

TYPICAL CHARACTERISTICS ON LM-28-C3-1

PMI MODEL NUMBER: LM-28-C3-1 IS A HIGH POWER LIMITER THAT WORKS FROM 2.0 GHz TO 8.0 GHz.



January 17, 2024

Designed By:

Engineering PMI

Tested and Reported By:

Alfredo Lopez

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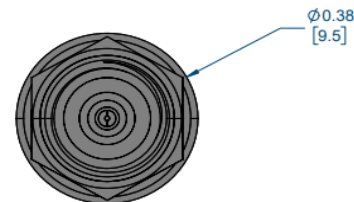
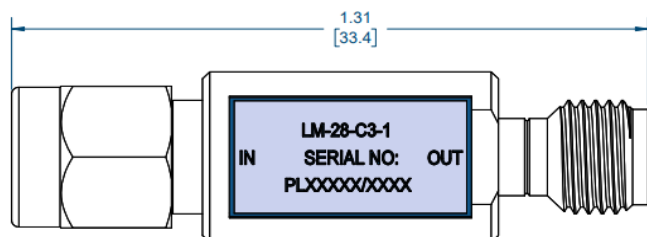
Outline

DESCRIPTION:

PMI MODEL NUMBER: LM-28-C3-1 IS A HIGH POWER LIMITER THAT WORKS FROM 2.0 GHz TO 8.0 GHz.

SPECIFICATIONS:

- FREQUENCY RANGE:..... 2.0 GHz TO 8.0 GHz
- VSWR:..... 2.0:1 MAX
- INSERTION LOSS:..... 1.0 dB TYP, 1.2 dB MAX
- AVERAGE POWER:..... 3 WATTS MAX
- PEAK POWER:..... 1000 WATTS MAX (1 μ s PW, 1% DUTY CYCLE)
- RECOVERY TIME:..... 1000 ns TYP @ 1 kW PEAK
100 ns TYP @ 3 W CW
- LEAKAGE POWER:..... 80 mW TYP (+19 dBm)
- CONNECTORS:..... 2.92mm (M) INPUT AND 2.92mm (F) OUTPUT
- SIZE:..... 1.31" (L) X 0.38" $\varnothing$
- WEIGHT:..... <1 OZ. TYP



ENVIRONMENTAL RATINGS:

- TEMPERATURE:..... -55°C TO +125°C (OPERATING)
DERATE POWER HANDLING TO ZERO AT +125°C
-65°C TO +125°C (STORAGE)
- HUMIDITY:..... MIL-STD-202, METHOD 103B COND. B
- SHOCK:..... MIL-STD-202, METHOD 213B COND. B
- ALTITUDE:..... MIL-STD-202, METHOD 105C COND. B
- VIBRATION:..... MIL-STD-202, METHOD 204B COND. B
- TEMPERATURE CYCLE:..... MIL-STD-202, METHOD 107D COND. A

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	10/01/2004	
	B1	ECN # 25-0008	11/10/2005	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES 2 0.005 0.005 0.005		PART NO. LM-28-C3-1		PMI CONFIDENTIAL AND PROPRIETARY Quantic PMI 7309-A GROVE ROAD, FREDERICK, MD 21704 USA WWW.QUANTICPMI.COM FAX: 301-662-1731 800-868-7878	
MATERIAL: SLANGE		APPROVALS SLANGE		DATE 10/01/2004	
FINISH: ISSUED		TITLE OUTLINE		REV. B1	
NEXT ASSY USED ON		SIZE B		FROM NO. 05XQ0	
APPLICATION 27049960		SCALE 5:1		SHEET 1 OF 1	

