



**TYPICAL CHARACTERISTICS
ON
P16T-100M50G-100-T-I**

PMI MODEL: P16T-100M50G-100-T-I IS A SINGLE POLE 16 THROW SOLID STATE SWITCH OPERATING OVER THE 100 MHz TO 50 GHz FREQUENCY RANGE. THIS MODEL OFFERS A TYPICAL INSERTION LOSS OF 16 dB WHILE MAINTAINING A TYPICAL ISOLATION OF 70 dB.

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October 27, 2017

Designed By: PMI Engineering

Tested & Reported By:
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Email: sales@pmi-rf.com



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DESCRIPTION

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SPECIFICATIONS

- FREQUENCY: 0,1 TO 50 GHz
- INSERTION LOSS: 8,0 dB (0,1 TO 18 GHz) TYP
12,5 dB (18 TO 40 GHz) TYP
18,0 dB (40 TO 50 GHz) MAX
- INPUT & OUTPUT VSWR: 2.5:1 (0.1 TO 18 GHz) TYP
3.0:1 (18 TO 40 GHz) TYP
3.5:1 (40 TO 50 GHz) TYP
- ISOLATION: 70 dB (0,1 TO 1 GHz) TYP
90 dB (1 TO 18 GHz) TYP
80 dB (18 TO 40 GHz) TYP
70 dB (40 TO 50 GHz) TYP
- INPUT POWER: 20 dBm CW MAX
- SWITCHING SPEED: 100 ns MAX
- CONTROL SIGNAL: TTL LOGIC - "0" = ON "1" = OFF
- DC VOLTAGE: +5 V @ 800 mA MAX
-5 V @ 720 mA MAX
- RF CONNECTORS: 2.4 mm FEMALE
- SIZE: 12.00" x 5.50" x 0.65"
- FINISH: GOLD PLATED
- WEIGHT: 2 LBS

ENVIRONMENTAL RATINGS

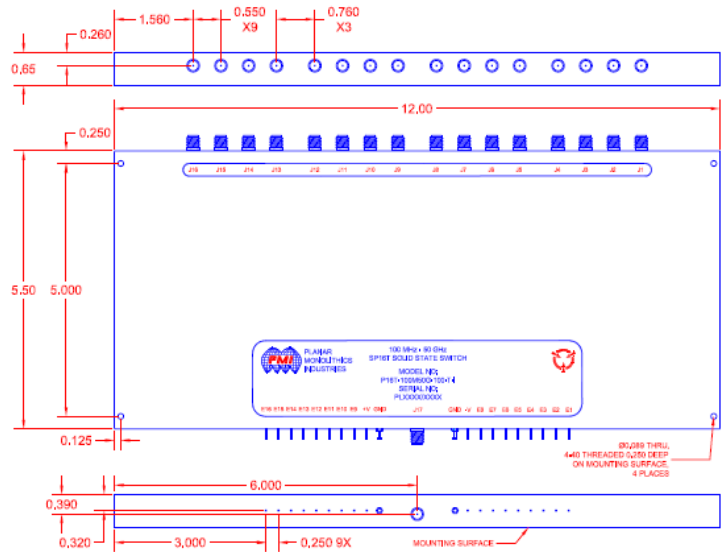
- TEMPERATURE: -40 °C TO +85 °C (OPERATING)
-65 °C TO +125 °C (STORAGE)
- HUMIDITY: MIL-STD-202, METHOD 103B COND. B
- SHOCK: MIL-STD-202, METHOD 213B COND. B
- VIBRATION: MIL-STD-202, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202, METHOD 107D COND.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

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

PMI CONFIDENTIAL AND PROPRIETARY

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE	10/13/16	
	2	DIMENSION UPDATE	03/06/17	
	3	MINOR EDITS	03/15/17	
	4	SPEC UPDATES	10/27/17	

MECHANICAL OUTLINE



PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F GROVE ROAD

FREDERICK, MARYLAND 21704 USA

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ISO 9001 CERTIFIED



APPROVALS		DATE	TITLE		REV.
DRAWN	<i>M. Berry</i>	03/06/17	PRODUCT FEATURE P16T-100M50G-100-T-I		4
CHECKED			SIZE	FRGM NO.	DRWG NO.
ISSUED			A	05XQ0	27030760
			SCALE	N/S	SHEET 1 OF 1

