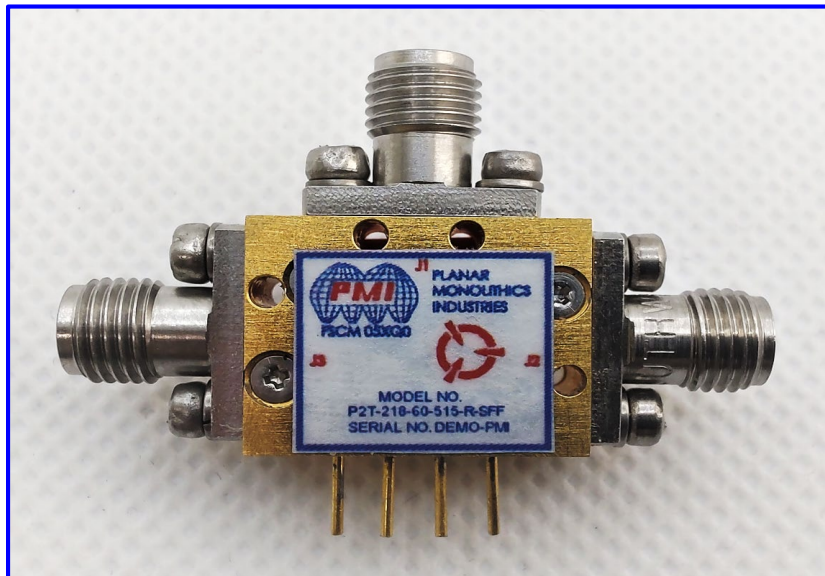




Typical Characteristics ON P2T-218-60-515-R-SFF

PLANAR MONOLITHICS INDUSTRIES MODEL NUMBER P2T-218-60-515-R-SFF IS A SINGLE POLE, TWO THROW, REFLECTIVE SWITCH OPERATING OVER THE FREQUENCY RANGE OF 2.0 TO 18.0 GHz. IT HAS A MINIMUM ISOLATION OF 60 dB AND A MAXIMUM INSERTION LOSS OF 1.8 dB. THIS MODEL IS OUTFITTED WITH SMA FEMALE CONNECTORS.



March 22, 2022

**Designed By:
PMI Engineering**

**Technical Drawings:
Michael Hanken**

**Tested and Reported By:
Alfredo Lopez**



Typical Characteristics ON P2T-218-60-515-R-SFF

Outline Drawing

DESCRIPTION:
 PLANAR MONOLITHICS INDUSTRIES MODEL NUMBER P2T-218-60-515-R-SFF IS A SINGLE POLE, TWO THROW, REFLECTIVE SWITCH OPERATING OVER THE FREQUENCY RANGE OF 2.0 TO 18.0 GHz. IT HAS A MINIMUM ISOLATION OF 60 dB AND A MAXIMUM INSERTION LOSS OF 1.8 dB. THIS MODEL IS OUTFITTED WITH SMA FEMALE CONNECTORS.

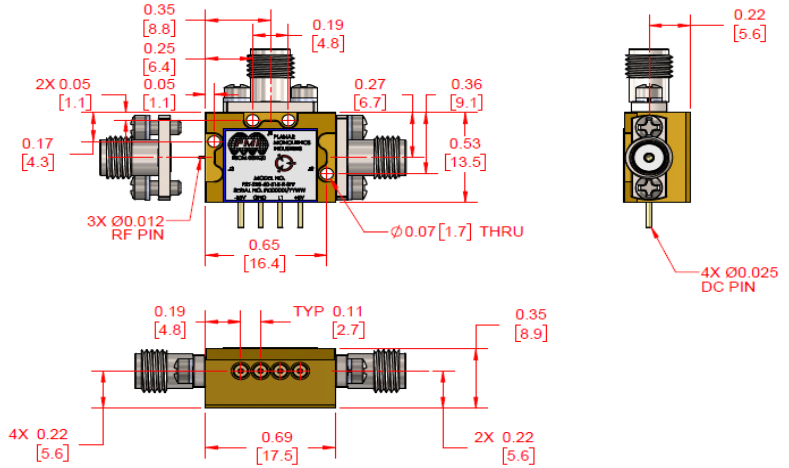
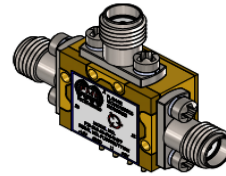
SPECIFICATIONS:

- FREQUENCY RANGE:..... 2.0 TO 18.0 GHz
- INTERFACE:..... TTL (SEE TRUTH TABLE)
- ISOLATION:..... 60 dB MIN
- INSERTION LOSS:..... 1.8 dB MAX
- SWITCHING SPEED:..... 30 ns MAX
- VSWR:..... 1.8:1 MAX
- IMPEDANCE:..... 50 OHMS
- RF INPUT POWER:..... 1W CW / 2W PEAK MAX
- SUPPLY VOLTAGES :..... +5V @ 65 mA max, -15V @ 65 mA MAX
- CONNECTORS:..... SMA MALE (FIELD REPLACABLE)
- FINISH:..... GOLD PLATED

ENVIRONMENTAL RATINGS:

- TEMPERATURE:..... -54°C TO +85°C (OPERATING)
 -57°C TO +125°C (STORAGE)
- VIBRATION:..... RANDOM: 20-500 Hz
 SPECTRAL DENSITY: 0.01g²/Hz
 RMS: 6.8g
 PEAK: 100g
 DURATION: 4 ms, HALFSINE
- MECHANICAL SHOCK:..... PEAK: 100g
- HUMIDITY:..... 90%
- PRESSURE:..... OPERATION: 0.6-1.4 BAR
 STORAGE: 0.3-1.4 BAR
 VARIATION: ±0.5 BAR
- CORROSION:..... RESISTANT AGAINST SEAWATER
- MTBF:..... 200,000 h
- EMC:..... NO RADIATION

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



TRUTH TABLE	
L1	OUTPUT
"1"	J1-J2
"0"	J1-J3

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	11/19/02	
	B1	ECN # 22-0046	02/20/03	
	B2	ECN # 23-0005	10/20/03	

PMI CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.
 7311-F GROVE ROAD
 FREDERICK, MD 21704-5015
 TEL: (301)662-5019 FAX: (301)662-1731
 WWW.PMI-RF.COM EMAIL: SALES@PMI-RF.COM
 ISO 9001 CERTIFIED

APPROVALS	DATE	TITLE
DRAWN M. HANKEN	01/19/02	OUTLINE
DESIGNED		P2T-218-60-515-R-SFF
ISSUED		05XQ0
		27043300
		SCALE 2:1
		SHEET 1 OF 1