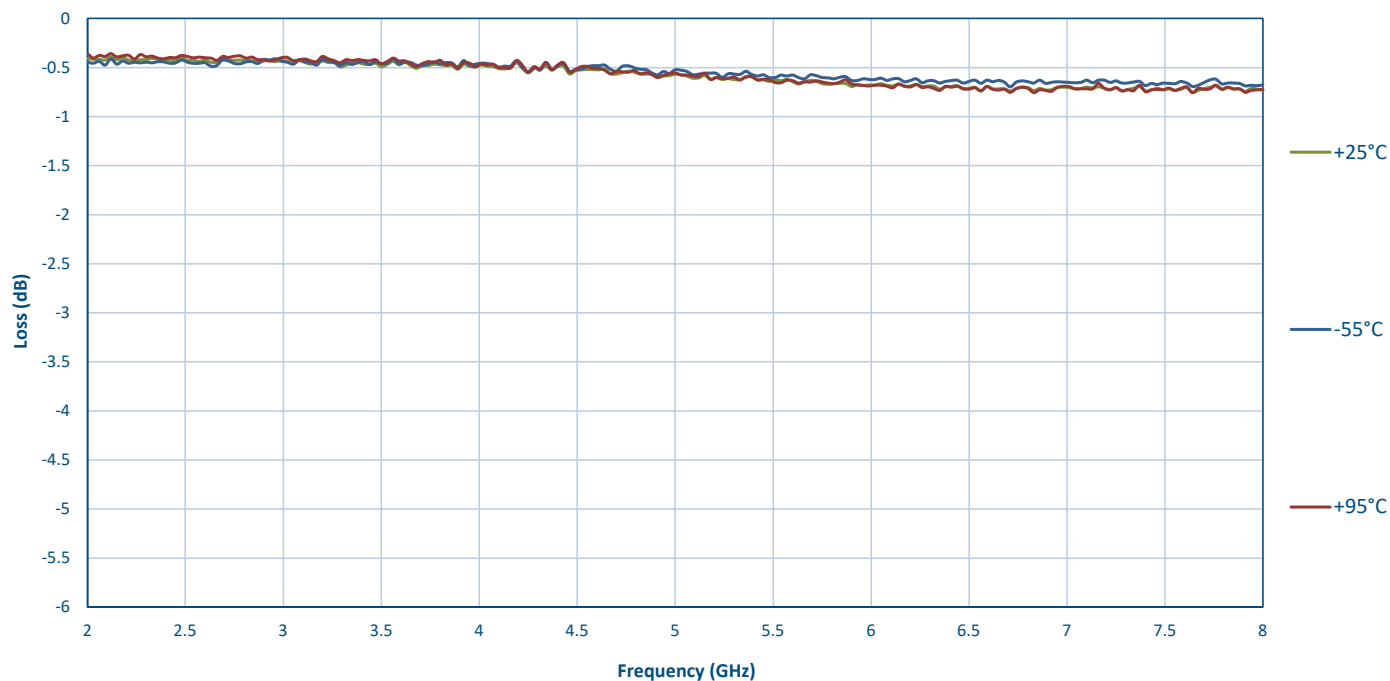
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Technical specifications

