



**TYPICAL CHARACTERISTICS
ON
PEC-20M3G-3T-SFF-LV-ROHS**

**PMI MODEL NUMBER PEC-20M3G-3T-SFF-LV-ROHS IS A SINGLE POLE,
THREE THROW NON-REFLECTIVE SWITCH DESIGNED TO OPERATE
OVER THE 20 MHz TO 3.0 GHz. THIS MODEL OFFERS ULTRA LOW VIDEO
TRANSIENTS, THIS VERSION IS LEAD-FREE ROHS COMPATIBLE. A NON-
ROHS VERSION IS ALSO AVAILABLE AS PEC-20M3G-3T-SFF-LV.**



March 26, 2022

TESTED & REPORTED BY: E. KRETZ



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OUTLINE DRAWING

DESCRIPTION:

PMI MODEL NUMBER PEC-20M3G-3T-SFF-LV-ROHS IS A SINGLE POLE, THREE THROW NON-REFLECTIVE SWITCH DESIGNED TO OPERATE OVER THE 20MHZ TO 3.0GHZ THIS MODEL OFFERS ULTRA LOW VIBED TRANSIENTS, THIS VERSION IS LEAD-FREE ROHS COMPATIBLE. A NON-ROHS VERSION IS ALSO AVAILABLE AS PEC-20M3G-3T-SFF-LV.

SPECIFICATIONS:

- OPERATING FREQUENCY: 20 MHz TO 3.0 GHz
- INSERTION LOSS (0.02 - 1.0GHz): 2.0dB MAXIMUM
- INSERTION LOSS (1.0 - 2.0GHz): 2.5dB MAXIMUM
- INSERTION LOSS (2.0 - 3.0GHz): 4.0dB MAXIMUM
- ISOLATION (0.02 - 1.0GHz): 70dB MINIMUM
- ISOLATION (1.0 - 2.0GHz): 60dB MINIMUM
- ISOLATION (2.0 - 3.0GHz): 50dB MINIMUM
- VSWR (0.02 - 3.0GHz): 2.0:1 MAX
- P1dB (0.02 - 1.0GHz): +23/25 dB
- P1dB (1.0 - 2.0GHz): +27/29 dB
- P1dB (2.0 - 3.0GHz): +30/32 dB
- VIBED TRANSIENTS: ABOVE 20MHZ -100 dBm
BELOW 20MHZ -75 dBm
- CONTROL: SEE TRUTH TABLE ABOVE
- POWER SUPPLY: +5V @ 250mA MAX
-12V @ 120mA MAX
- RF CONNECTORS: GPO & SMA FEMALE CONNECTORS
- FINISH: SILVER PLATED

ENVIRONMENTAL RATINGS:

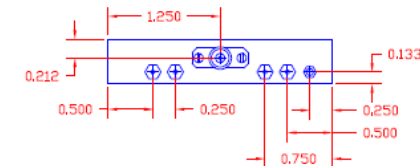
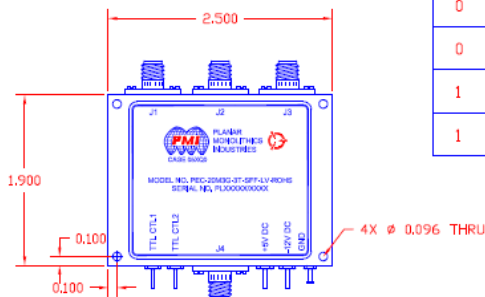
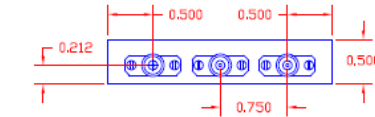
- TEMPERATURE: -45°C TO +90°C (OPERATING)
-54°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 213B COND. C
- VIBRATION: MIL-STD-202F, METHOD 204D COND. B
- SALT FOG: MIL-STD-202F, METHOD 101D+EST COND. B
- FUNGUS: MIL-STD-810F, METHOD 508.5
- EMI / EMC: MIL-STD-461E

Note: Environmental testing and ESS will be met, but actual testing is not done by PMI
Actual screening is available for an additional charge.