Typical Characteristics ON P2T-218-60-515-R-SFF

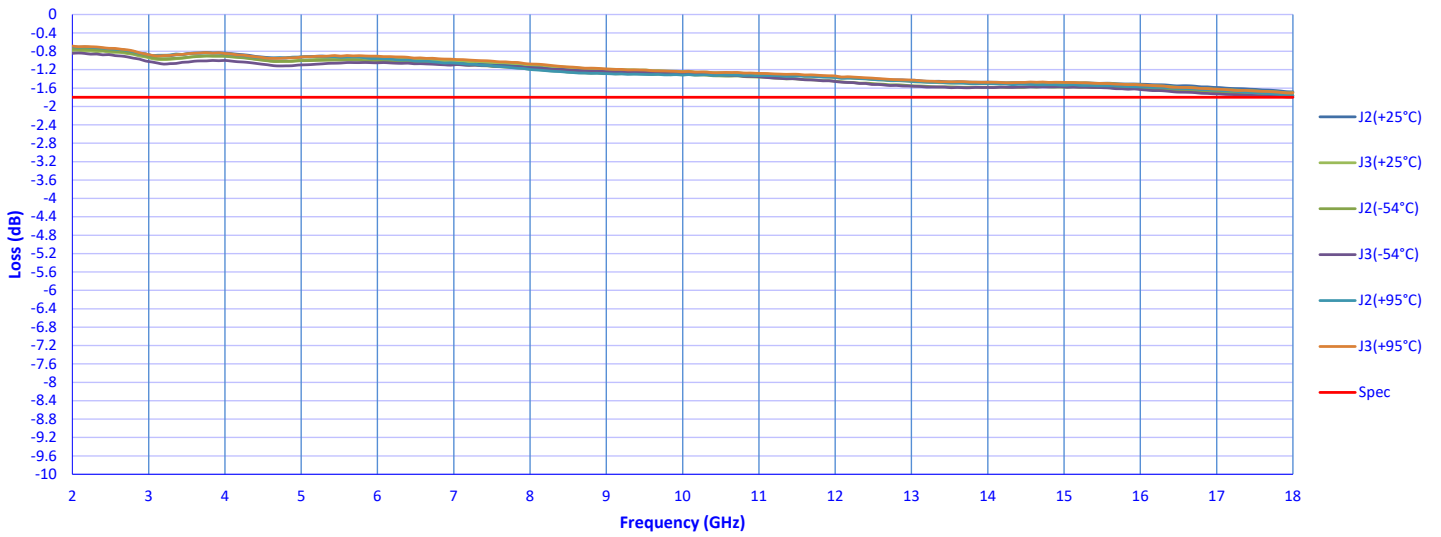
Technical Specifications

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS			QA QC
			+25°C	-54°C	+95°C	
1	Frequency Range:	2.0 GHz to 18.0 GHz	2.0 GHz to 18.0 GHz	2.0 GHz to 18.0 GHz	2.0 GHz to 18.0 GHz	
2	Insertion Loss:	1.80 dB Max.	1.71 dB See Graph	1.79 dB See Graph	1.76 dB See Graph	
3	Isolation:	60 dB Min.	61 dB See Graph	61 dB See Graph	60 dB See Graph	
4	VSWR:	1.9:1 Max.	1.35 See Graph	1.33 See Graph	1.36 See Graph	
5	Switching Speed:	30 ns Max.	Speed ON-19.0 ns Speed OFF-18.55 ns See Plots	Speed ON-19.0 ns Speed OFF-18.55 ns See Plots	Speed ON-19.0 ns Speed OFF-18.55 ns See Plots	
6	Input Power:	1W CW / 2W PEAK MAX	Pass See Graph	Pass See Graph	Pass See Graph	
7	DC Supply:	+5 VDC @ 65 mA Max. -15 VDC @ 65 mA Max.	+5 VDC @ 48 mA -15 VDC @ 22 mA	+5 VDC @ 45 mA -15 VDC @ 20 mA	+5 VDC @ 49 mA -15 VDC @ 25 mA	
8	Control:	TTL "0" → (J1-J2) TTL "1" → (J1-J3)	Pass	Pass	Pass	