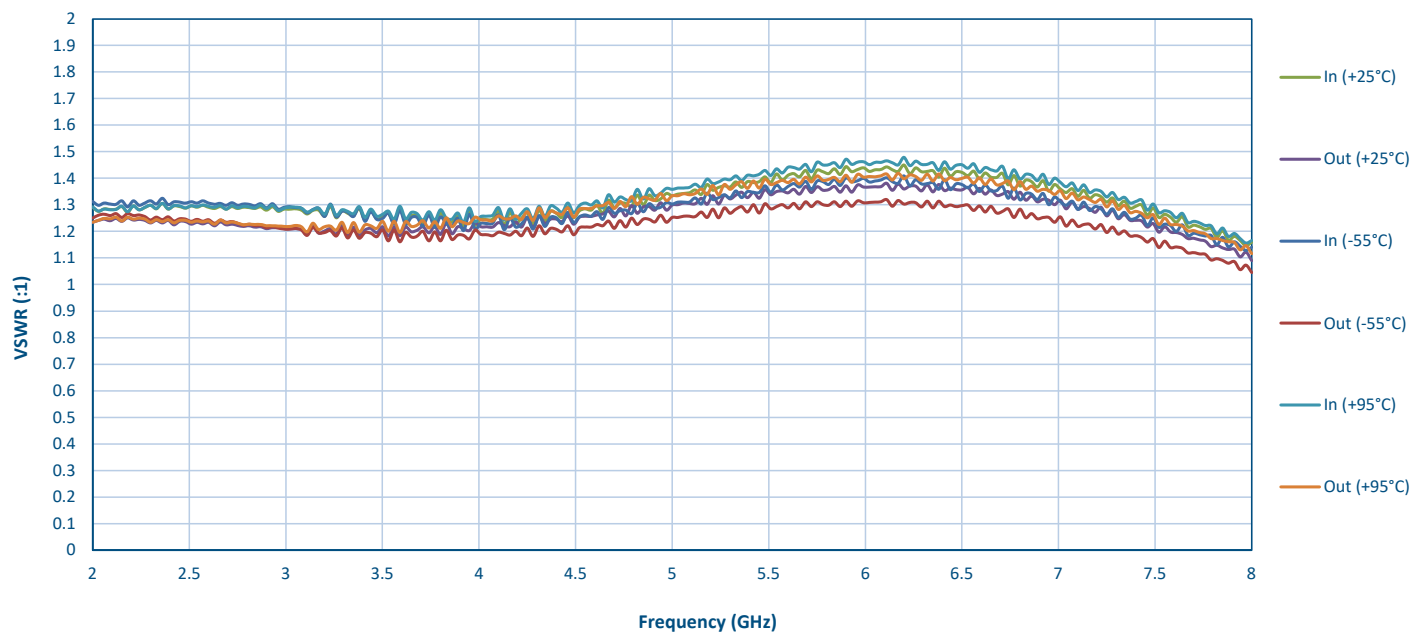
TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	Test Results		
			+25°C	-55°C	+95°C
1	Frequency Range:	2 to 8.0 GHz	2.0 to 8.0 GHz	2.0 to 8.0 GHz	2.0 to 8.0 GHz
2	VSWR	2.0:1 Max.	1.45 :1 See Graph	1.41 :1 See Graph	1.48 :1 See Graph
3	Insertion Loss:	1.0 dB Typ. 1.2 dB Max.	0.76 dB See Graph	0.7 dB See Graph	0.76 dB See Graph
4	Average Power:	3 Watts Max. (CW)	Pass 3 Watts CW See Graph	Pass 3 Watts CW See Graph	Pass 3 Watts CW See Graph
5	Peak Power:	1000 Watts Max. (1 μ s PW, 1% Duty Cycle)	Pass 1 kW Peak See Graph	Pass 1 kW Peak See Graph	Pass 1 kW Peak See Graph
6	Recovery Time:	1000 ns Typ. @1kW 100 ns Typ. @3W CW	780 ns @ 1 kW Peak Input Power See Plots	780 ns @ 1 kW Peak Input Power See Plots	780 ns @ 1 kW Peak Input Power See Plots
			15.15 ns @ 3 W Peak Input Power See Plots	15.15 ns @ 3 W Peak Input Power See Plots	15.15 ns @ 3 W Peak Input Power See Plots
7	Leakage Power:	80 mW Typ. (19 dBm)	+14.87 dBm CW	+15.2 dBm CW	+14.44 dBm CW
			+16.32 dBm Pulsed	+16.32 dBm Pulsed	+16.32 dBm Pulsed
			See Graph	See Graph	See Graph

