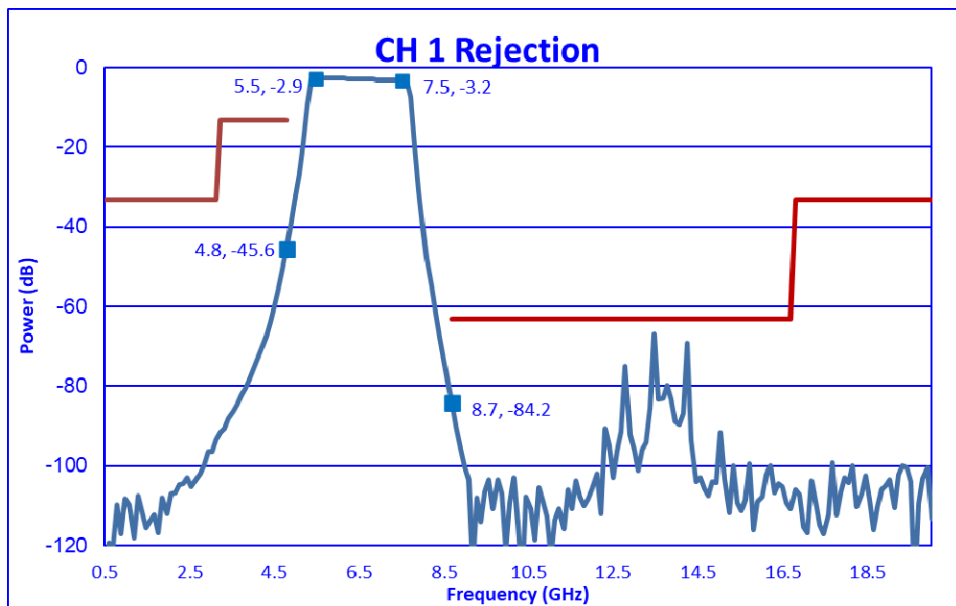
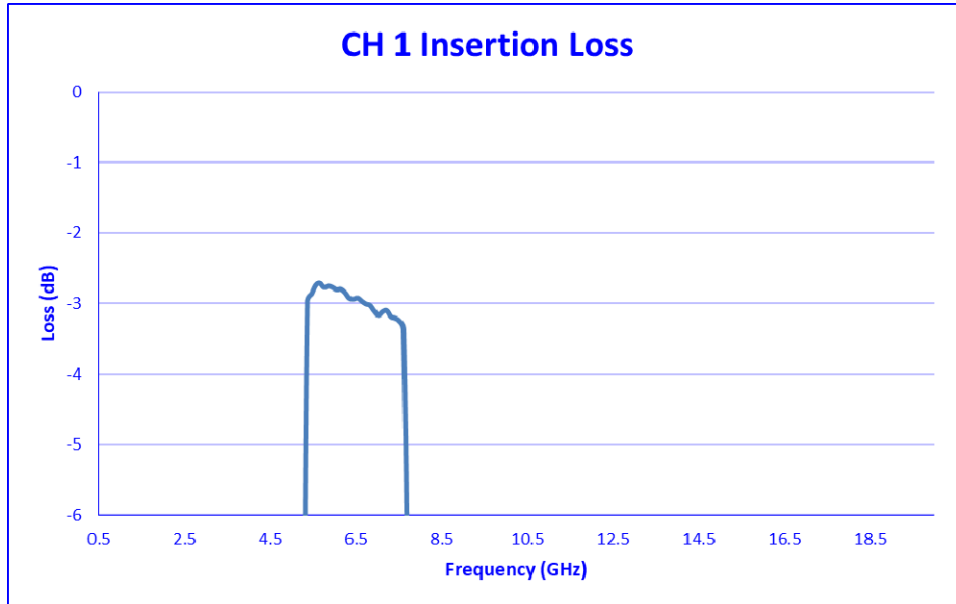
TEST DATA SUMMARY @ 25°C

TEST ITEM	PARAMETERS		SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	Frequency Range		5.5 GHz to 18.5 GHz	5.5 GHz to 18.5 GHz	
2	Insertion Loss		4.0 dB TYP 6.0 dB MAX	5.02 dB	
3	VSWR		1.7:1 TYP. 2.0:1 MAX.	1.63:1	
4	Switching Speed		200 ns MAX	125 ns	
5	Input Power		1W MAX	1W MAX	
6	Power Supply		+5 VDC @ 550 mA MAX. -5 VDC @ 100mA MAX.	+5 VDC @ 507mA -5 VDC @ 75mA	
7	Ripple - 1GHz Bandwidth		1 dB	0.704 dB	
8	Channel #	Passband	Lower Rejection		
	1	(5.5 - 7.5 GHz)	DC-3.2≤-30dB 3.2-4.8≤-10dB	-88 dB -42 dB	
	2	(6.5 - 9.7 GHz)	DC-4.7≤-30dB 4.7-5.5≤-10dB	-99 dB -69 dB	
	3	(8.7 - 11.8 GHz)	DC-4.8≤-30dB 4.8-7.6≤-10dB	-101 dB -52 dB	
	4	(10.8 - 14.5 GHz)	DC-5≤-30dB 5-10≤-10dB	-101 dB -43 dB	