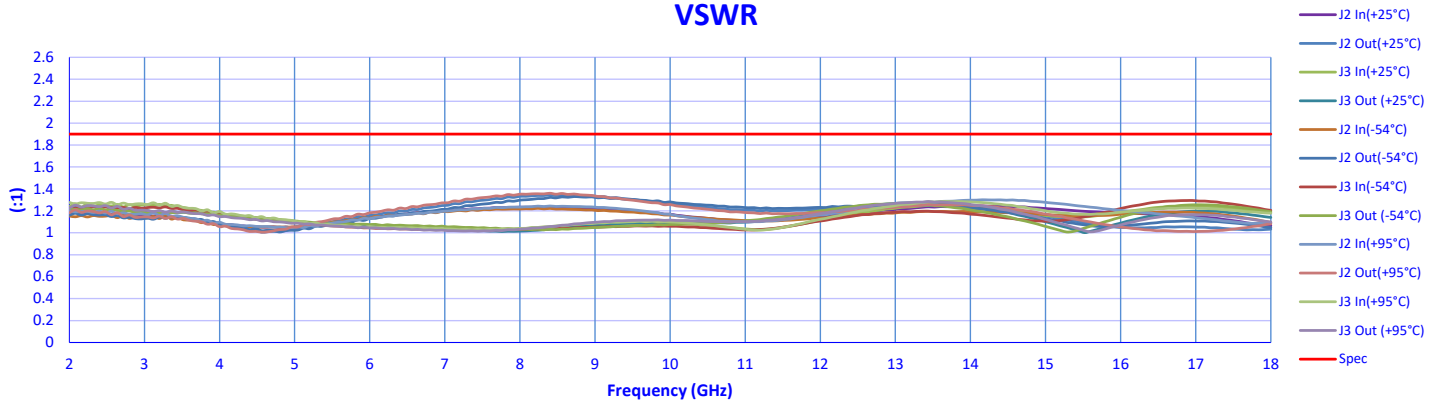


Typical Characteristics ON P2T-218-60-515-R-SFF

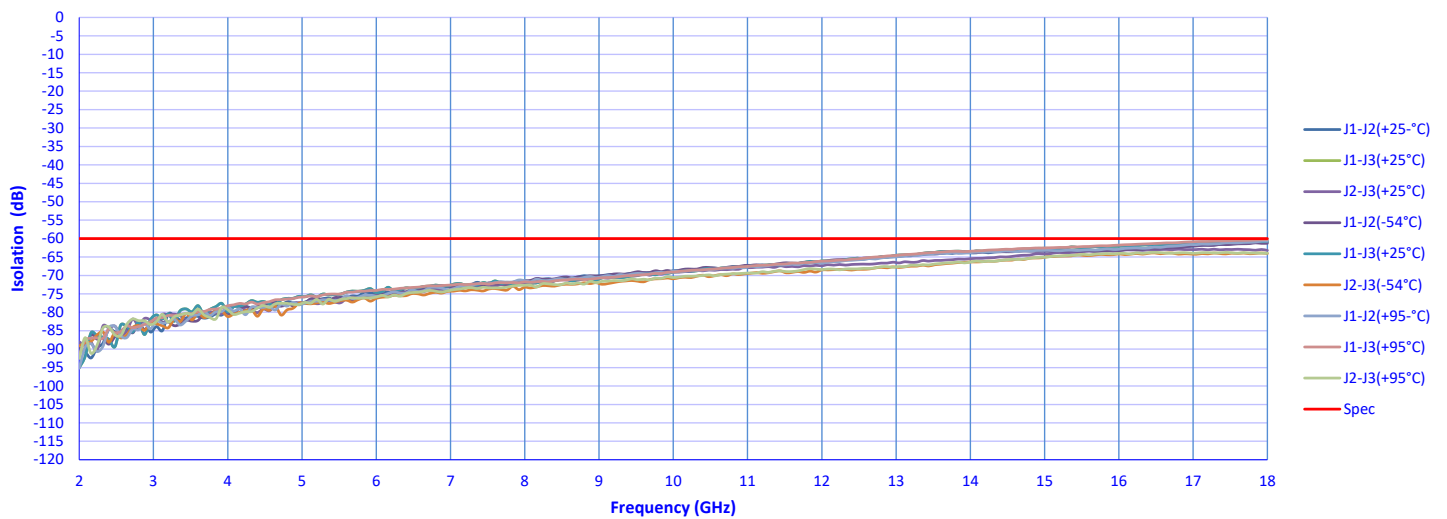
Insertion Loss



VSWR