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Insertion Loss

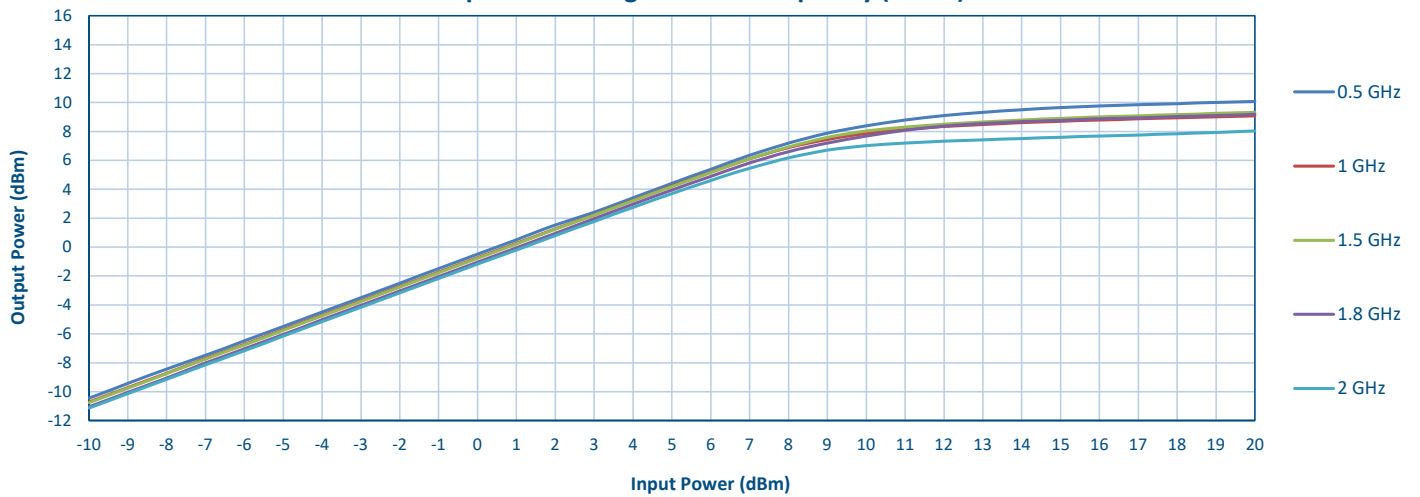


VSWR

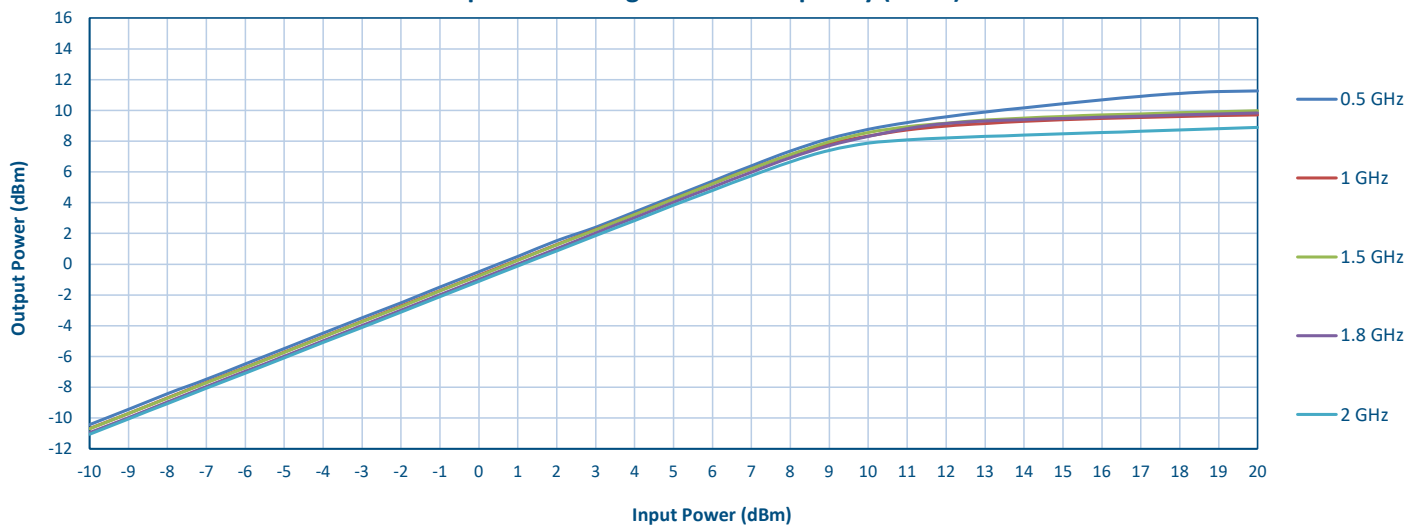