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	01/19/22	

MECHANICAL OUTLINE



TRUTH TABLE

TTL1	TTL2	PATH
0	0	J1-J4
0	1	J2-J4
1	0	J3-J4
1	1	UNDEFINED

PMI CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F GROVE ROAD
FREDERICK, MARYLAND 21704 USA
TEL: 301-662-5019 FAX: 301-662-1731
WEBSITE: www.pmi-rf.com
E-MAIL: sales@pmi-rf.com
ISO 9001 CERTIFIED



APPROVALS		DATE	TITLE		
DRAWN: <i>DH</i>		11/11/21	PRODUCT FEATURE PEC-20M3G-3T-SFF-LV-ROHS		
CHECKED:			SIZE: A	FSQM NO.: 05XQ0	DWG NO.: 27043560
ISSUED:			SCALE: N:S		REV: A1
					SHEET 1 OF 1



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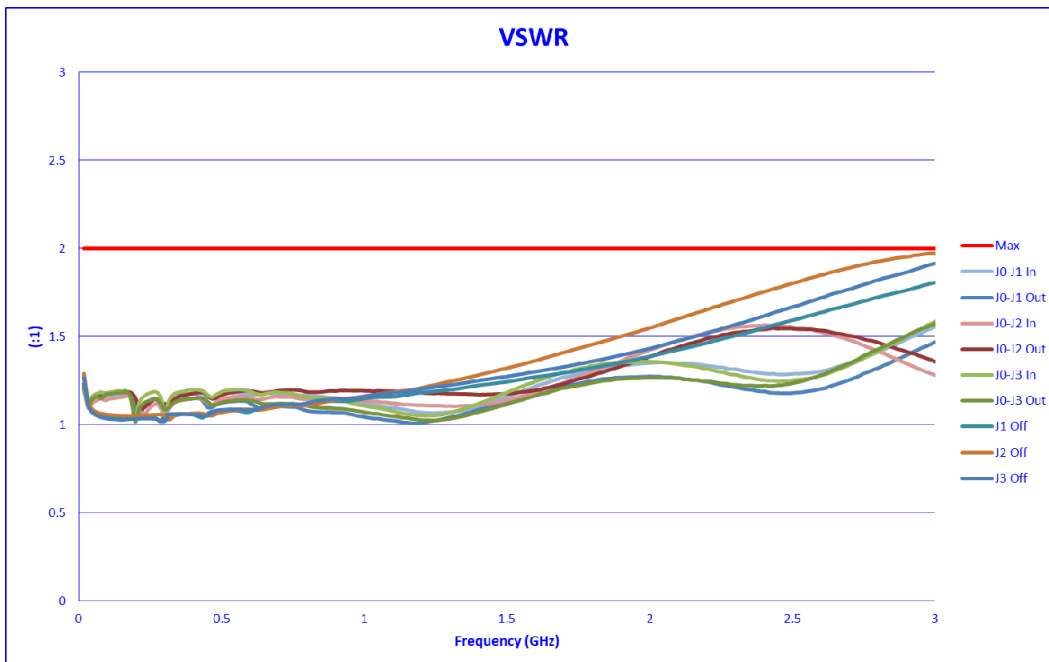
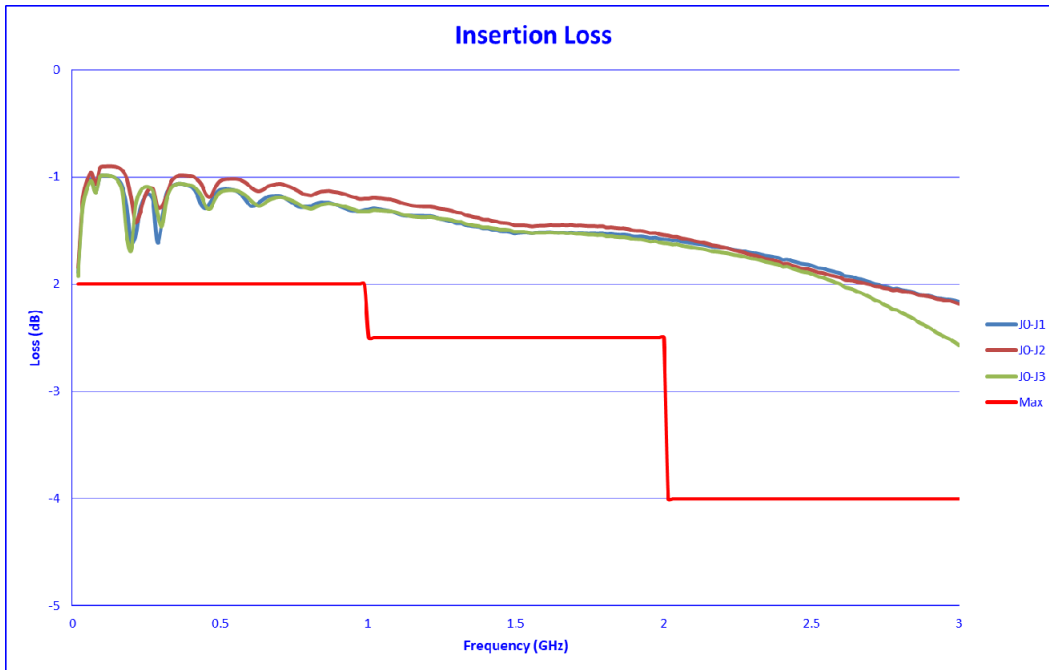
TEST DATA SUMMARY @ +25°C