	5	(13.5 - 16.2 GHz)	DC-4.5≤-30dB 4.5-12≤-10dB	-102 dB -77 dB	
	6	(15.2 - 18.5 GHz)	DC-13≤-60dB	-75 dB	
9	Channel #	Passband	Upper Rejection		
	1	(5.5 - 7.5 GHz)	8.7-16.7≤-60dB 16.7-18≤-30dB	-64 dB -96 dB	
	2	(6.5 - 9.7 GHz)	10.5≤-10dB 11.2-20≤-60dB	-47 dB -76 dB	
	3	(8.7 - 11.8 GHz)	13≤-10dB 13.5-20≤-60dB	-39 dB -74 dB	
	4	(10.8 - 14.5 GHz)	15.8-24≤-60dB	-61 dB	
	5	(13.5 - 16.2 GHz)	16.8≤-10dB 18-24≤-60dB	-24 dB -76 dB	
	6	(15.2 - 18.5 GHz)	19.5-20≤-10dB 20-24≤-30dB	-31 dB -49 dB	



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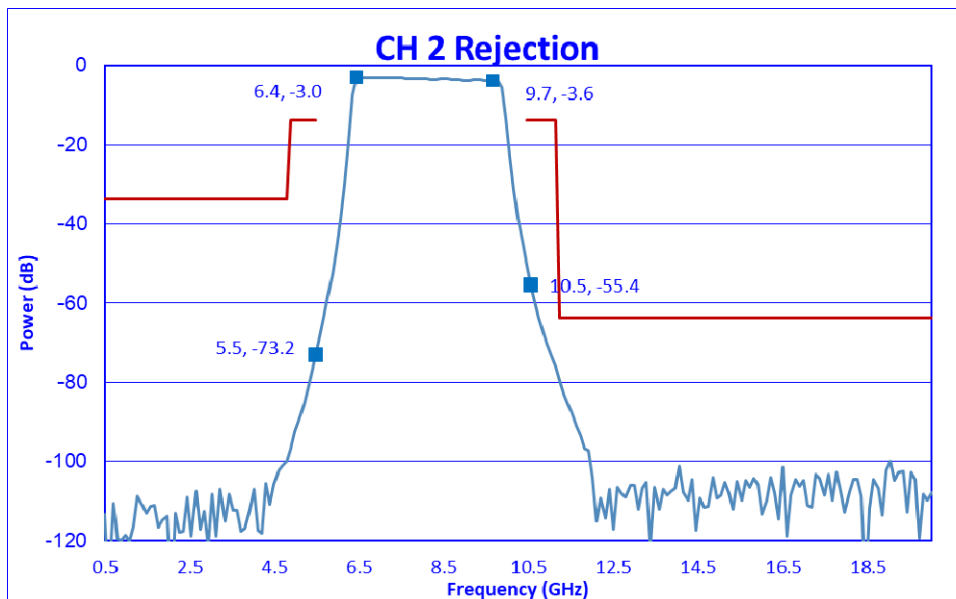
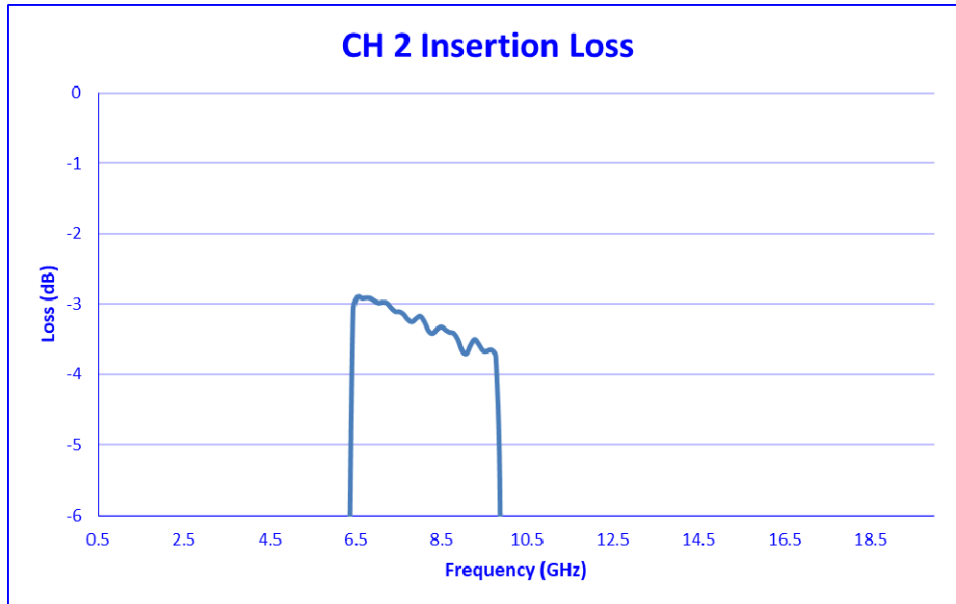
25°C





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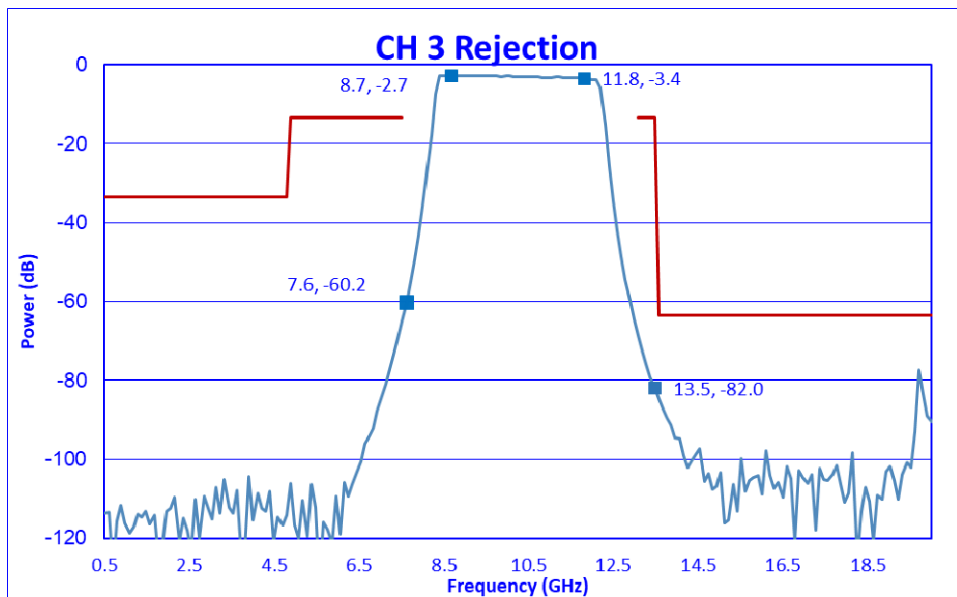
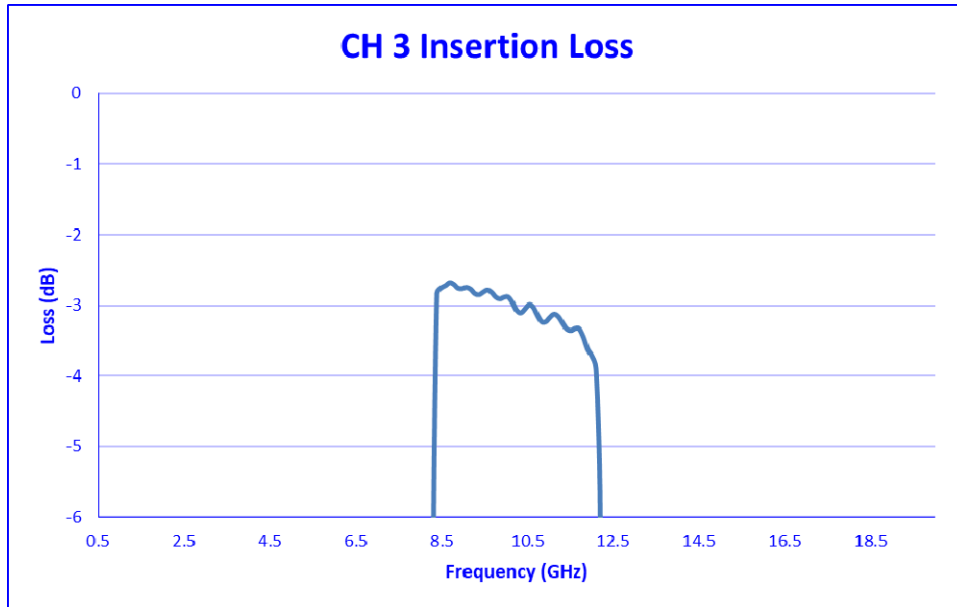