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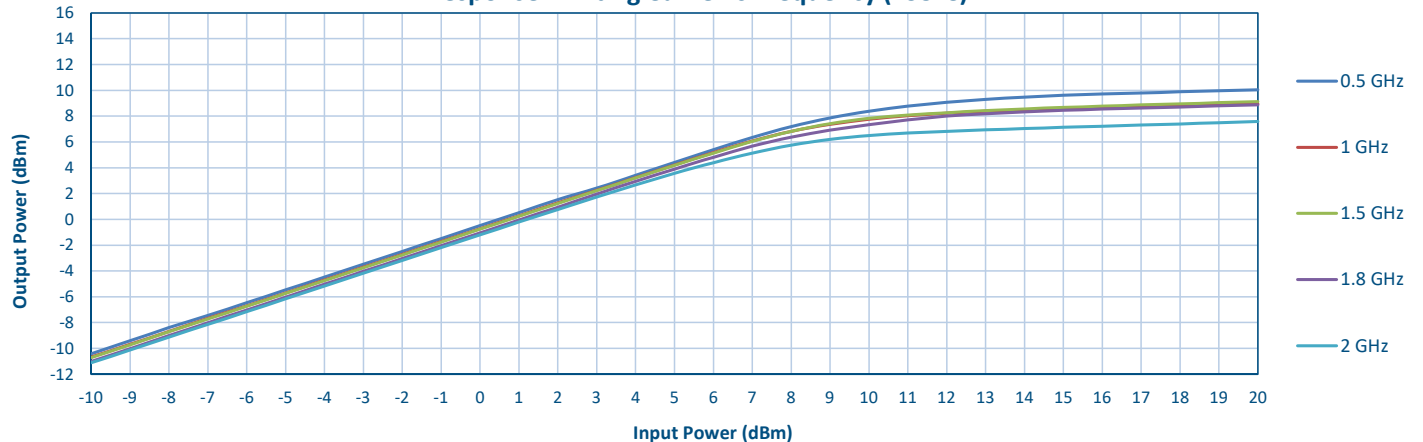
Response Limiting Curve Vs Frequency (+25°C)



