



Typical Characteristics on 4SFB-2G6G-CD-5-N12-SFF

PL20495/1704

PMI MODEL 4SFB-2G6G-CD-5-N12-SFF IS A FOUR CHANNEL SWITCHED FILTER BANK OFFERING FAST SWITCH SPEED & HIGH REJECTION WITH LOW LOSS.



January 30, 2017
Designed by: PMI Engineering
Test and Reported by: H. Gonzales / S. Palacio



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DESCRIPTION:

PMI MODEL 4SFB-2G6G-CD-5-N12-SFF IS A FOUR CHANNEL SWITCHED FILTER BANK OFFERING FAST SWITCH SPEED & HIGH REJECTION WITH LOW LOSS.

SPECIFICATIONS:

- FREQUENCY RANGE: 2000 MHz TO 6000 MHz
- 3dB BW 1 GHz MIN.
- INSERTION LOSS: 5 dB MAX
- PASSBAND RIPPLE: 0.5 dB PK-PK MAX
- VSWR: 2.0:1 MAX.
- IMPEDANCE: 50 OHMS
- SWITCHING SPEED: 2 us MAX.
- CONTROL: TTL, 2 LINES
- POWER SUPPLY: +5VDC; 200mA max.
-15VDC; 200mA max.
- CONNECTOR: SMA FEMALE (REMOVABLE)
- SIZE: 4.33" (L) X 4.33" (W) X 0.787" (H)
- FINISH: BLUE EPOXY POLIMIDE COATING IAW MIL-C-22750, TYPE I OVER EPOXY POLIMIDE PRIMER IAW MIL-P-23377, TYPE I, CLASS 1 OR 3.

CTRL1	CTRL2	FILTER PATH
0	1	2 - 3 GHz
0	0	3 - 4 GHz
1	0	4 - 5 GHz
1	1	5 - 6 GHz

FILTER CHARACTERISTICS					
PARAMETER	FL1	FL2	FL3	FL4	UNITS
CENTER FREQUENCY	2600	3600	4600	5600	MHz
5 dB MAX.	1 GHz BANDWIDTH				
-60 dB MIN.	15 % OF CORNER FREQUENCY				MHz

ENVIRONMENTAL RATINGS:

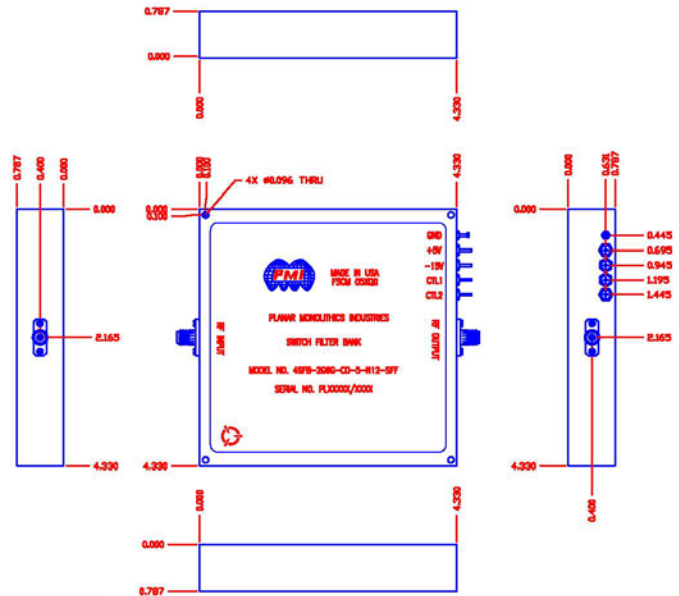
- TEMPERATURE: -40°C TO +85°C (OPERATING)
-65°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 213B COND. B
- VIBRATION: MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND. A

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

ALL DIMENSIONS ARE IN INCHES

TOLERANCES:
X.XX ± 0.020
X.XXX ± 0.010

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	3/4/08	
	B1	UPDATE TO NEW LAYOUT	5/29/08	
	C1	ECN # 15-0045	04/10/16	
	C2	ECN # 15-0112	10/06/16	