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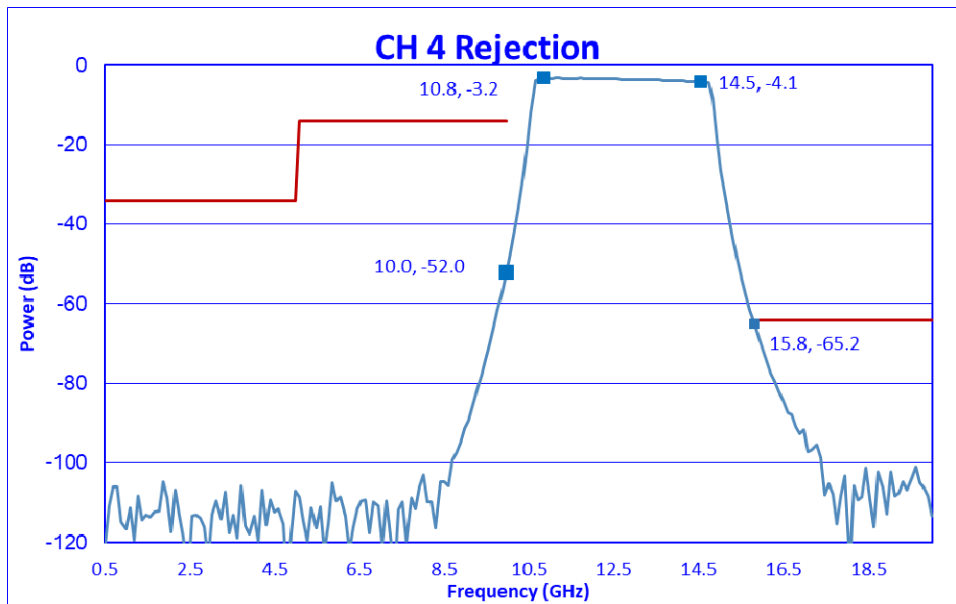
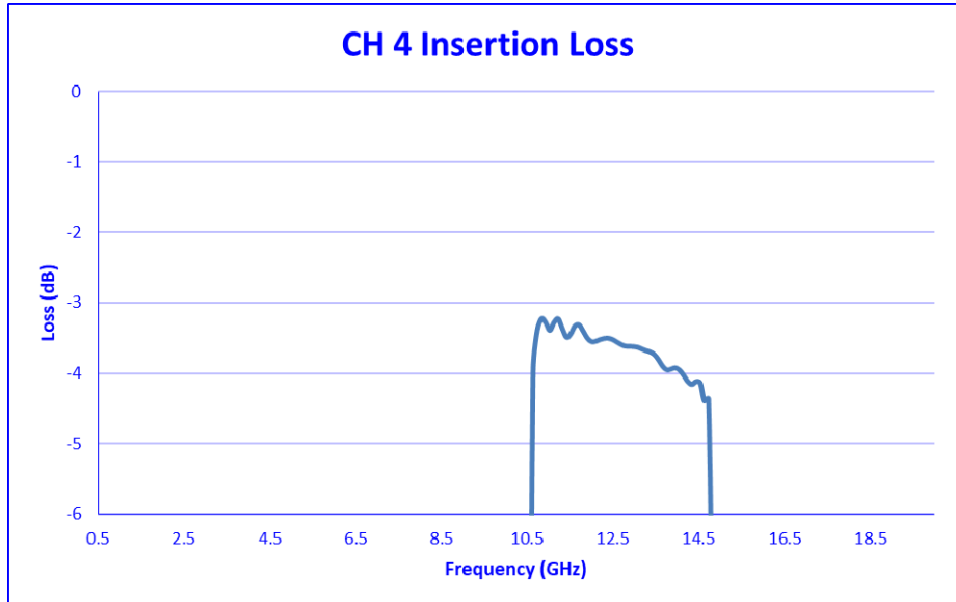
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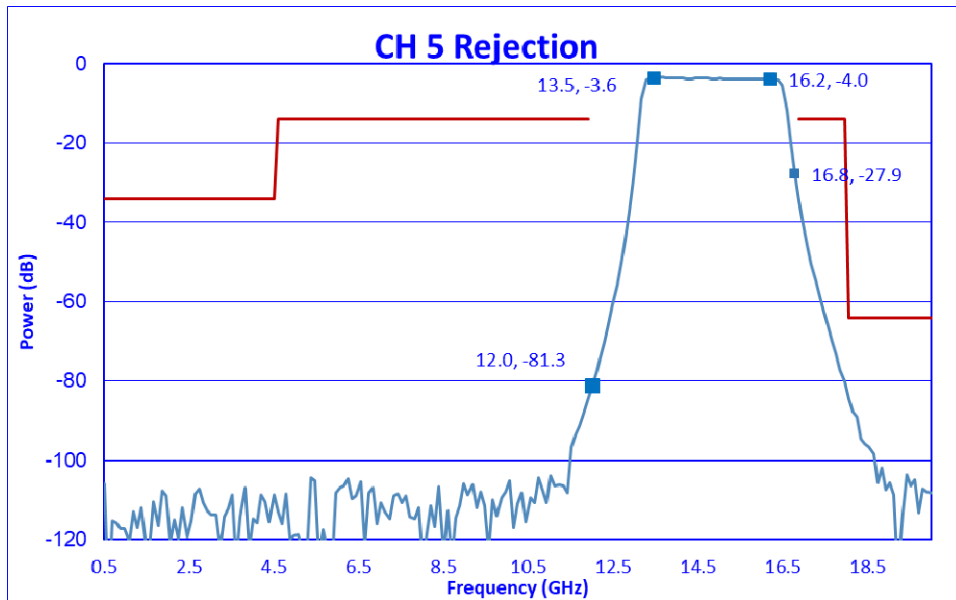
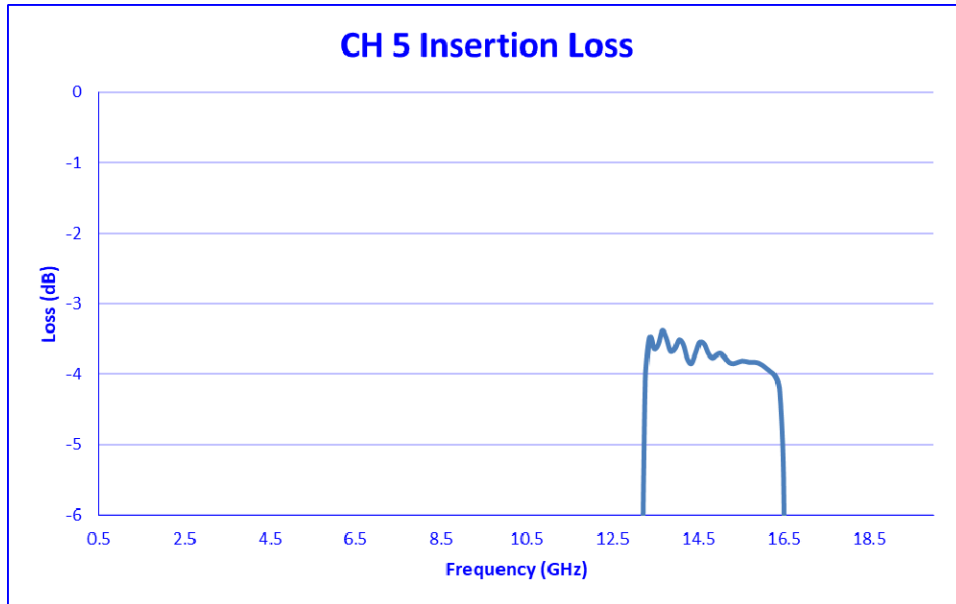
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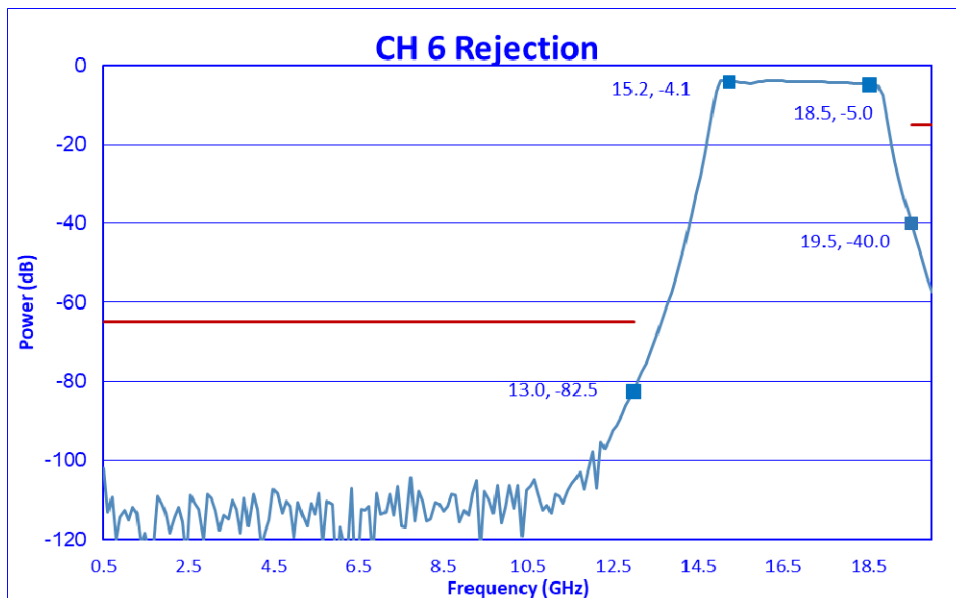
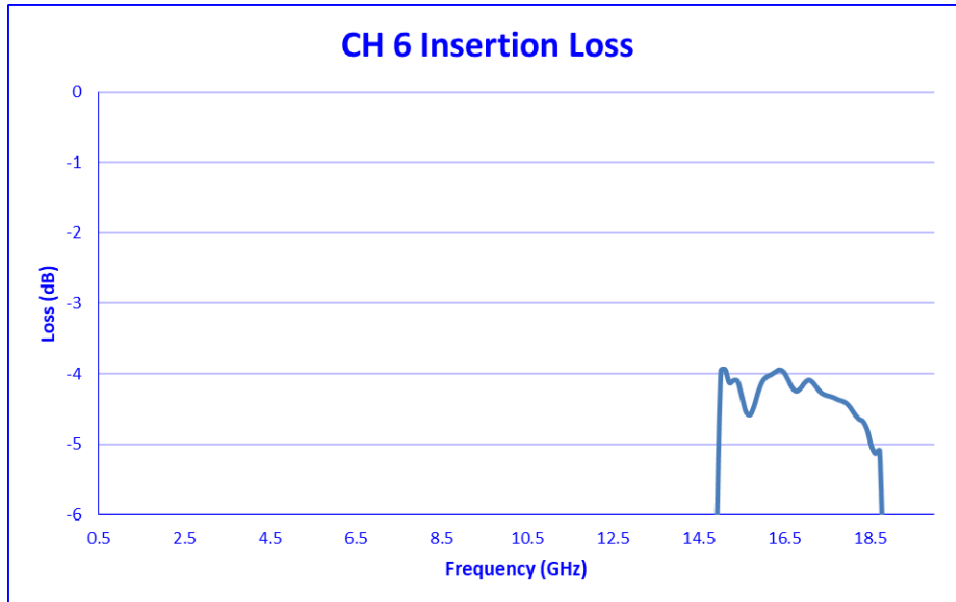
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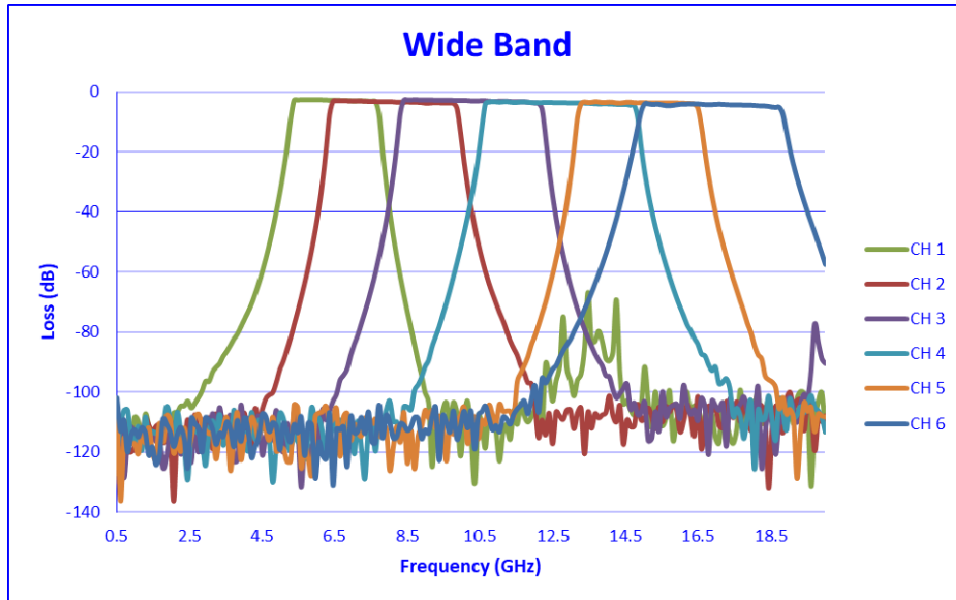
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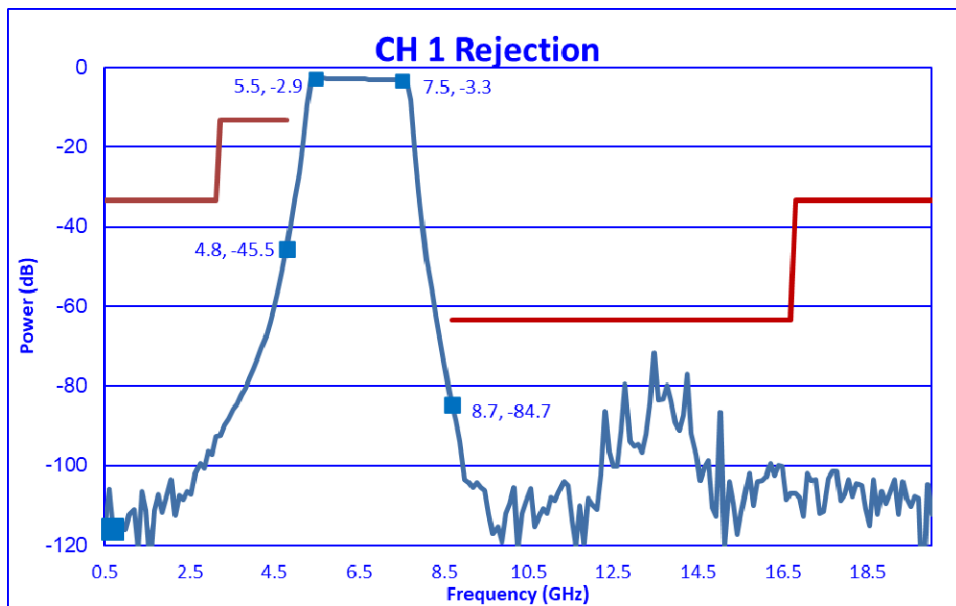
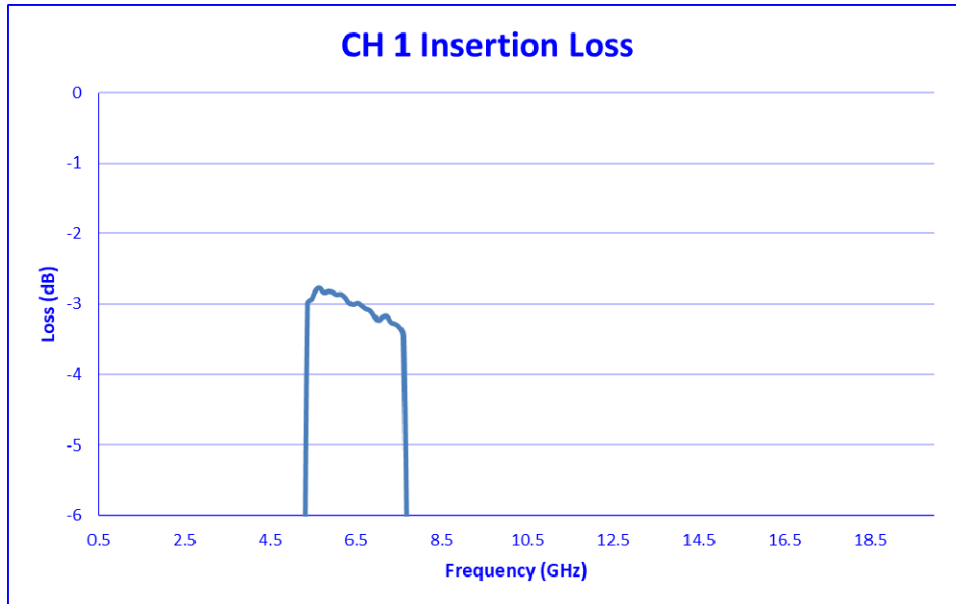
TEST DATA SUMMARY @ 85°C

TEST ITEM	PARAMETERS		SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	Frequency Range		5.5 GHz to 18.5 GHz	5.5 GHz to 18.5 GHz	