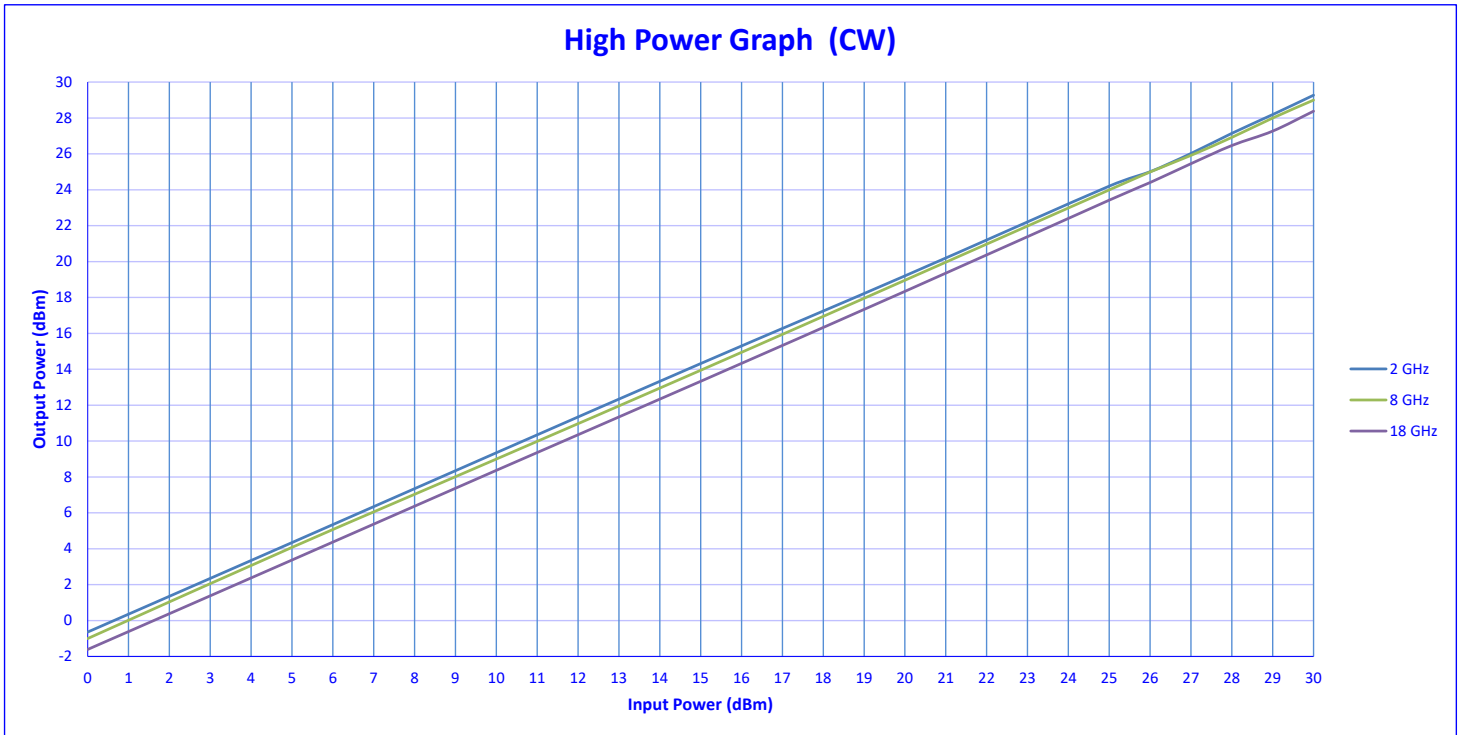
Isolation





Typical Characteristics ON P2T-218-60-515-R-SFF

High Power Graph (CW)



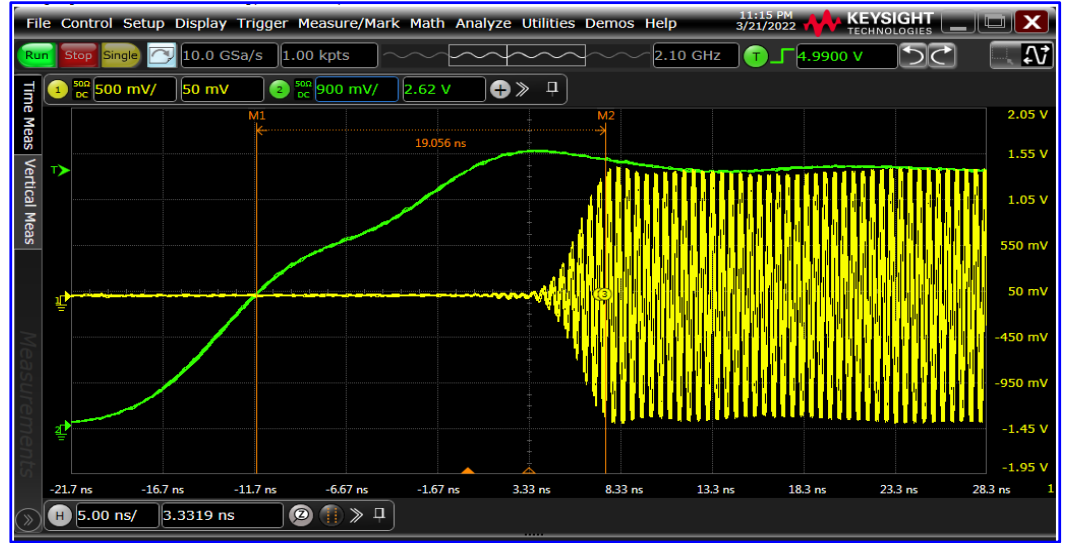
High Power Test Data (CW)