PMI CONFIDENTIAL AND PROPRIETARY

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ISO 9001 CERTIFIED

APPROVALS: _____ DATE: _____

DRAWN: *S. PALAZZO* 02/04/08

CHECKED: _____

DESIGNED: _____

TITLE: PRODUCT FEATURE
4SFB-2G6G-CD-5-N12-SFF
SWITCHED FILTER BANK

SIZE: FROM NO. 05XQ0 DWG NO. 27010341 REV. C2

SCALE: N: S SHEET 1 OF 1



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TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULT	QA QC
1	Pass Band Frequency Range:	2 GHz – 6 GHz	2 GHz – 6 GHz See Plot	
2	Pass Band Bandwidth:	1 GHz Min @ each channel	1 GHz Min @ See Plots	
3	Pass Band Ripple:	0.5 dB Peak to Peak	≤0.5dB See Plots	
4	Insertion Loss:	5 dB Max	3.56dB See Plots	
5	Impedance:	50 OHMS	50 OHMS	
6	Switching Speed:	2 us Max	35ns See Plots	
7	Pass Band VSWR:	2.0:1 Max	1.9:1 See Plots	
8	Control Line:	TTL Positive See Truth Table	Pass	
9	DC Supply:	+5VDC @ 200mA Max -15VDC @ 200mA Max	+5VDC @ 47mA -15VDC @ 50mA	
10	Stop Band Frequency And Attenuation:	15% of corner frequency 60 dB Min	62.36dB See Plots	

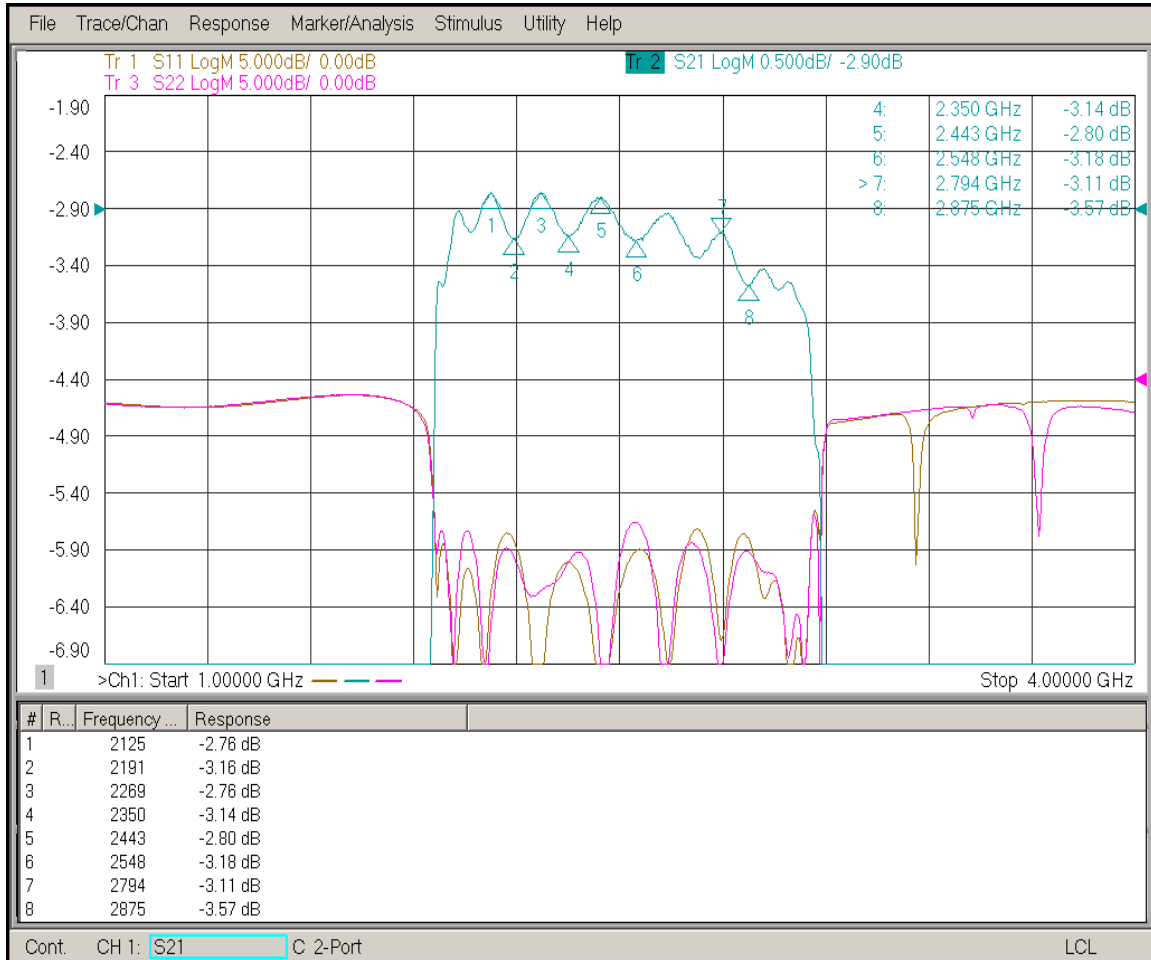
TTL Truth Table		
CTL 1	CTL 2	Filter Path
0	1	2 – 3 GHz
0	0	3 – 4 GHz
1	0	4 – 5 GHz
1	1	5 – 6 GHz