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	20 MHz to 3.0 GHz	20 to MHz to 3.0 GHz	
2	Insertion Loss:	0.02 - 1.0 GHz 2.0 dB Max. 1.0 - 2.0 GHz 2.5 dB Max. 2.0 - 3.0 GHz 4.0 dB Max.	1.93 dB 1.62 dB 2.57 dB	
3	Isolation:	0.02-1.0 GHz 70dB Min. 1.0 - 2.0 GHz 60dB Min. 2.0 - 3.0 GHz 50 dB Min.	90.97 dB 83.15 dB 74.18 dB	
4	VSWR: (0.02-3.0 GHz)	2.0:1 Max.	1.97:1 See Plot	
6	Video Transients	ABOVE 20 MHz -100 dBm BELOW 20 MHz -75 dBm	ABOVE 20 MHz -100 dBm BELOW 20 MHz -75 dBm	
7	Control	TTL1 "0", TTL2 "0" J1-J4 TTL1 "0", TTL2 "1" J2-J4 TTL1 "1", TTL2 "0" J3-J4 TTL1 "1", TTL2 "1" UNDEFINED	PASS	
8	Power Supply:	+5V @ 250 mA Max. -12V @ 120 mA Max.	+5V @ 100 mA -12V @ 90 mA	



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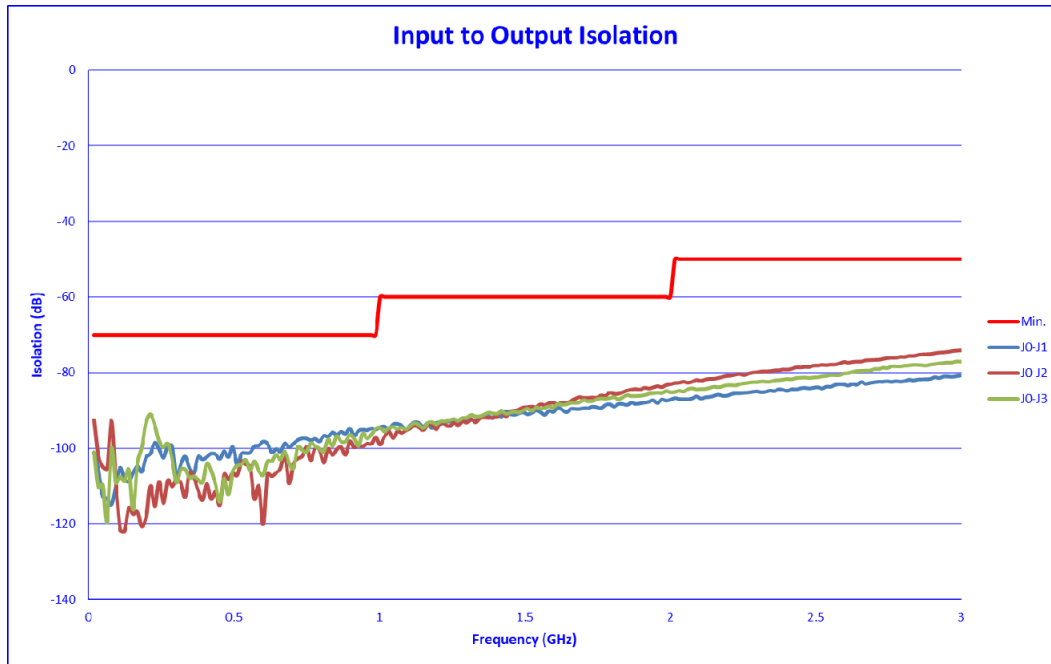
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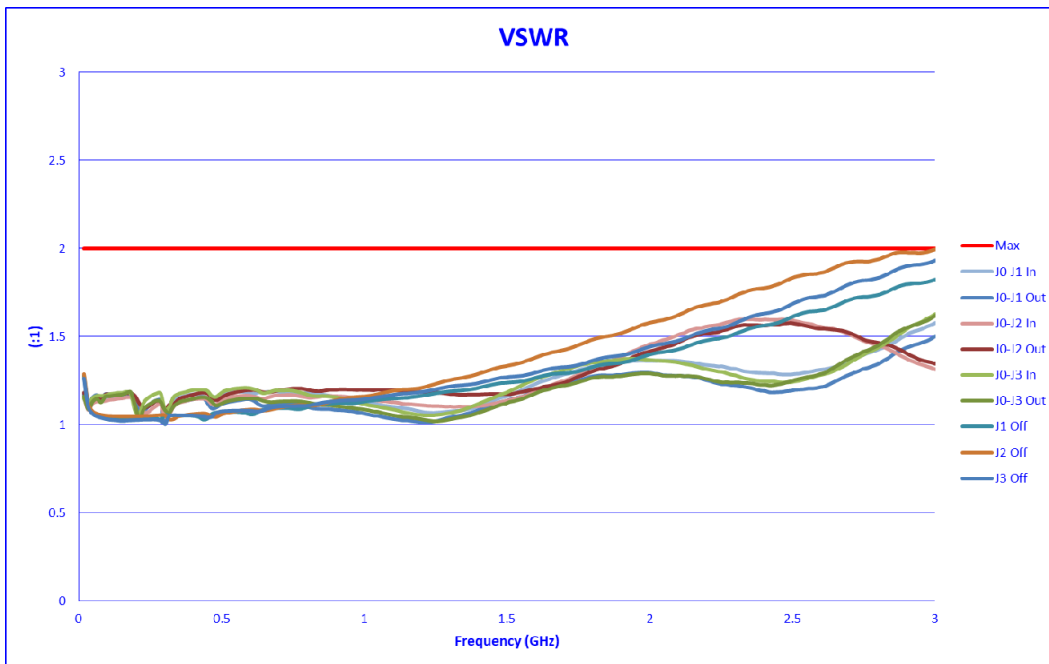
TEST DATA SUMMARY @ -45°C