2 GHz				8 GHz				18 GHz			
Input Power (dBm)	Output Power (dBm)	Loss (dBm)	Compression (dBm)	Input Power (dBm)	Output Power (dBm)	Loss (dBm)	Compression (dBm)	Input Power (dBm)	Output Power (dBm)	Loss (dBm)	Compression (dBm)
0	-0.641	0.641	0	0	-1.003	1.003	0	0	-1.61	1.61	0
5	4.344	0.656	0.015	5	4.077	0.923	0.08	5	3.372	1.628	0.018
10	9.347	0.653	0.012	10	8.996	1.004	0.001	10	8.367	1.633	0.023
15	14.315	0.685	0.044	15	13.941	1.059	0.056	15	13.327	1.673	0.063
20	19.202	0.798	0.157	20	18.958	1.042	0.039	20	18.339	1.661	0.051
25	24.202	0.798	0.157	25	23.992	1.008	0.005	25	23.421	1.579	0.031
26	25.004	0.996	0.355	26	24.99	1.01	0.007	26	24.403	1.597	0.013
27	26.021	0.979	0.338	27	25.915	1.085	0.082	27	25.452	1.548	0.062
28	27.143	0.857	0.216	28	26.917	1.083	0.08	28	26.464	1.536	0.074
29	28.189	0.811	0.17	29	27.996	1.004	0.001	29	27.268	1.732	0.122
30	29.267	0.733	0.092	30	28.994	1.006	0.003	30	28.376	1.624	0.014



Typical Characteristics ON P2T-218-60-515-R-SFF

Switching Speed ON
5.0 ns Per Div
Measured value (19.0 ns)