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Pass Band Ripple Plot Channel 1 (2 – 3 GHz)





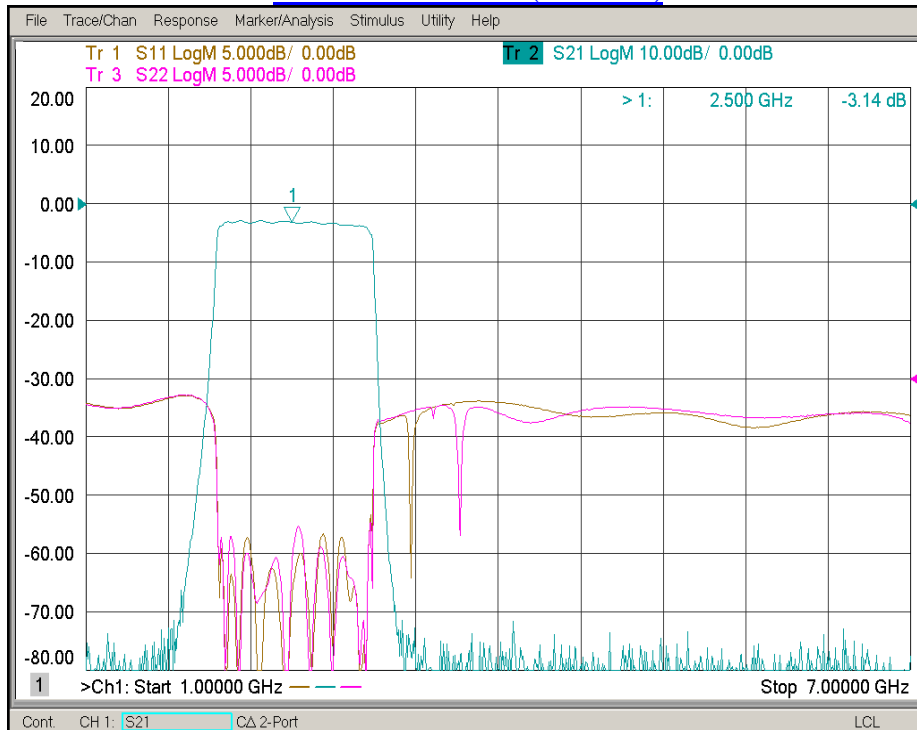
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Channel 1 (2 – 3 GHz)