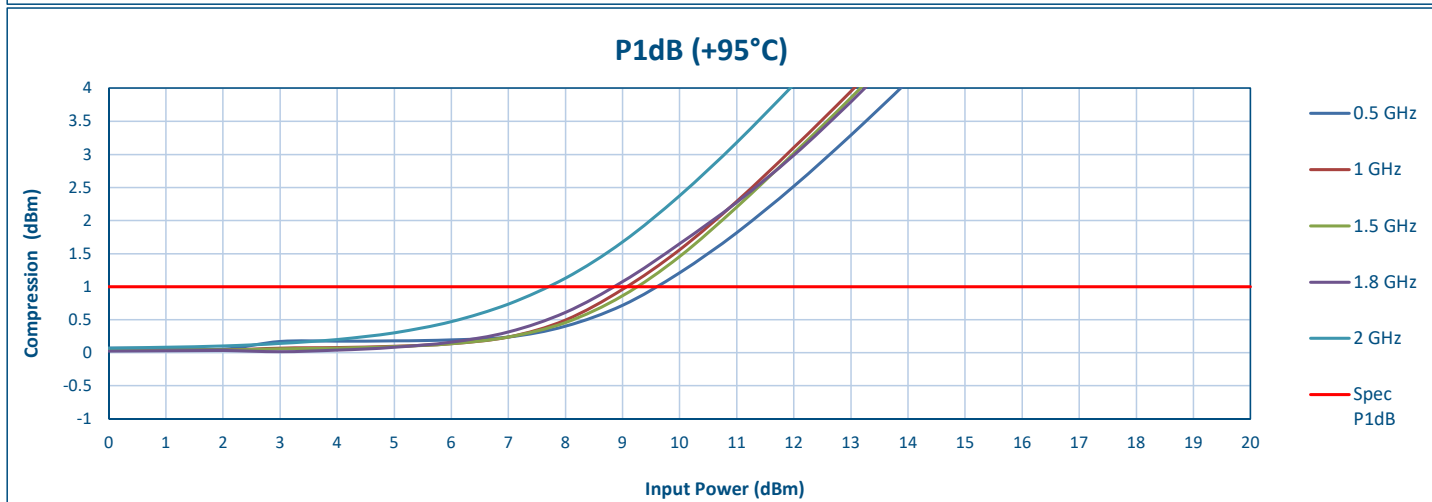
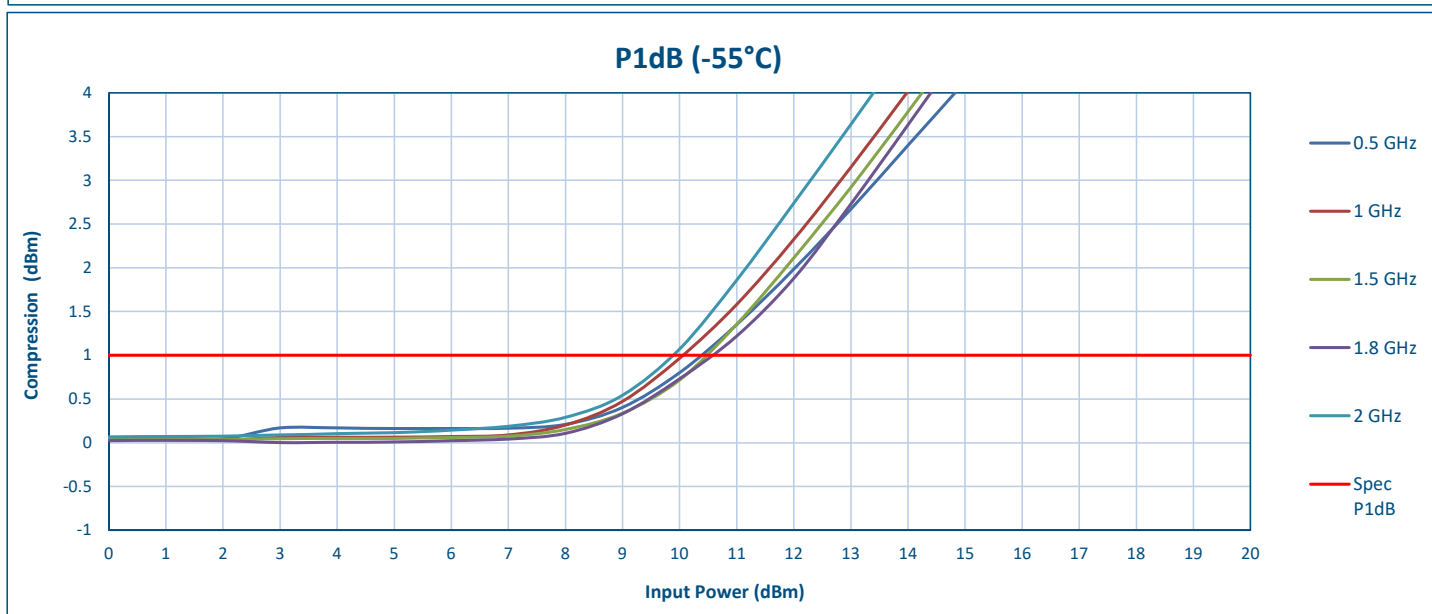