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	20 MHz to 3.0 GHz	20 to MHz to 3.0 GHz	
2	Insertion Loss:	0.02 - 1.0 GHz 2.0 dB Max. 1.0 - 2.0 GHz 2.5 dB Max. 2.0 - 3.0 GHz 4.0 dB Max.	1.98 dB 1.62 dB 2.47 dB	
3	Isolation:	0.02-1.0 GHz 70dB Min. 1.0 - 2.0 GHz 60dB Min. 2.0 - 3.0 GHz 50 dB Min.	91.86 dB 82.87 dB 73.96 dB	
4	VSWR: (0.02-3.0 GHz)	2.0:1 Max.	1.99:1 See Plot	
6	Video Transients	ABOVE 20 MHz -100 dBm BELOW 20 MHz -75 dBm	ABOVE 20 MHz -100 dBm BELOW 20 MHz -75 dBm	
7	Control	TTL1 "0", TTL2 "0" J1-J4 TTL1 "0", TTL2 "1" J2-J4 TTL1 "1", TTL2 "0" J3-J4 TTL1 "1", TTL2 "1" UNDEFINED	PASS	
8	Power Supply:	+5V @ 250 mA Max. -12V @ 120 mA Max.	+5V @ 100 mA -12V @ 90 mA	



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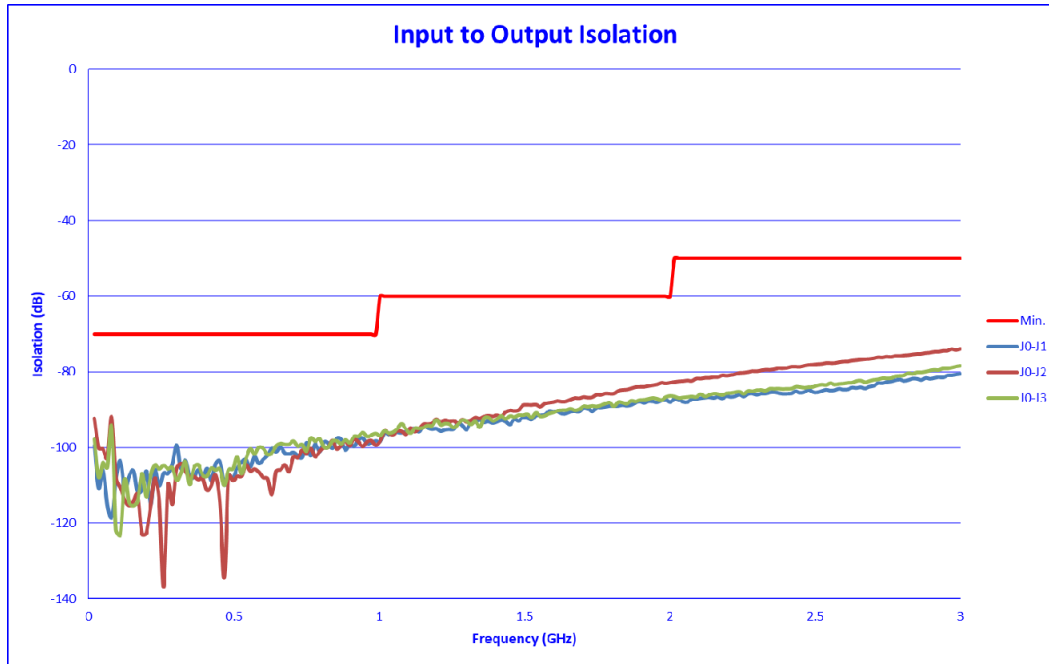
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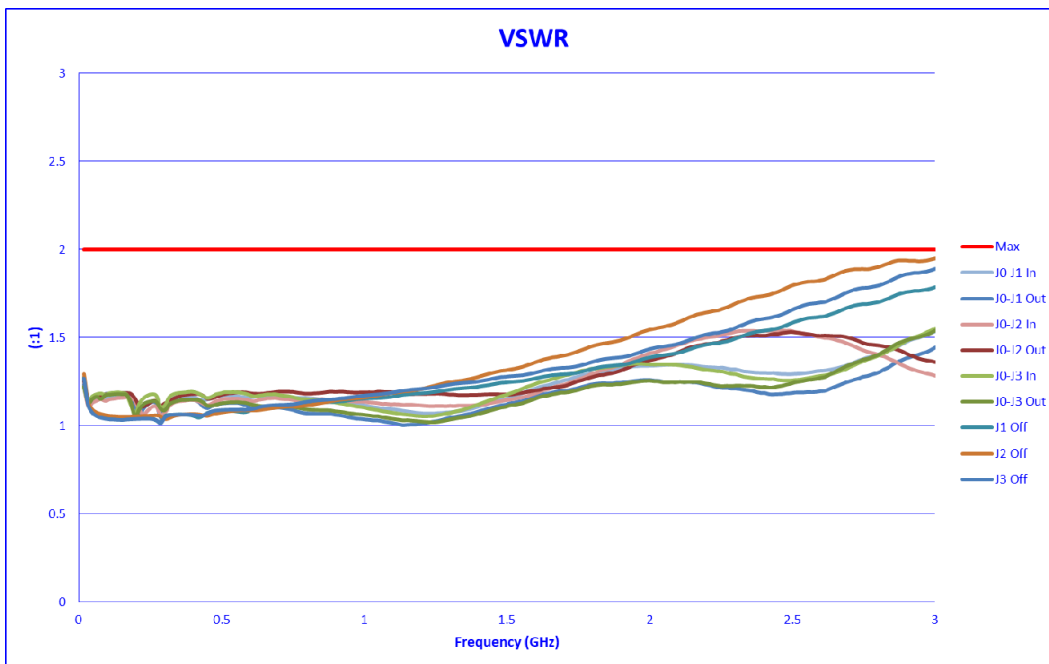
TEST DATA SUMMARY @ +45°C