Channel 1 Broadband (2 – 3 GHz)

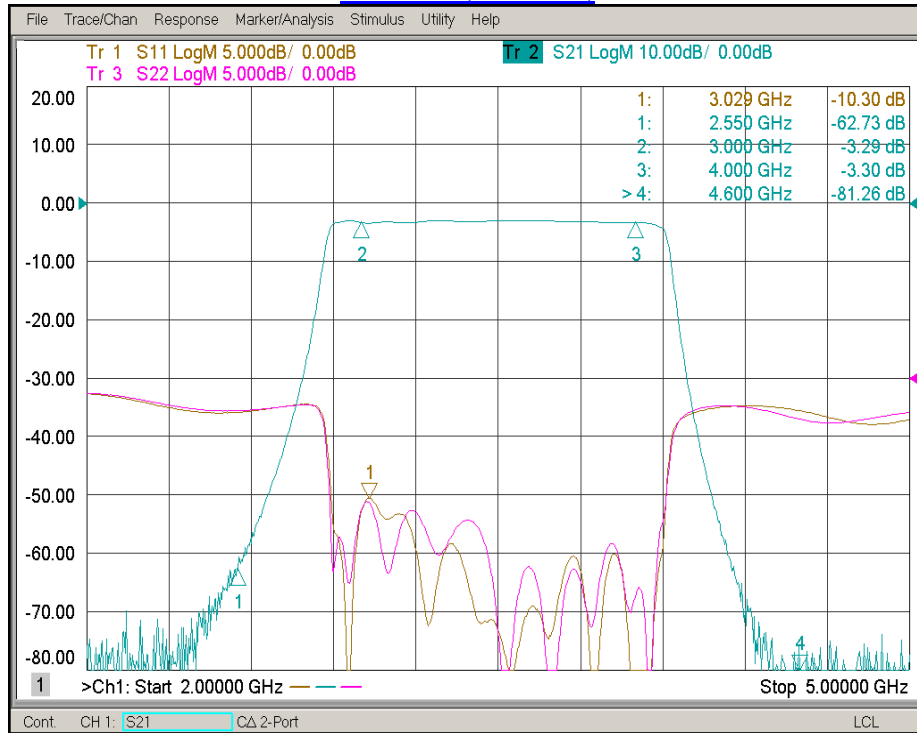




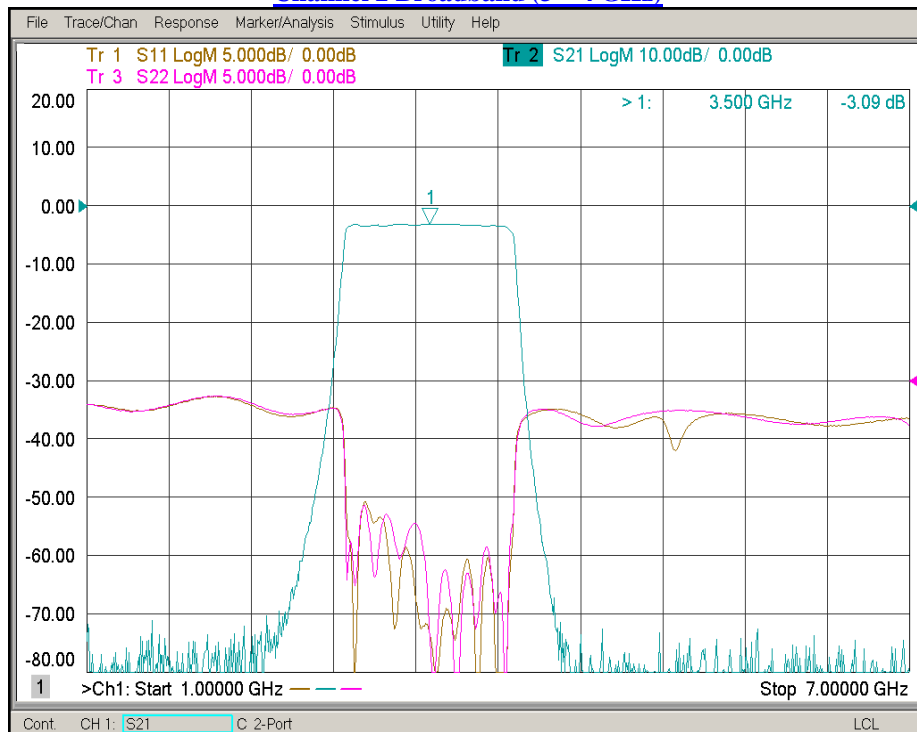
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Channel 2 (3 – 4 GHz)