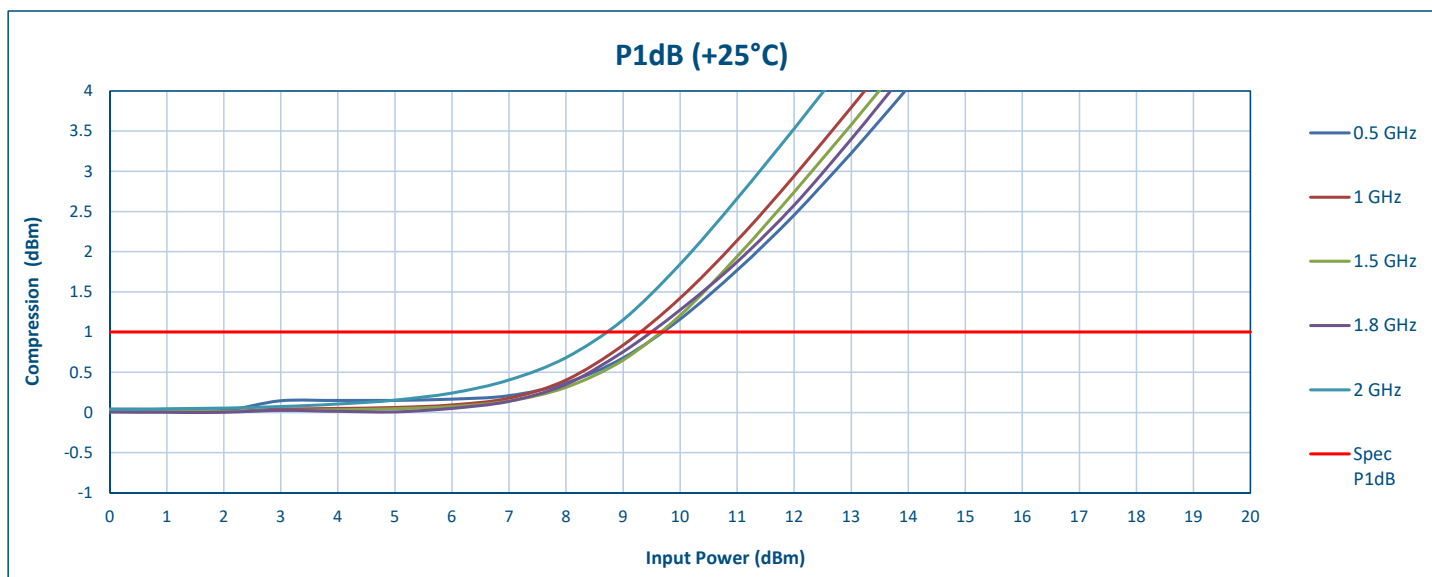
Response Limiting Curve Vs Frequency (-55°C)