2	Insertion Loss		4.0 dB TYP 6.0 dB MAX	5.37 dB	
3	VSWR		1.7:1 TYP. 2.0:1 MAX.	1.61:1	
4	Switching Speed		200 ns MAX	125 ns	
5	Input Power		1W MAX	1W MAX	
6	Power Supply		+5 VDC @ 550 mA MAX. -5 VDC @ 100mA MAX.	+5 VDC @ 507mA -5 VDC @ 75mA	
7	Ripple - 1GHz Bandwidth		1 dB	0.864 dB	
8	Channel #	Passband	Lower Rejection		
	1	(5.5 - 7.5 GHz)	DC-3.2≤-30dB 3.2-4.8≤-10dB	-89 dB -42 dB	
	2	(6.5 - 9.7 GHz)	DC-4.7≤-30dB 4.7-5.5≤-10dB	-102 dB -69 dB	
	3	(8.7 - 11.8 GHz)	DC-4.8≤-30dB 4.8-7.6≤-10dB	-103 dB -51 dB	
	4	(10.8 - 14.5 GHz)	DC-5≤-30dB 5-10≤-10dB	-100 dB -42 dB	
	5	(13.5 - 16.2 GHz)	DC-4.5≤-30dB 4.5-12≤-10dB	-98 dB -77 dB	
	6	(15.2 - 18.5 GHz)	DC-13≤-60dB	-74 dB	
9	Channel #	Passband	Upper Rejection		
	1	(5.5 - 7.5 GHz)	8.7-16.7≤-60dB 16.7-18≤-30dB	-68 dB -98 dB	