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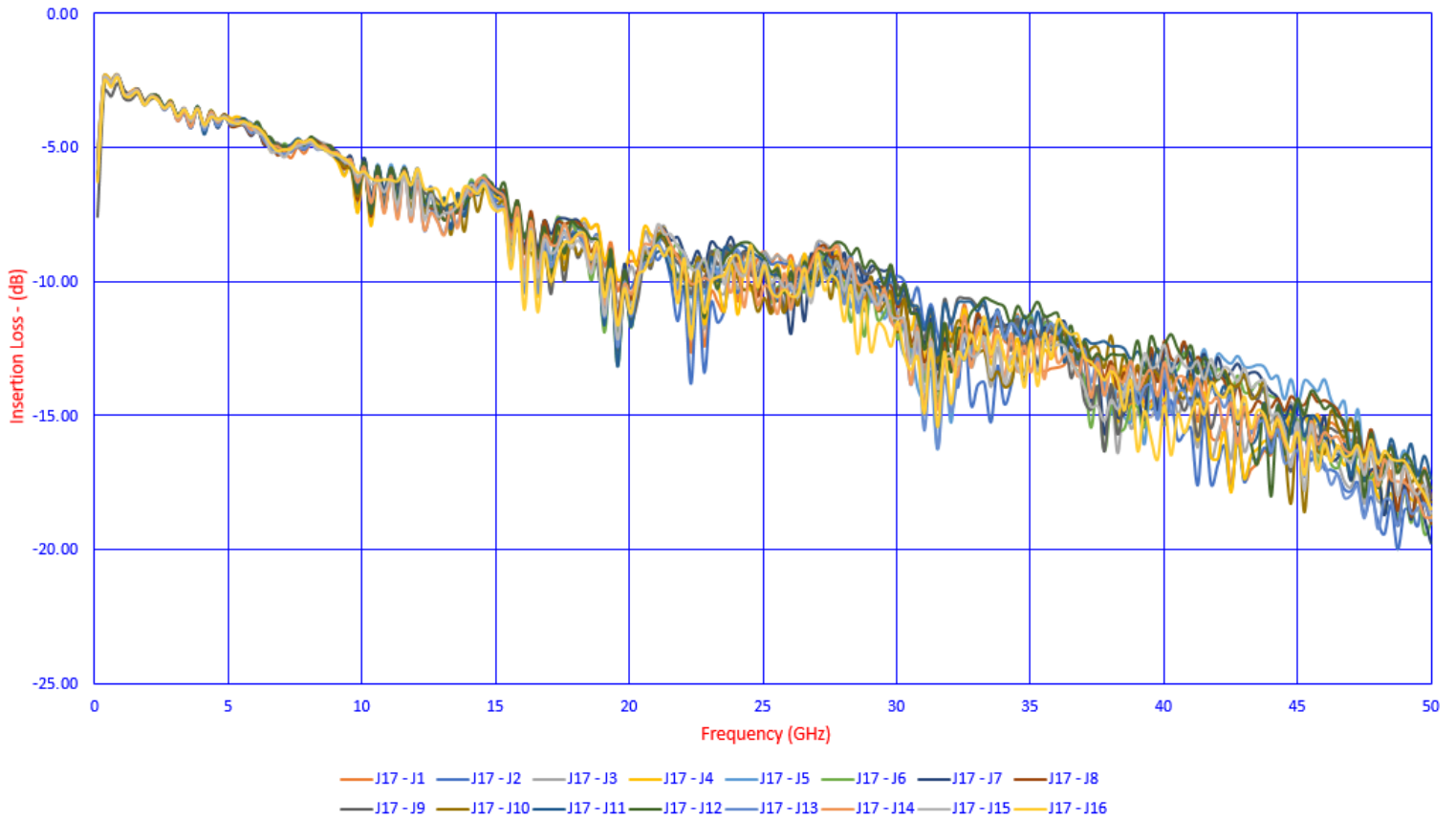
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TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range	0.1 to 50 GHz	0.1 to 50 GHz	
2	Insertion Loss	8.0 dB Typ (0.1 to 18 GHz) 12.5 dB Typ (18 to 40 GHz) 18.0 dB Typ (40 to 50 GHz)	12.5 dB 17.0 dB 20.0 dB (See Plots)	
3	In/Out VSWR	2.5:1 Typ (0.1 to 18 GHz) 3.0:1 Typ (18 to 40 GHz) 3.5:1 Typ (40 to 50 GHz)	2.5:1 3.0:1 3.5:1 (See Plots)	
4	Isolation	70 dB Typ (0.1 to 1 GHz) 90 dB Typ (1 to 18 GHz) 80 dB Typ (18 to 40 GHz) 70 dB Typ (40 to 50 GHz)	84dB 92dB 72dB 61dB (See Plot)	
5	Input Power	+20 dBm CW Max	Pass	
6	Switching Speed	100 ns Max	90ns See Plots	
7	DC Supply	+5 VDC @ 800 mA Max -5 VDC @ 720 mA Max	+5 VDC @ 710mA -5 VDC @ 680mA	