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	20 MHz to 3.0 GHz	20 to MHz to 3.0 GHz	
2	Insertion Loss:	0.02 - 1.0 GHz 2.0 dB Max. 1.0 - 2.0 GHz 2.5 dB Max. 2.0 - 3.0 GHz 4.0 dB Max.	1.96 dB 1.71 dB 2.66 dB	
3	Isolation:	0.02-1.0 GHz 70dB Min. 1.0 - 2.0 GHz 60dB Min. 2.0 - 3.0 GHz 50 dB Min.	89.5 dB 81.23 dB 70.36 dB	
4	VSWR: (0.02-3.0 GHz)	2.0:1 Max.	1.95:1 See Plot	
6	Video Transients	ABOVE 20 MHz -100 dBm BELOW 20 MHz -75 dBm	ABOVE 20 MHz -100 dBm BELOW 20 MHz -75 dBm	
7	Control	TTL1 "0", TTL2 "0" J1-J4 TTL1 "0", TTL2 "1" J2-J4 TTL1 "1", TTL2 "0" J3-J4 TTL1 "1", TTL2 "1" UNDEFINED	PASS	
8	Power Supply:	+5V @ 250 mA Max. -12V @ 120 mA Max.	+5V @ 100 mA -12V @ 90 mA	



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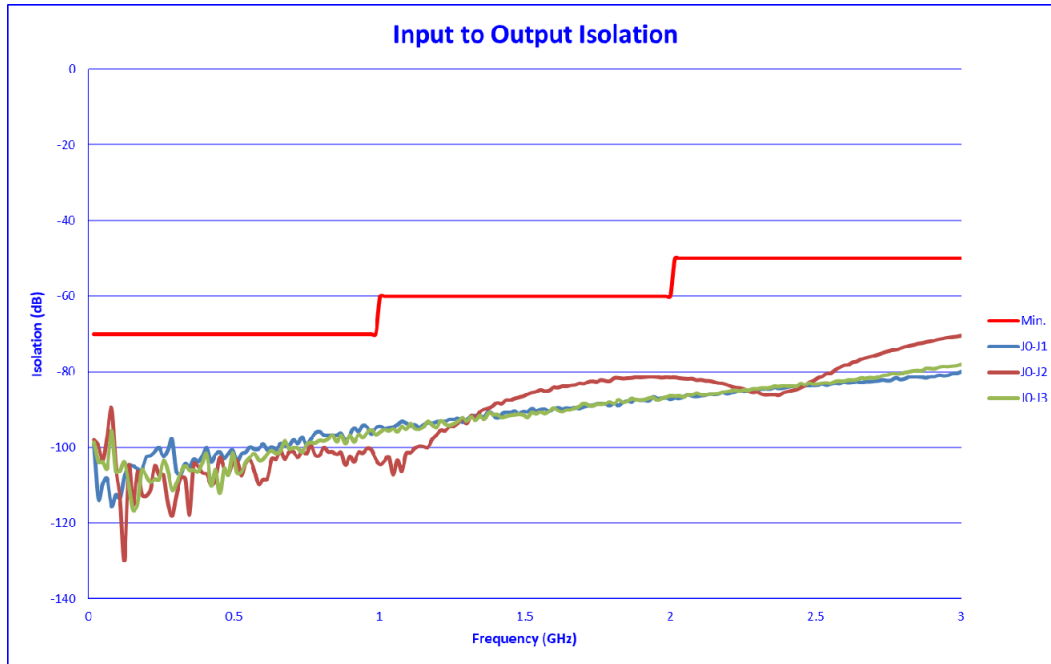
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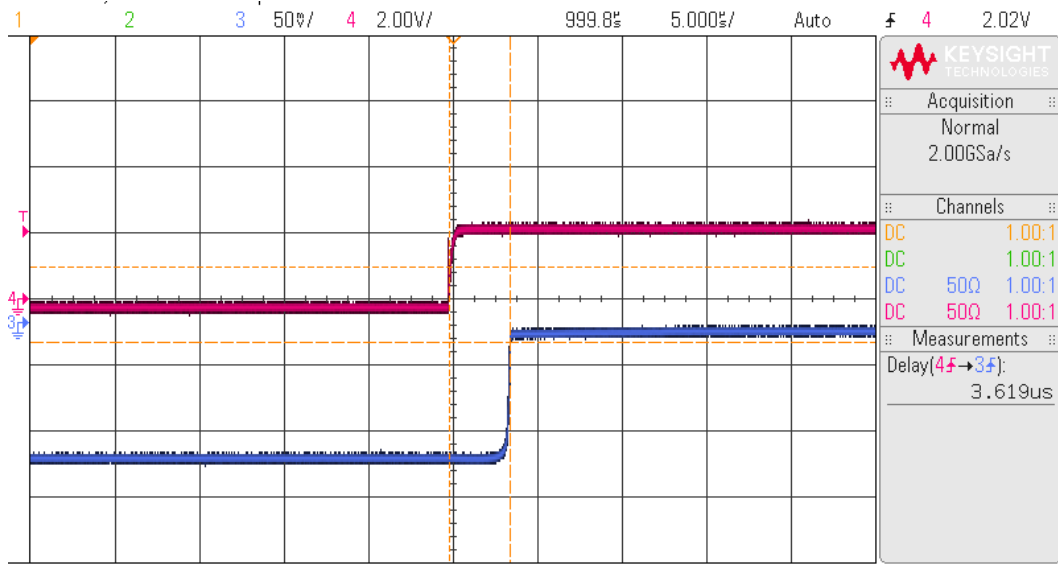
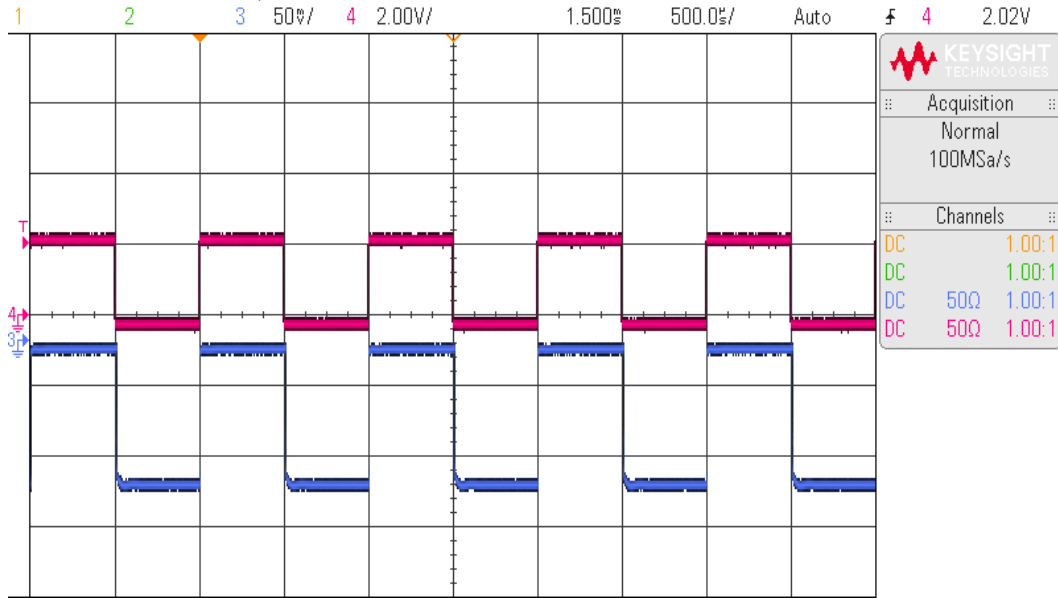
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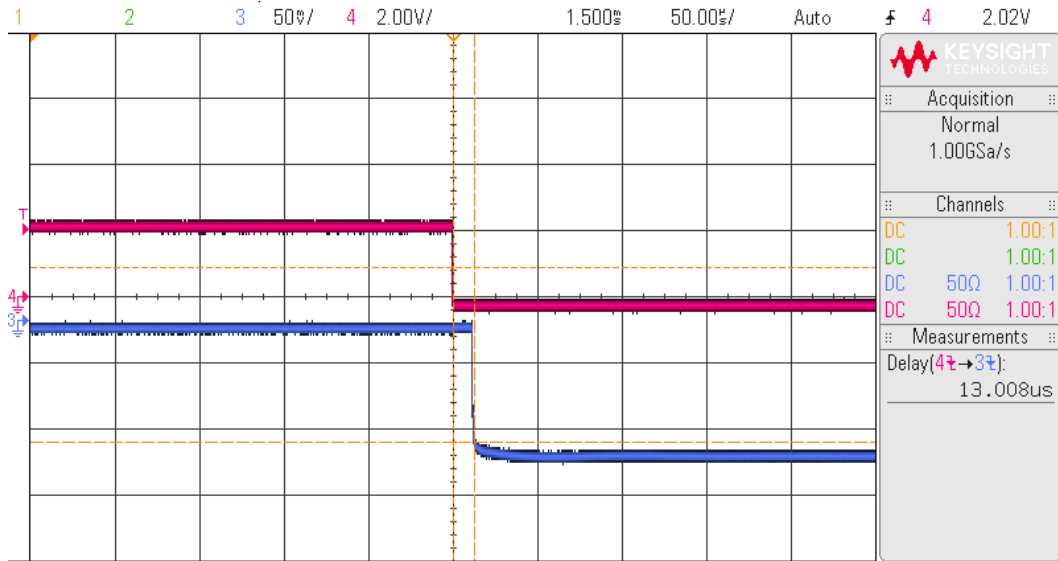
Switching speed plots



RED TRACE = TTL CONTROL
BLUE TRACE = RF



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