	2	(6.5 - 9.7 GHz)	10.5≤-10dB 11.2-20≤-60dB	-47 dB -76 dB	
	3	(8.7 - 11.8 GHz)	13≤-10dB 13.5-20≤-60dB	-39 dB -66 dB	
	4	(10.8 - 14.5 GHz)	15.8-24≤-60dB	-62 dB	
	5	(13.5 - 16.2 GHz)	16.8≤-10dB 18-24≤-60dB	-25 dB -77 dB	
	6	(15.2 - 18.5 GHz)	19.5-20≤-10dB 20-24≤-30dB	-33 dB -49 dB	



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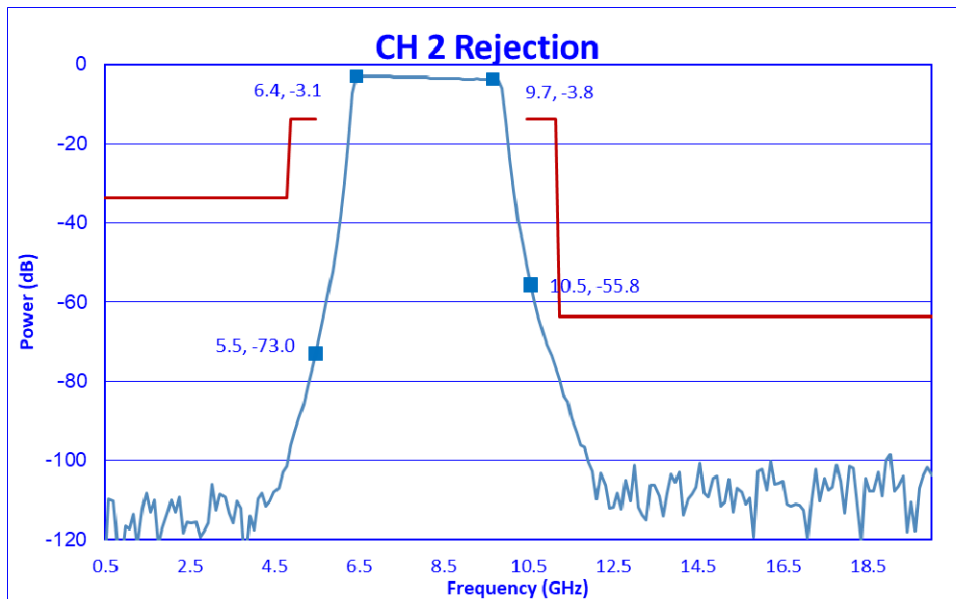
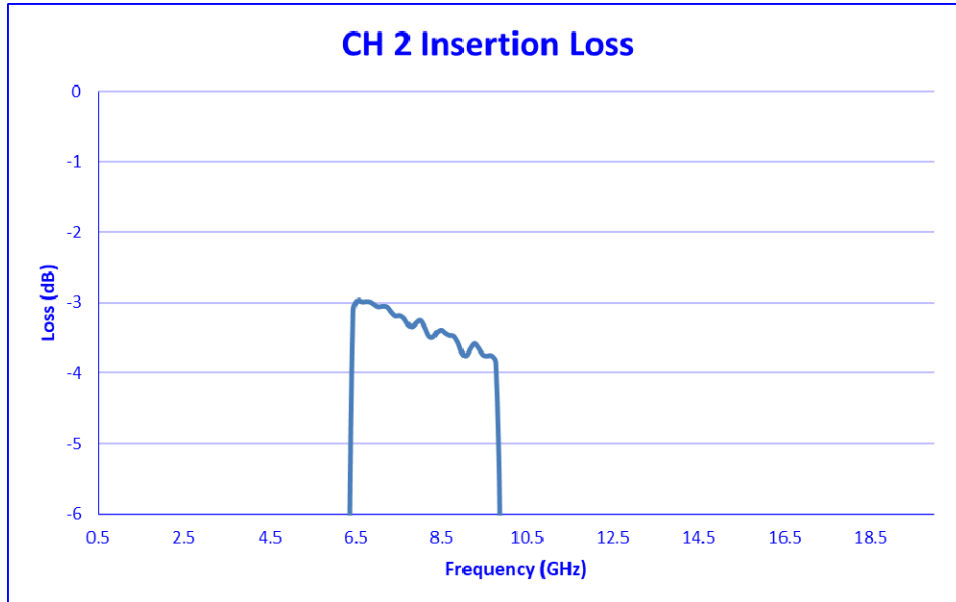
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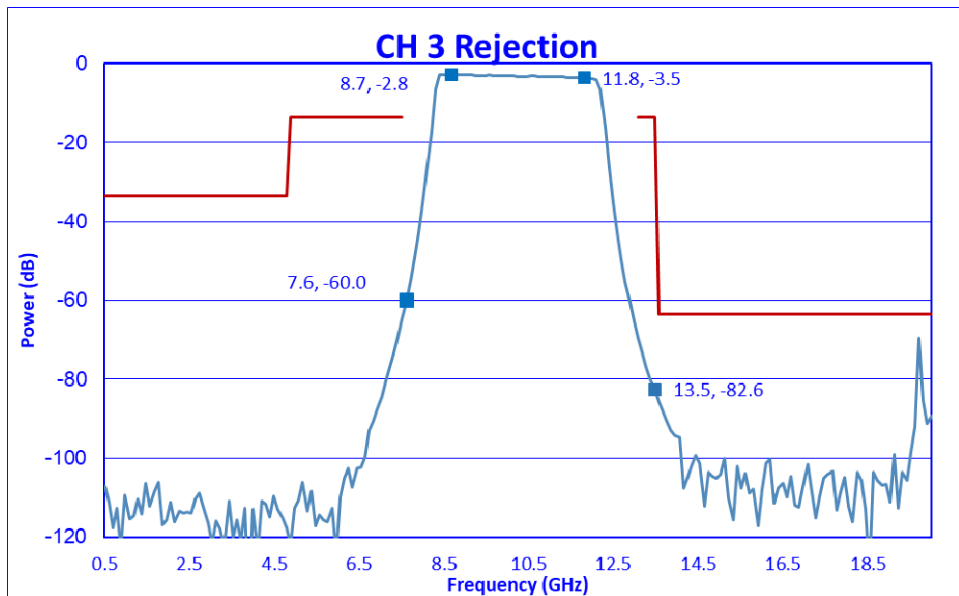
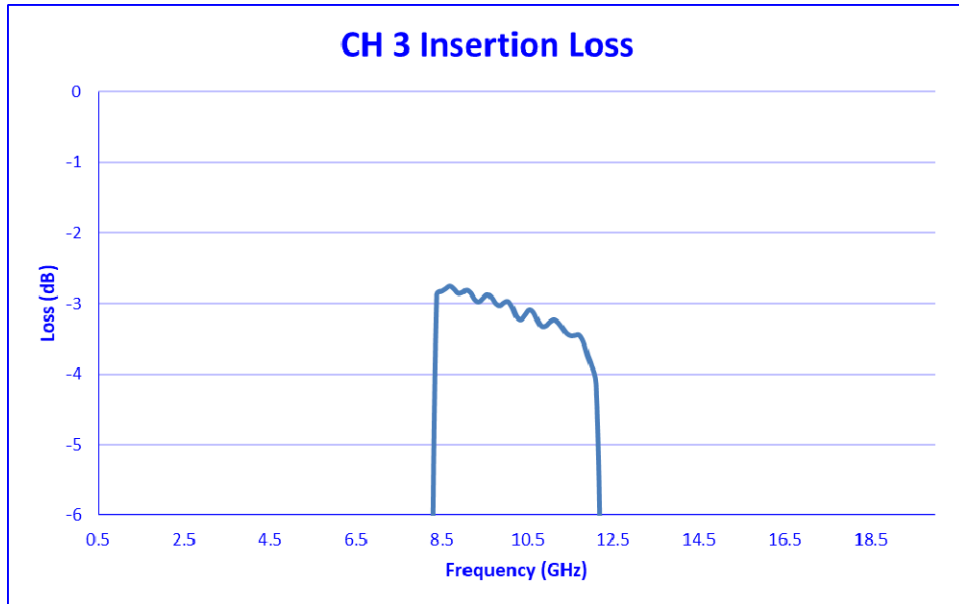
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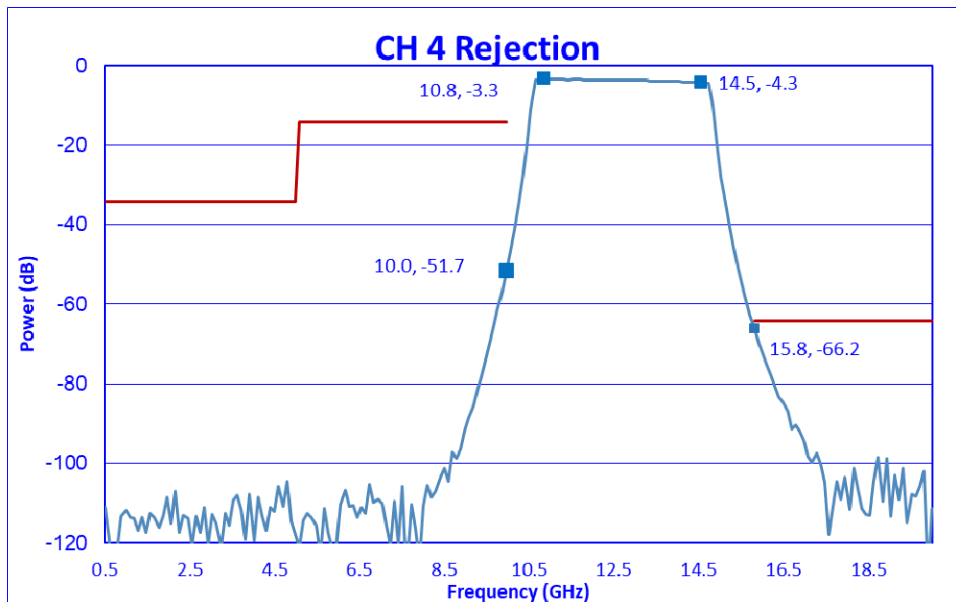
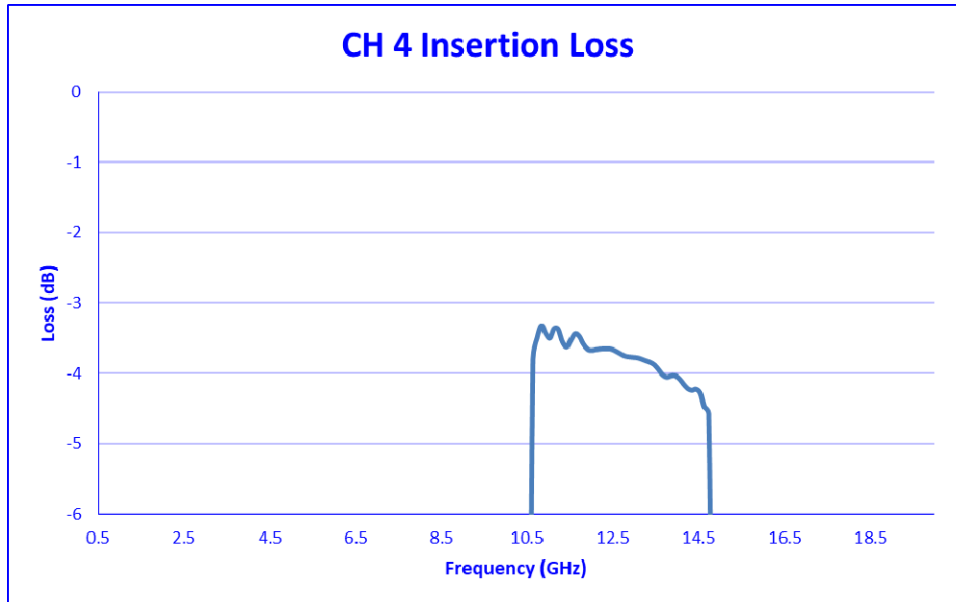
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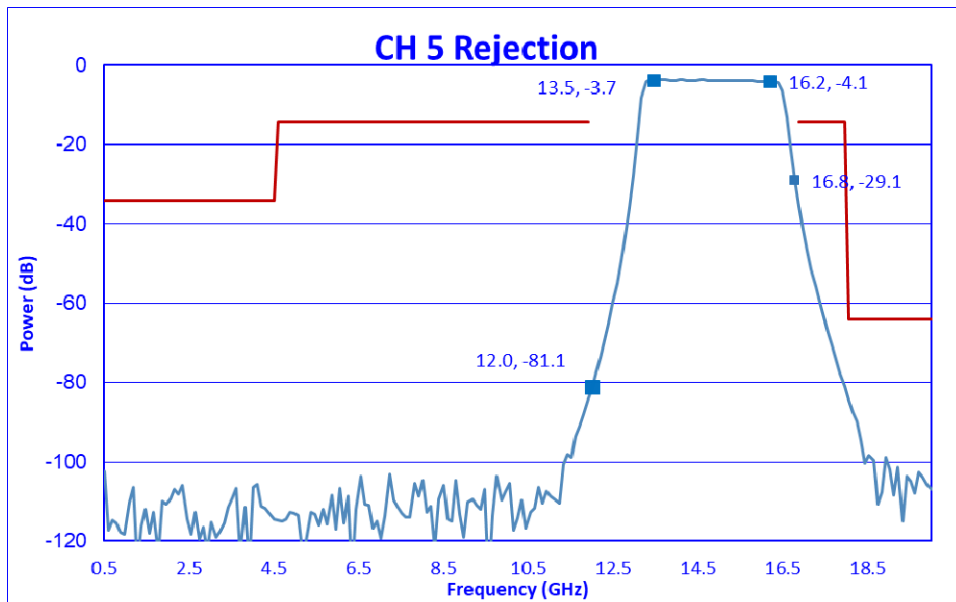