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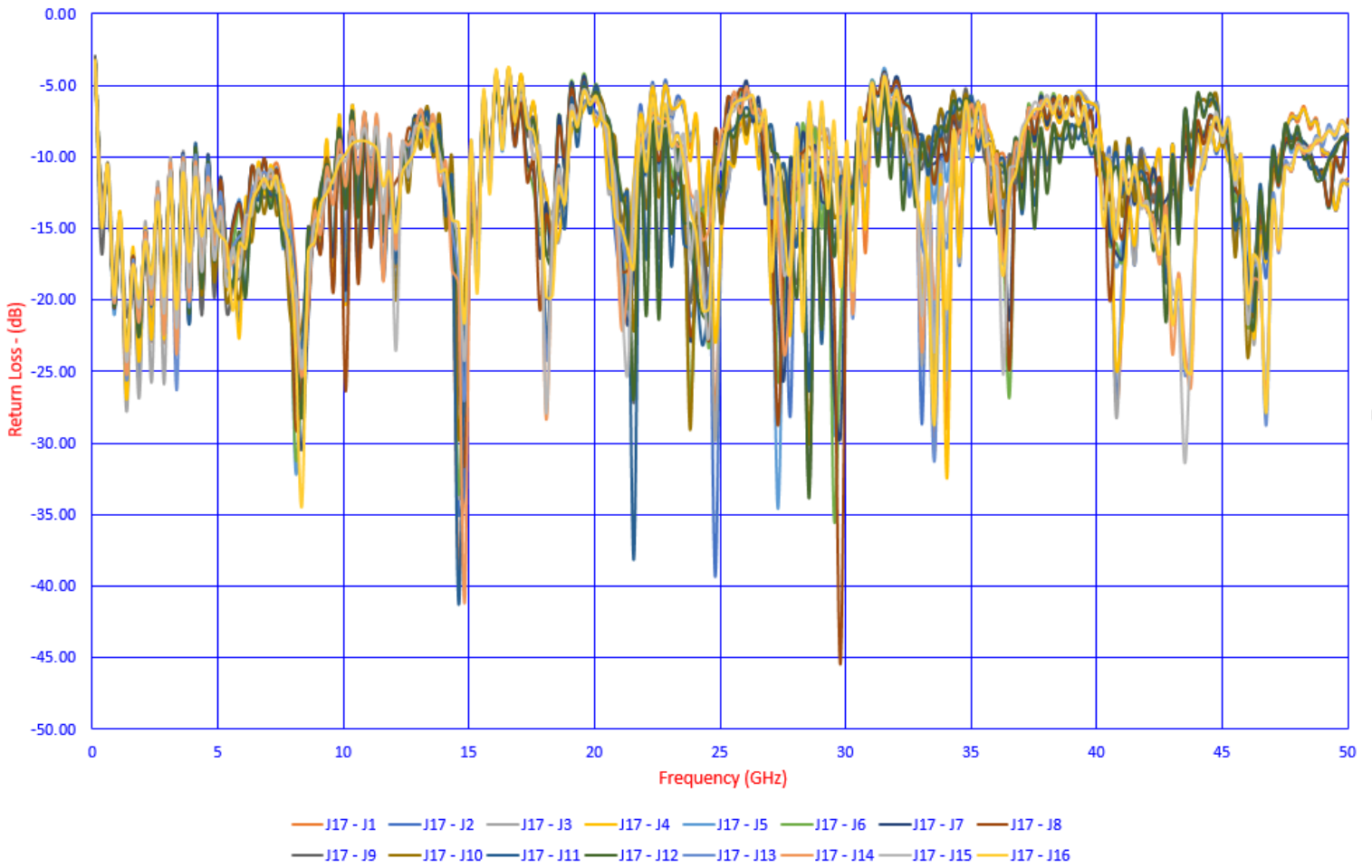
INSERTION LOSS vs FREQUENCY