Channel 2 Broadband (3 – 4 GHz)

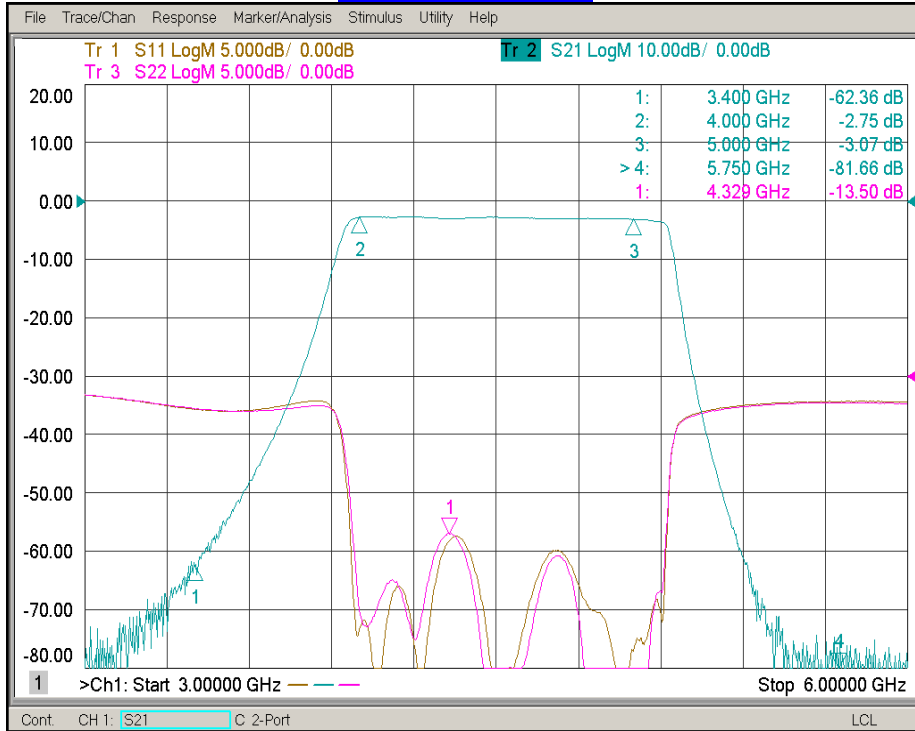




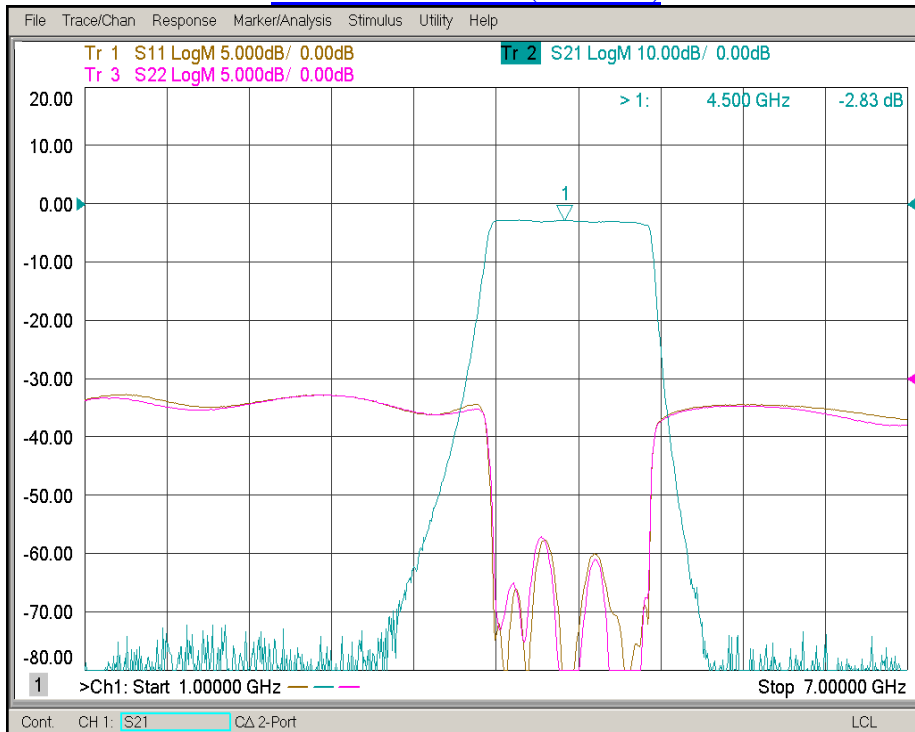
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Channel 3 (4 – 5 GHz)



Channel 3 Broadband (4 – 5 GHz)