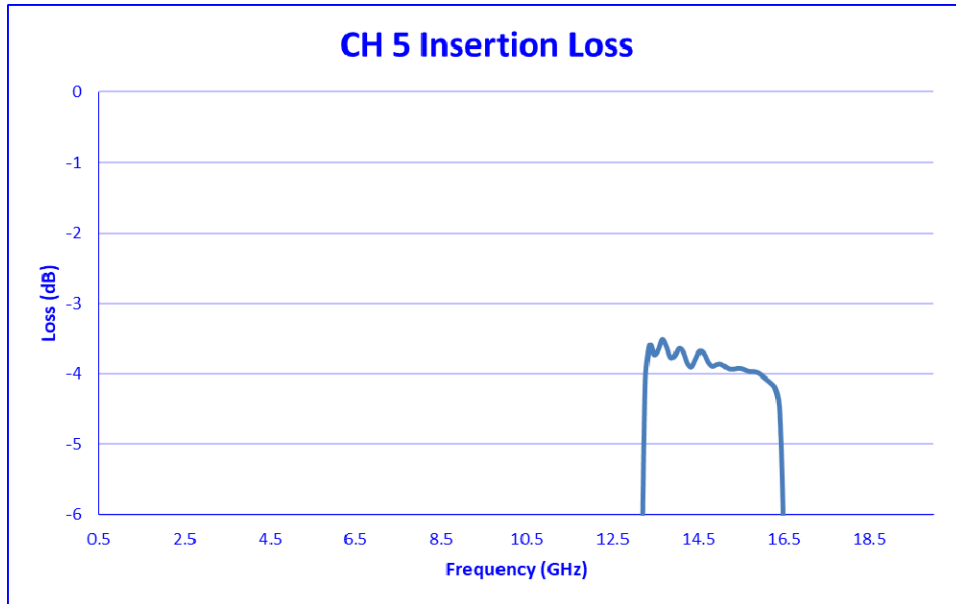
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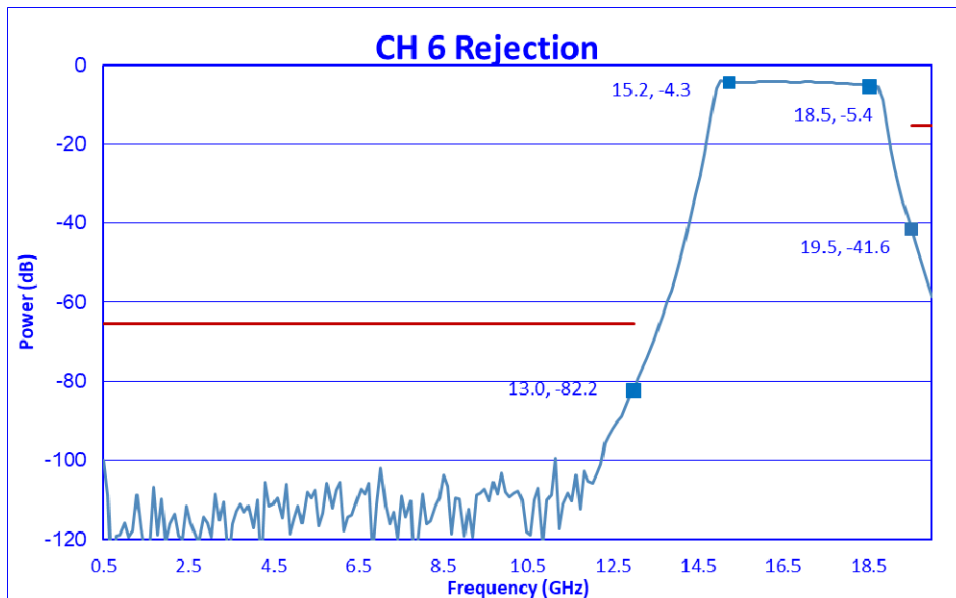
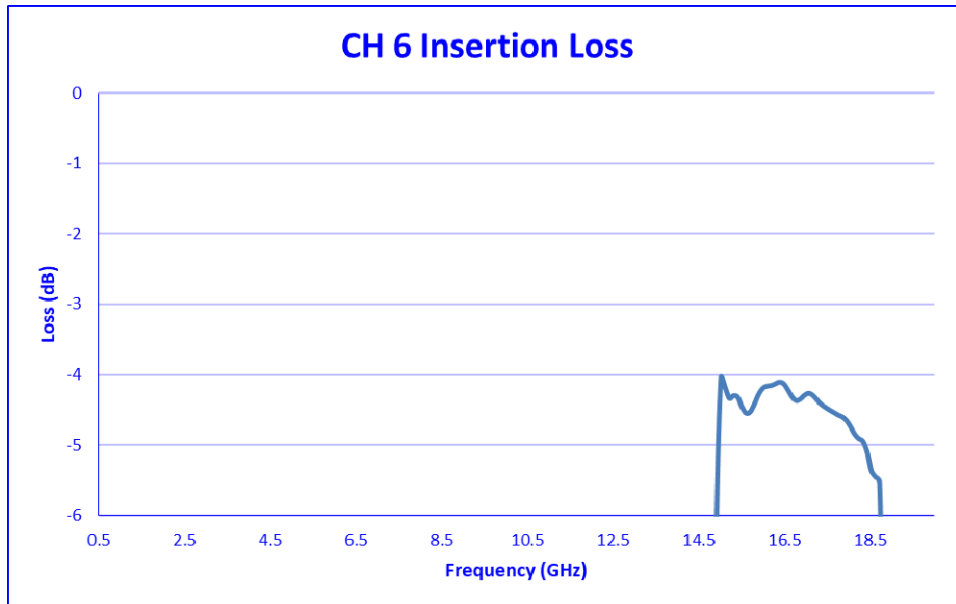
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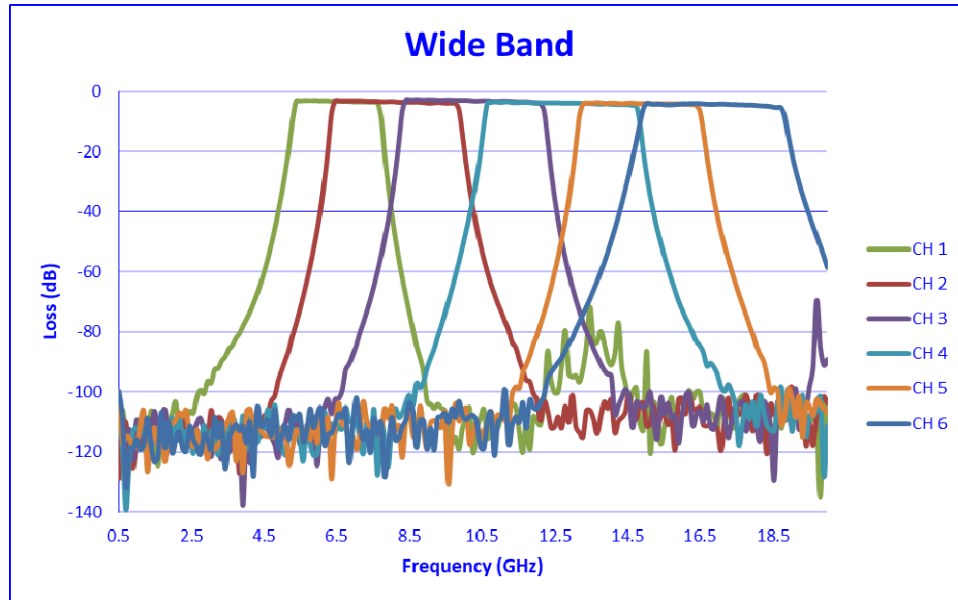
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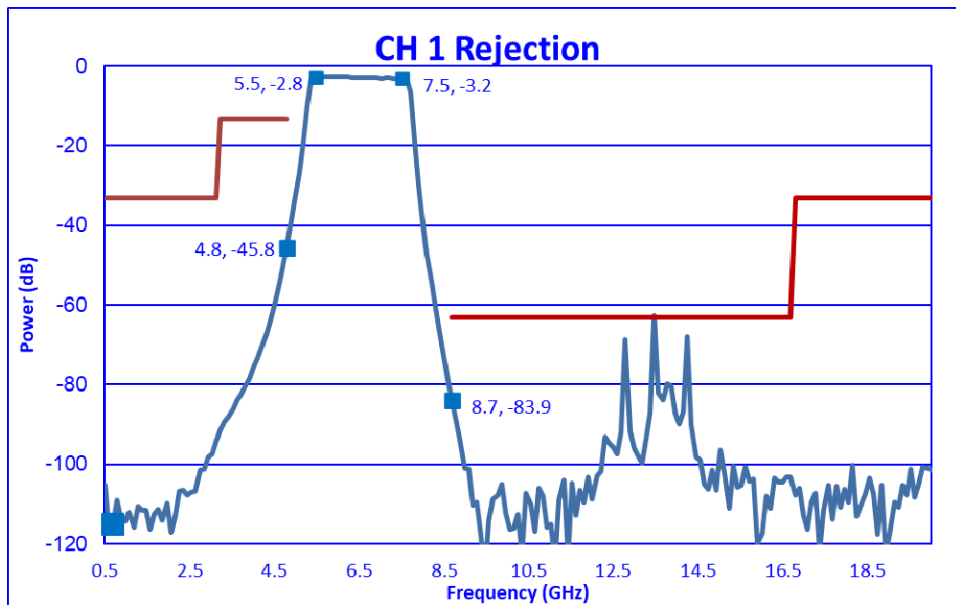
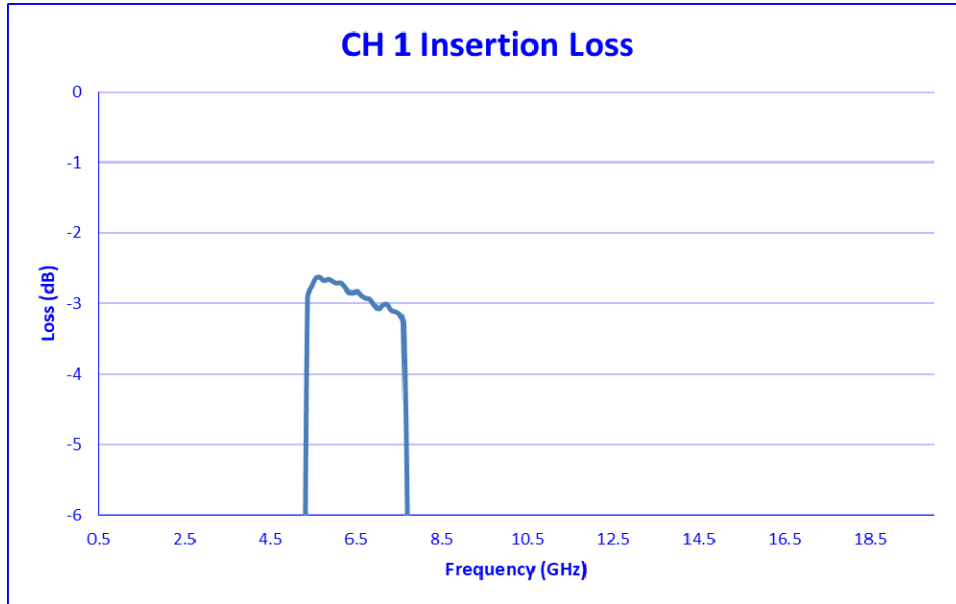
TEST DATA SUMMARY @ -45°C

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1	Frequency Range		5.5 GHz to 18.5 GHz	5.5 GHz to 18.5 GHz	
2	Insertion Loss		4.0 dB TYP 6.0 dB MAX	5.37 dB	
3	VSWR		1.7:1 TYP. 2.0:1 MAX.	1.61:1	
4	Switching Speed		200 ns MAX	125 ns	
5	Input Power		1W MAX	1W MAX	
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	4	(10.8 - 14.5 GHz)	DC-5≤-30dB 5-10≤-10dB	-100 dB -42 dB	