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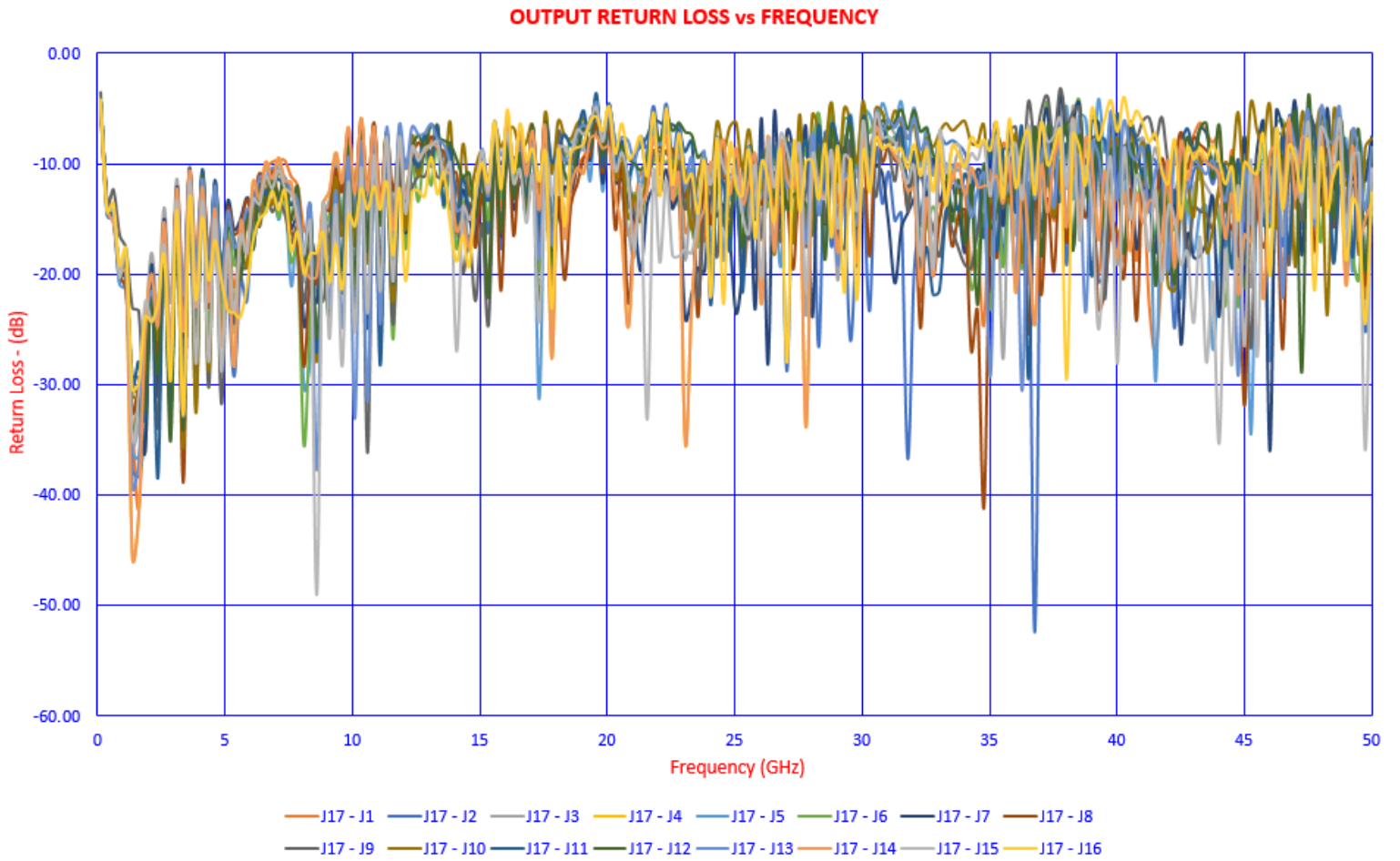
INPUT RETURN LOSS vs FREQUENCY