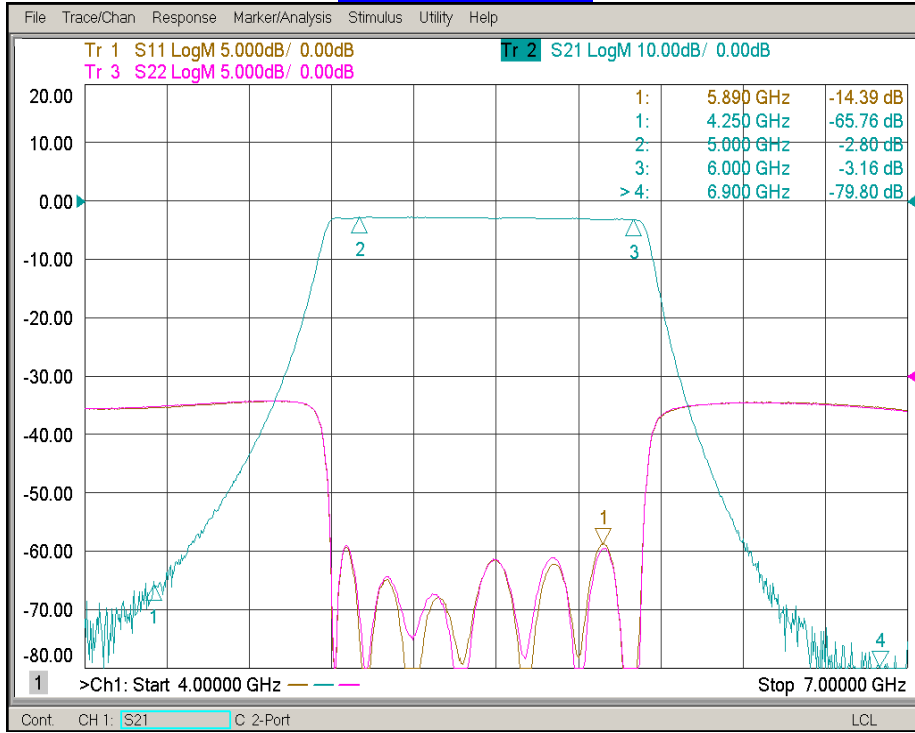




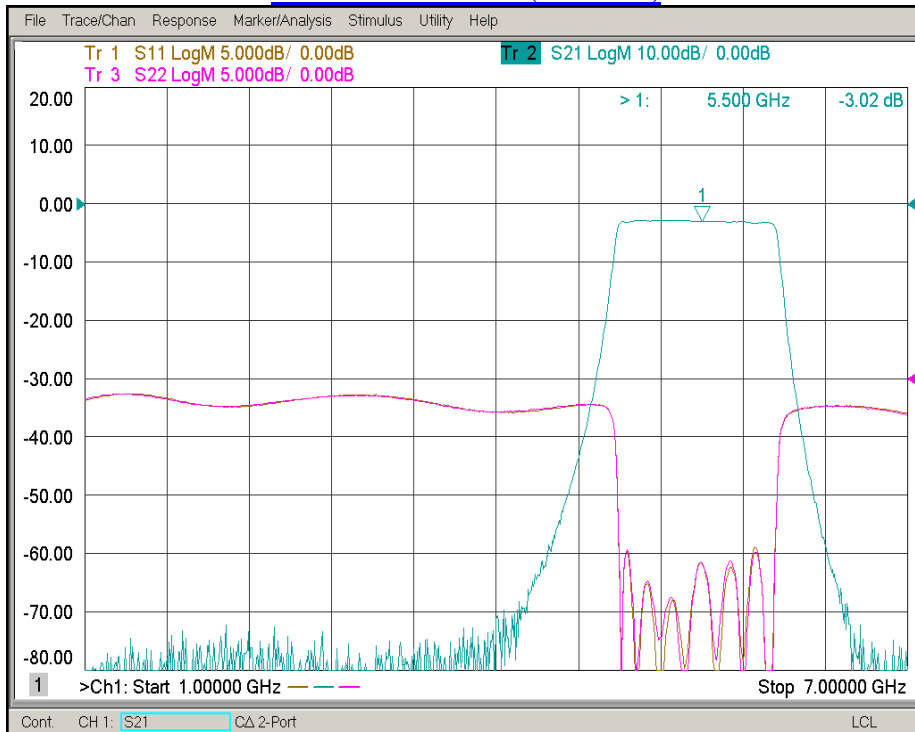
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Channel 4 (5 – 6 GHz)