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9	Channel #	Passband	Upper Rejection		
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	3	(8.7 - 11.8 GHz)	13≤-10dB 13.5-20≤-60dB	-39 dB -66 dB	
	4	(10.8 - 14.5 GHz)	15.8-24≤-60dB	-62 dB	
	5	(13.5 - 16.2 GHz)	16.8≤-10dB 18-24≤-60dB	-25 dB -77 dB	
	6	(15.2 - 18.5 GHz)	19.5-20≤-10dB 20-24≤-30dB	-33 dB -49 dB	



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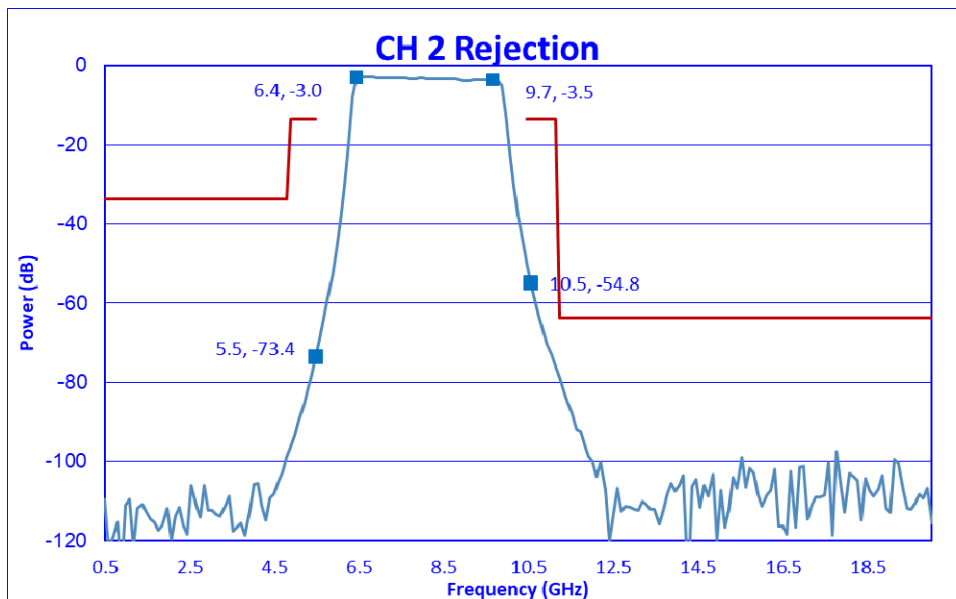
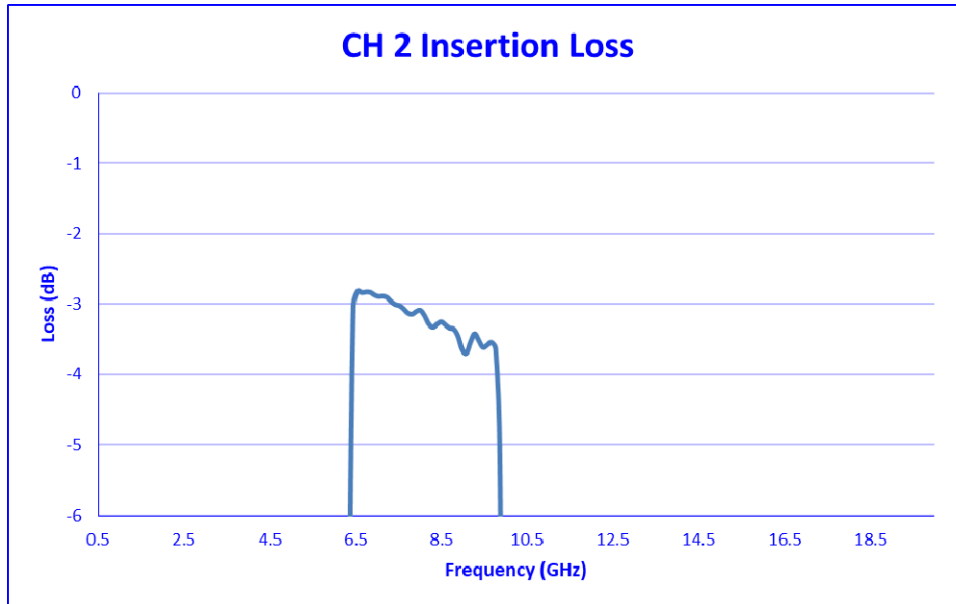
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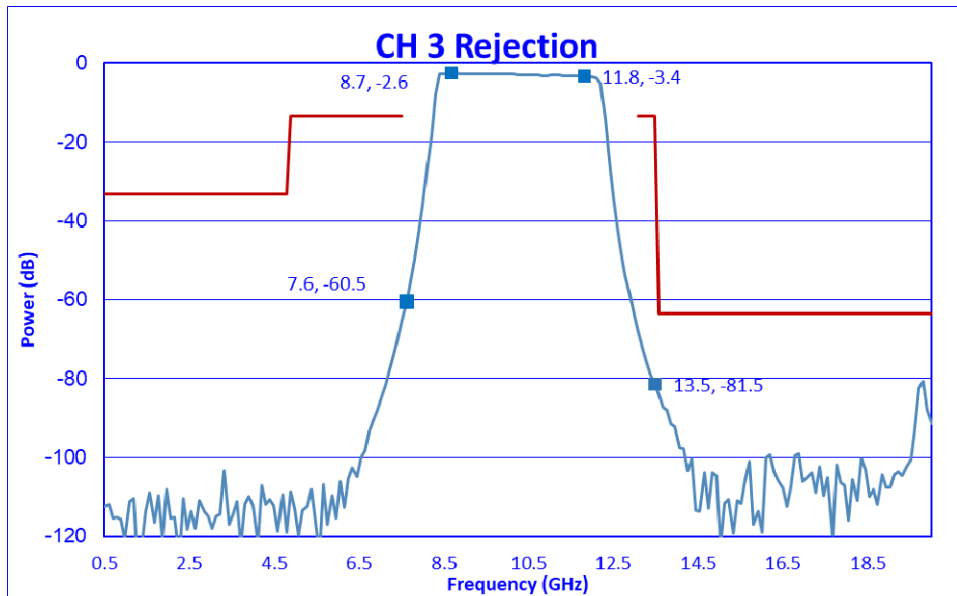
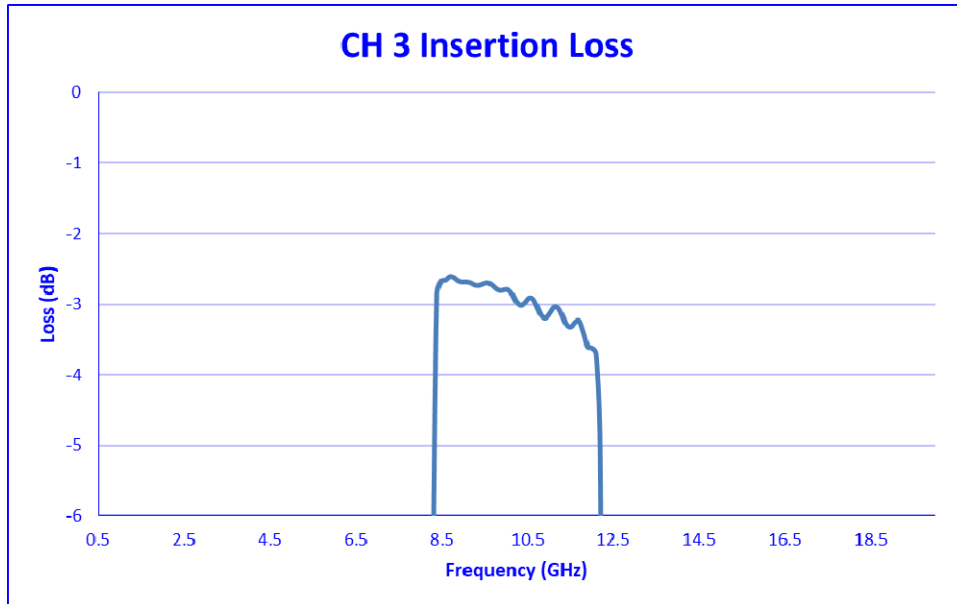
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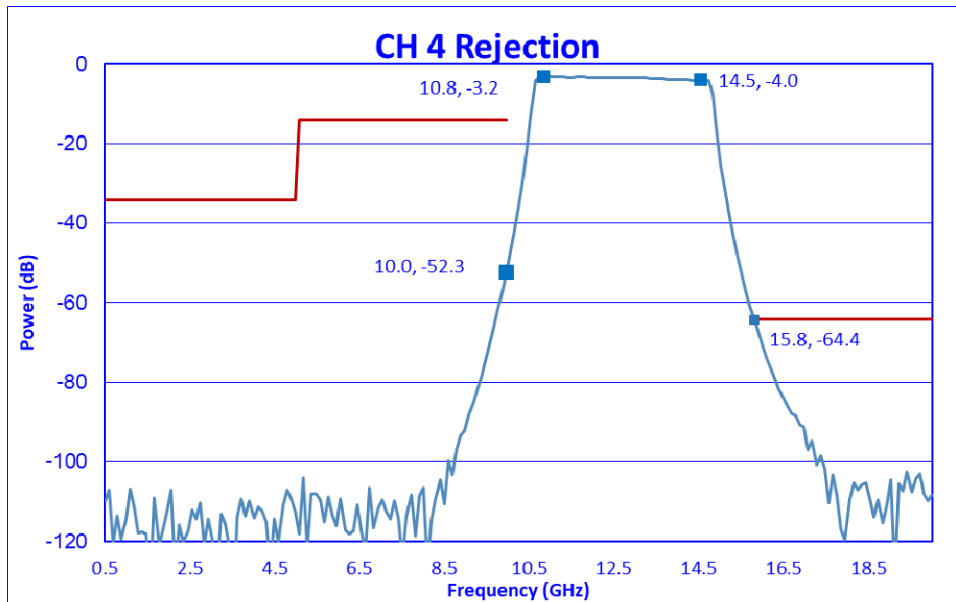
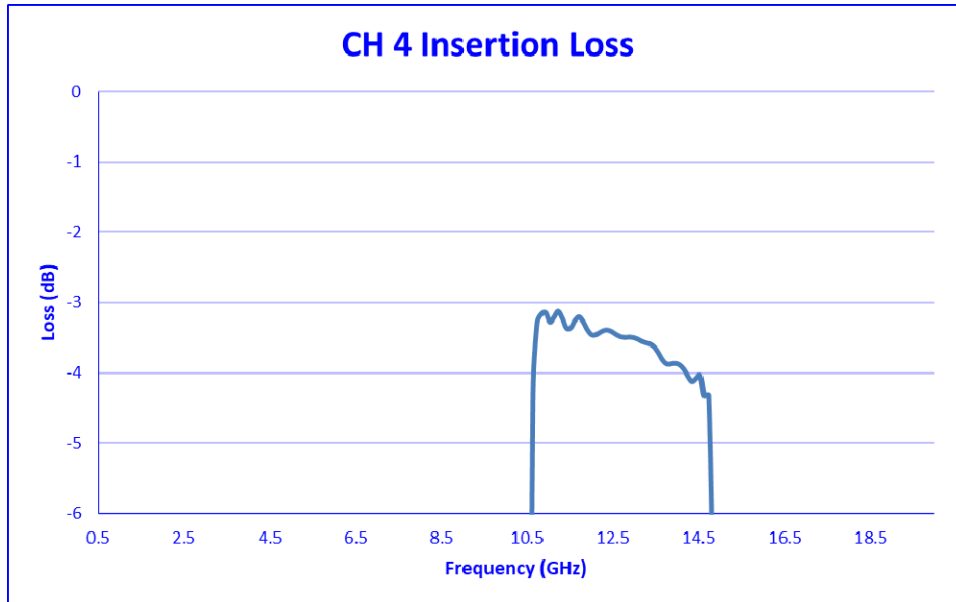