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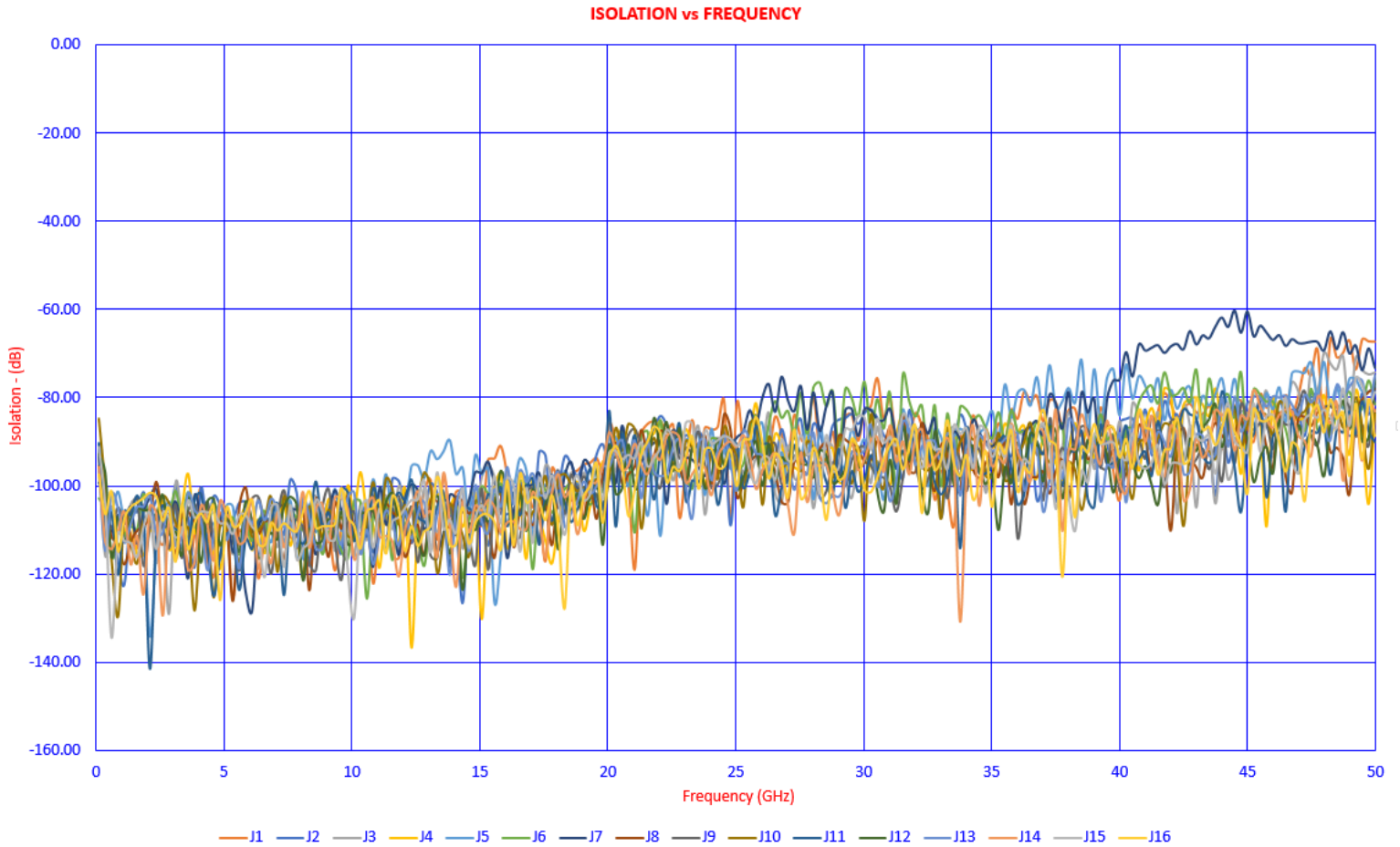
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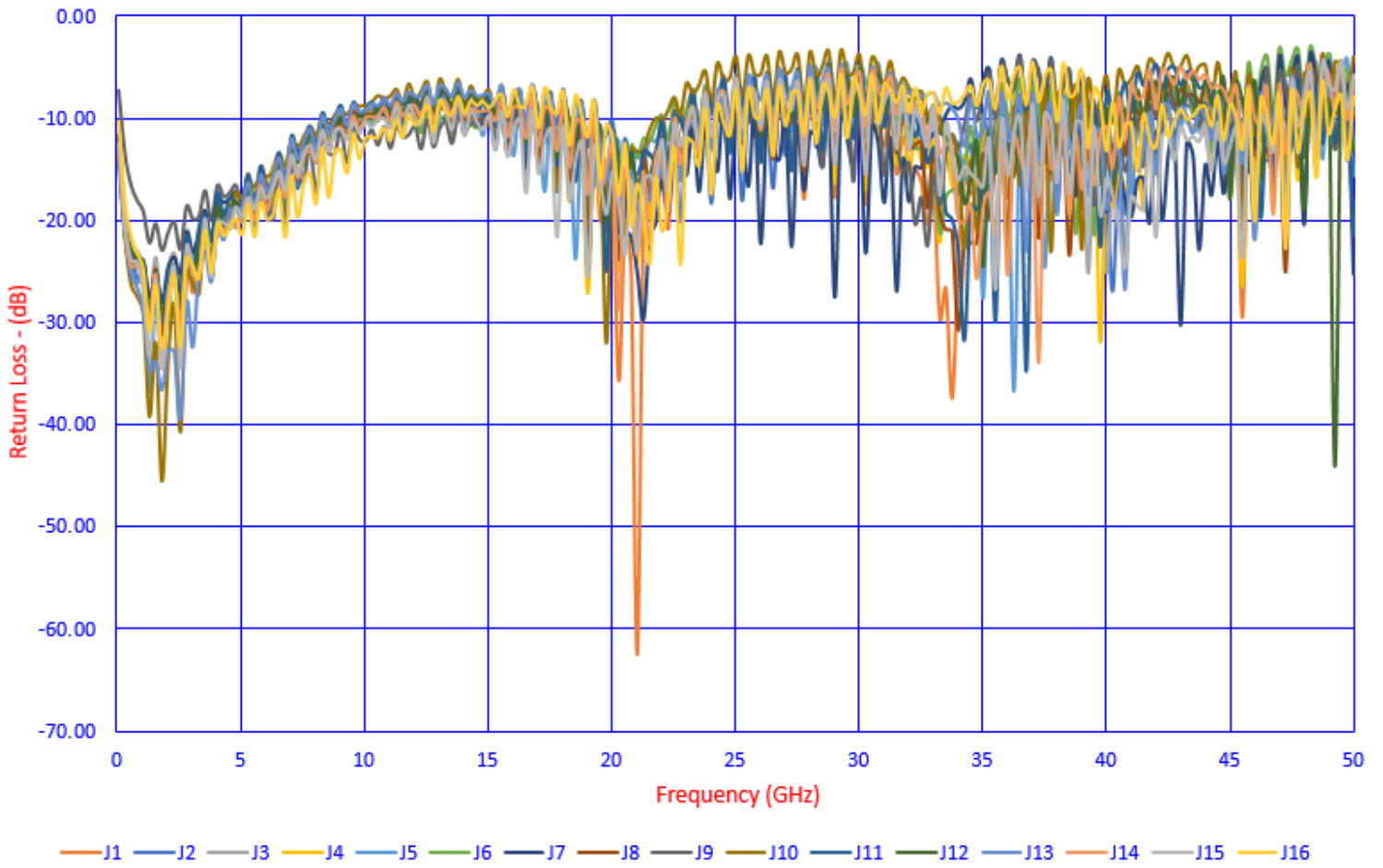


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**TYPICAL CHARACTERISTICS
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OFF RETURN LOSS vs FREQUENCY





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**Switching Speed
ON – 100ns per Div.**



Green Trace = TTL Signal
Yellow Trace = RF Signal



**TYPICAL CHARACTERISTICS
ON
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**Switching Speed
OFF – 100ns per Div.**



Green Trace = TTL Signal
Yellow Trace = RF Signal



**TYPICAL CHARACTERISTICS
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**Switching Speed
Full Pulse – 200ns per Div.**



Green Trace = TTL Signal
Yellow Trace = RF Signal



**TYPICAL CHARACTERISTICS
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Video Transients – 100ns & 200mV per Div.



Green Trace = TTL Signal
Blue Trace = Video Transients