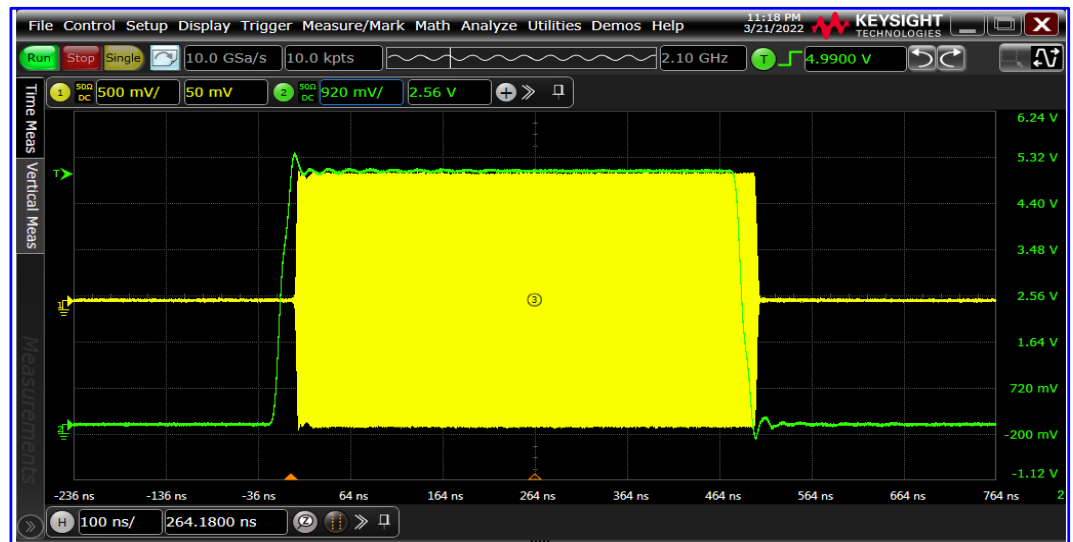


Switching Speed OFF
5.0 ns Per Div
Measured value (18.55ns)



Full Pulse
100 ns Per Div

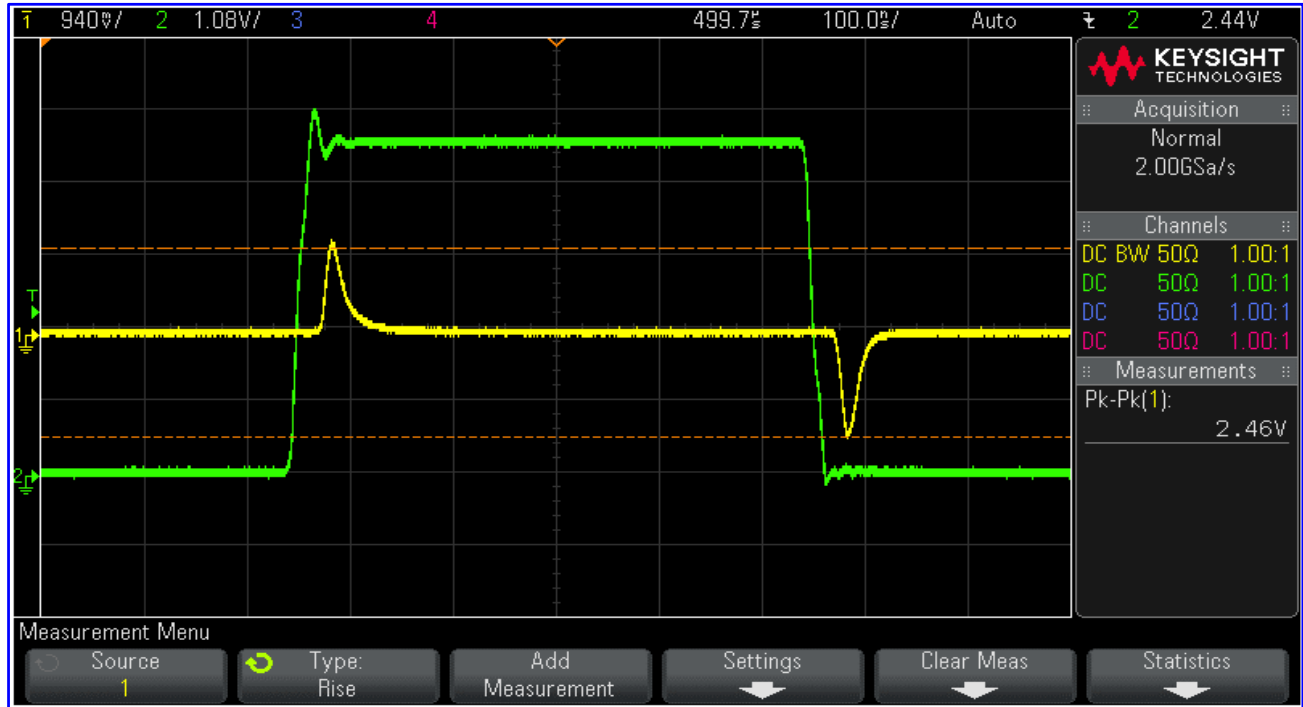
Green Trace - TTL Signal
Yellow Trace - RF Signal





Typical Characteristics ON P2T-218-60-515-R-SFF

Transient Video
350 MHz BW Limit
Switching Rate 1MHz



Green Trace - TTL Signal
Yellow Trace - Video Signal