Channel 4 Broadband (5 – 6 GHz)

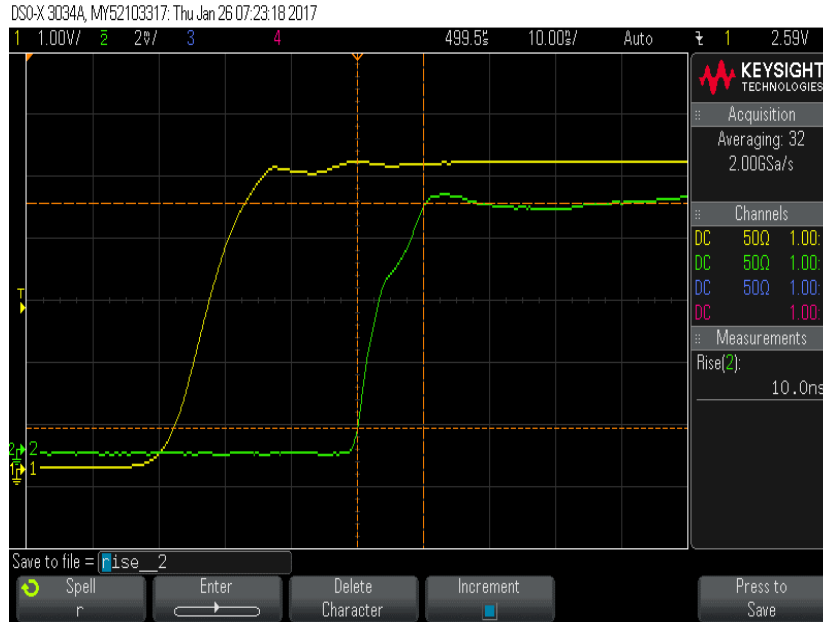




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Switching Speed On Delay & Rise Time 10ns per Div.