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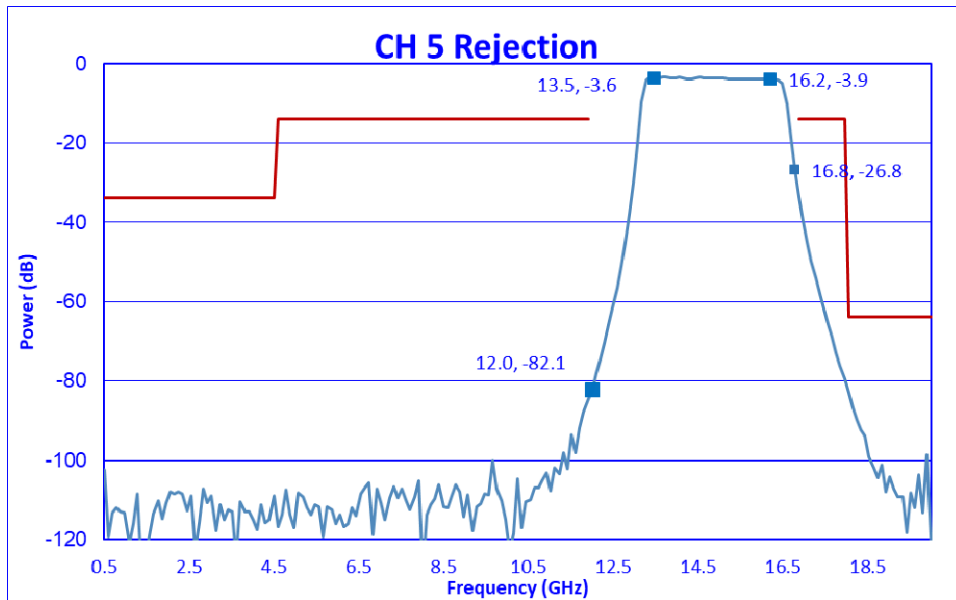
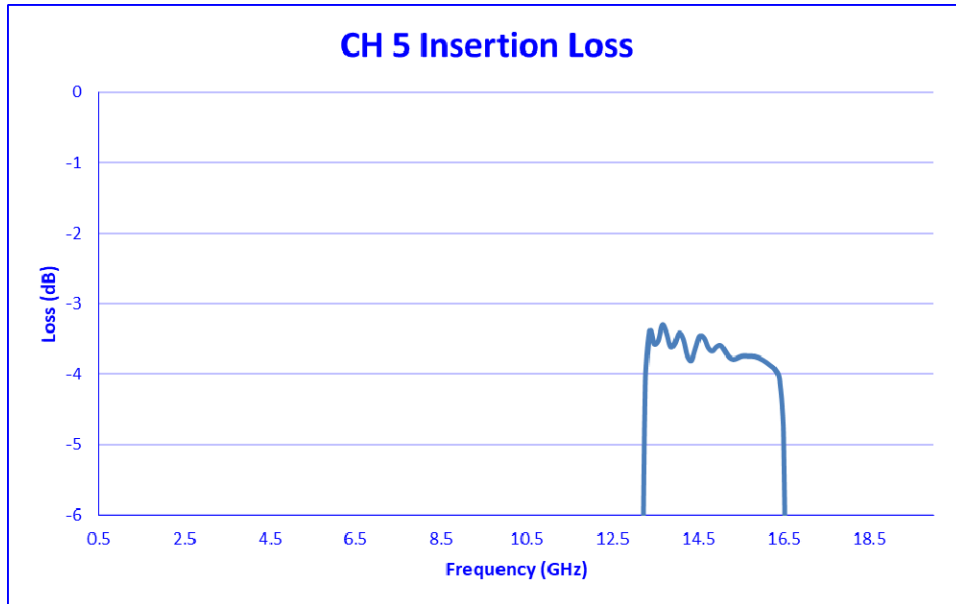
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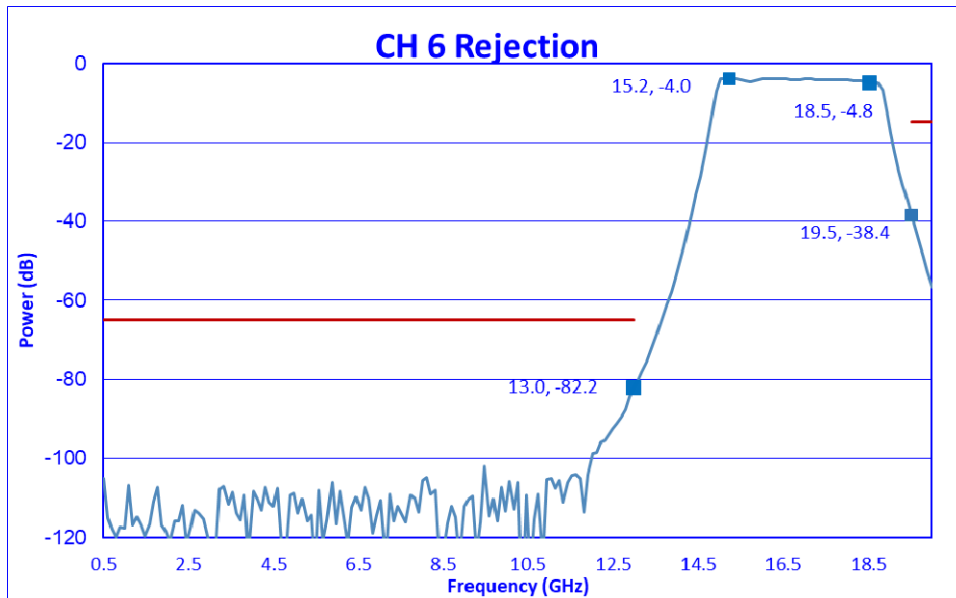
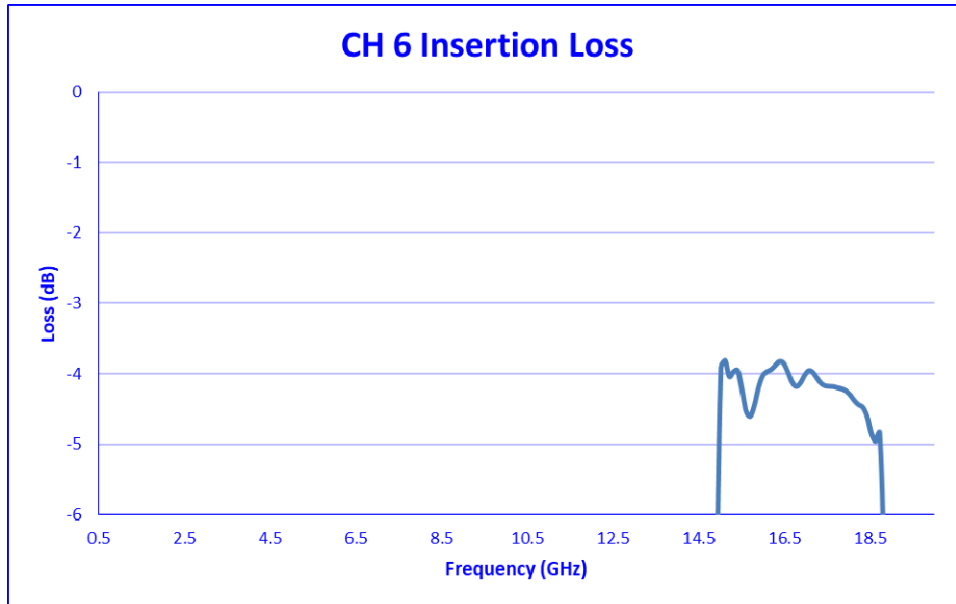
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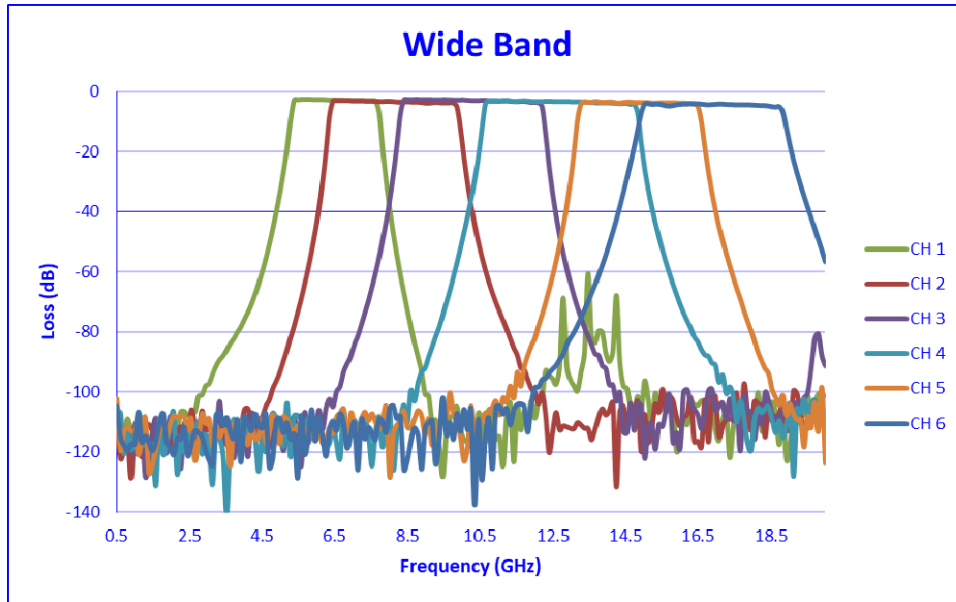
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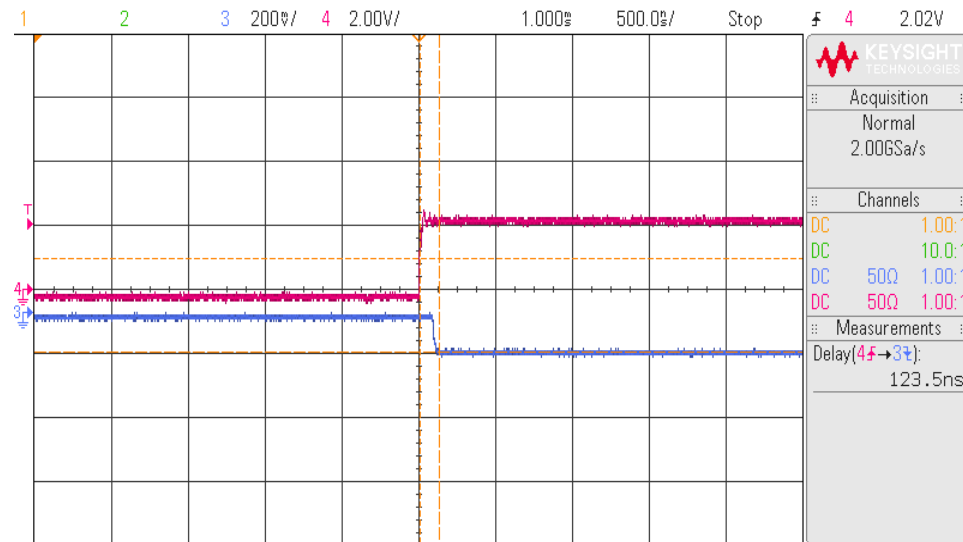




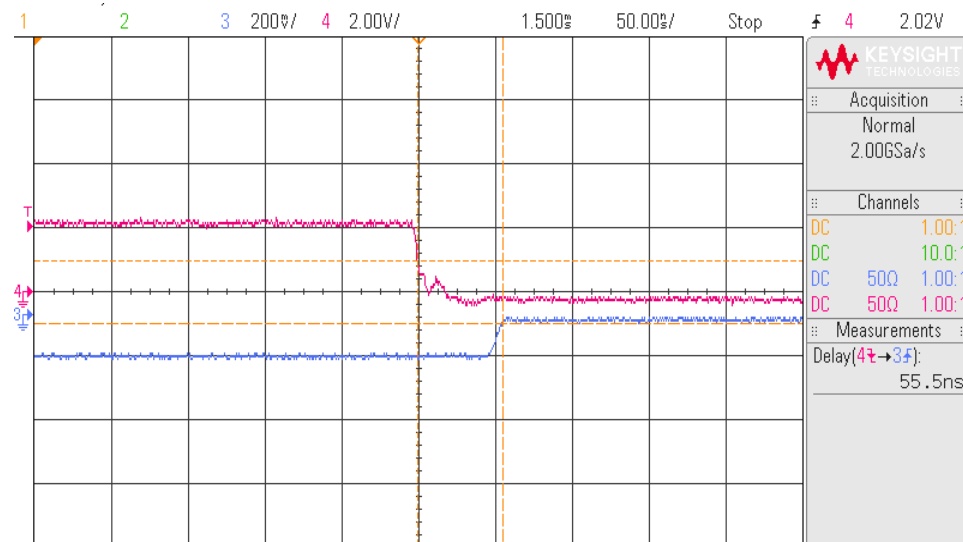
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Switching Speed

OFF Delay



ON Delay

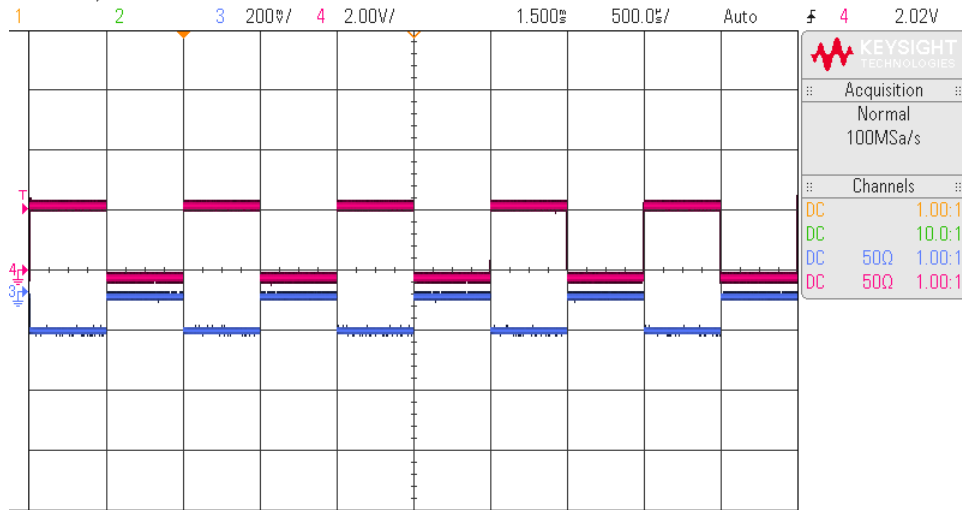


RED TRACE : TTL
BLUE TRACE : RF



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FULL PULSE



RED TRACE: TTL
BLUE TRACE: RF