Off Delay & Fall Time 10ns per Div.



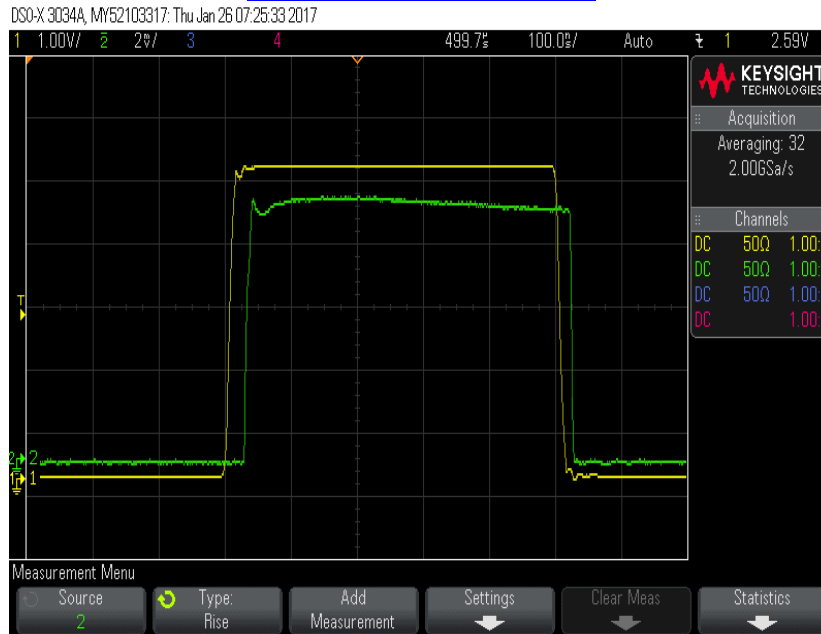
GREEN TRACE: RF Signal
YELLOW TRACE: TTL Signal



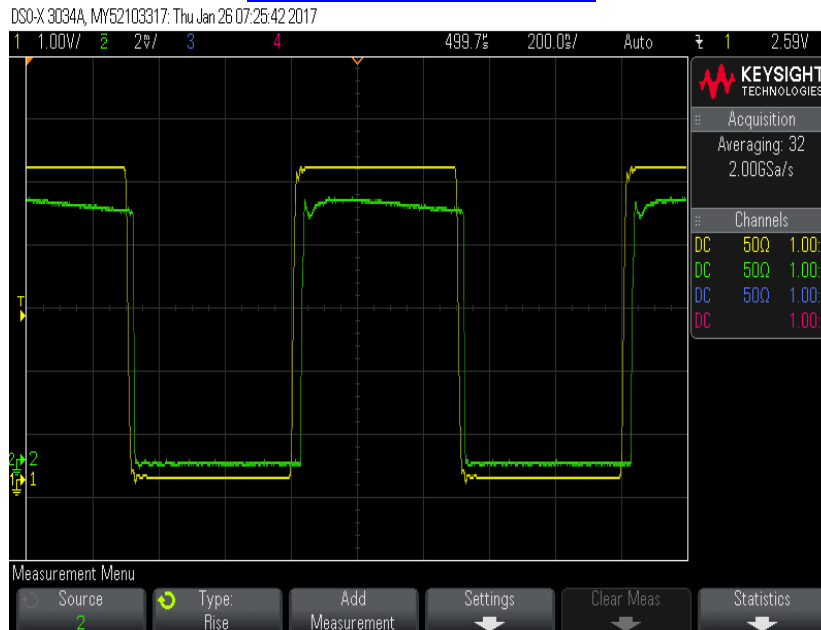
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Full Pulse 100 ns per Div.



Full Pulse 200 ns per Div.



GREEN TRACE: RF Signal
YELLOW TRACE: TTL Signal