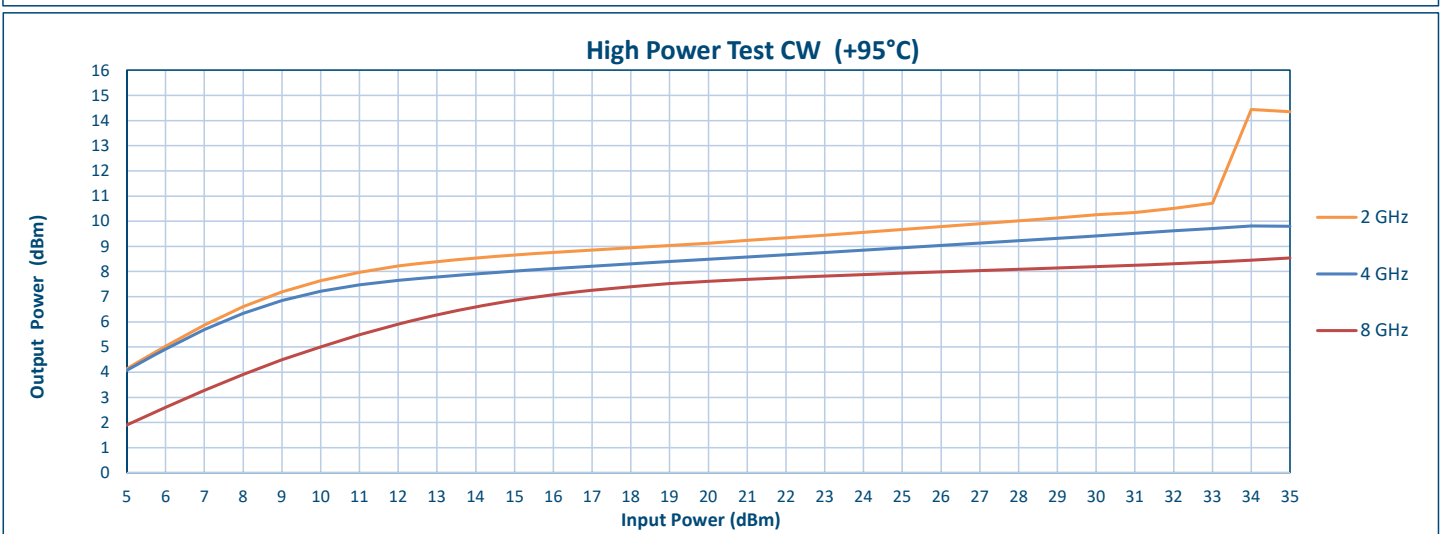
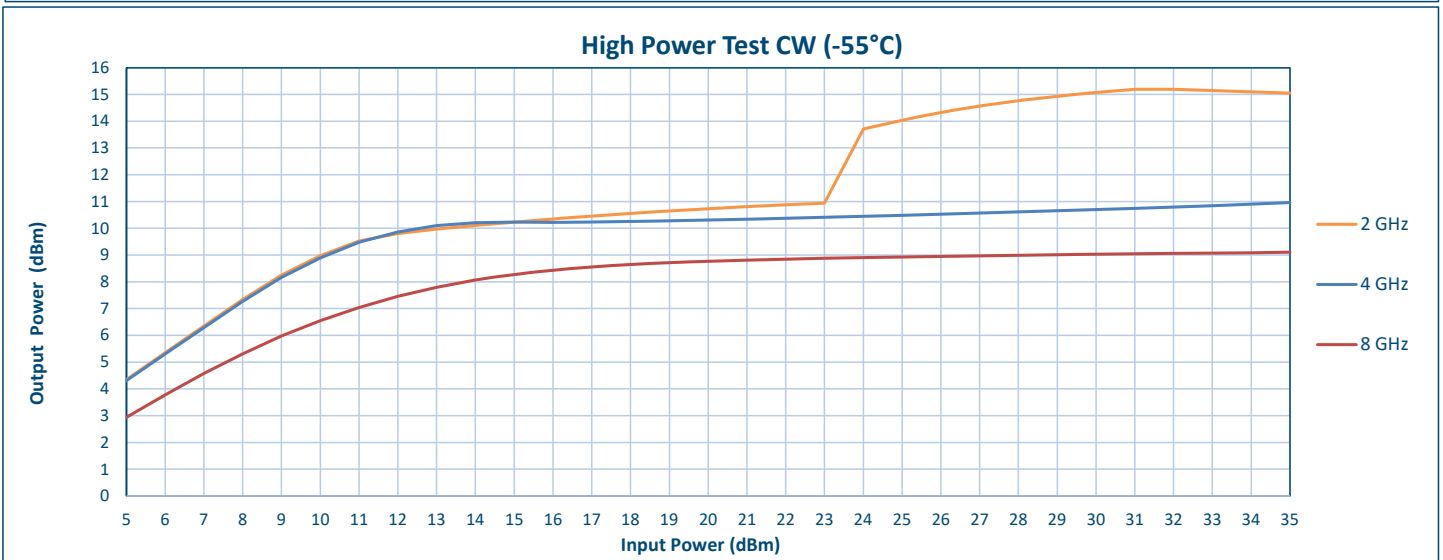
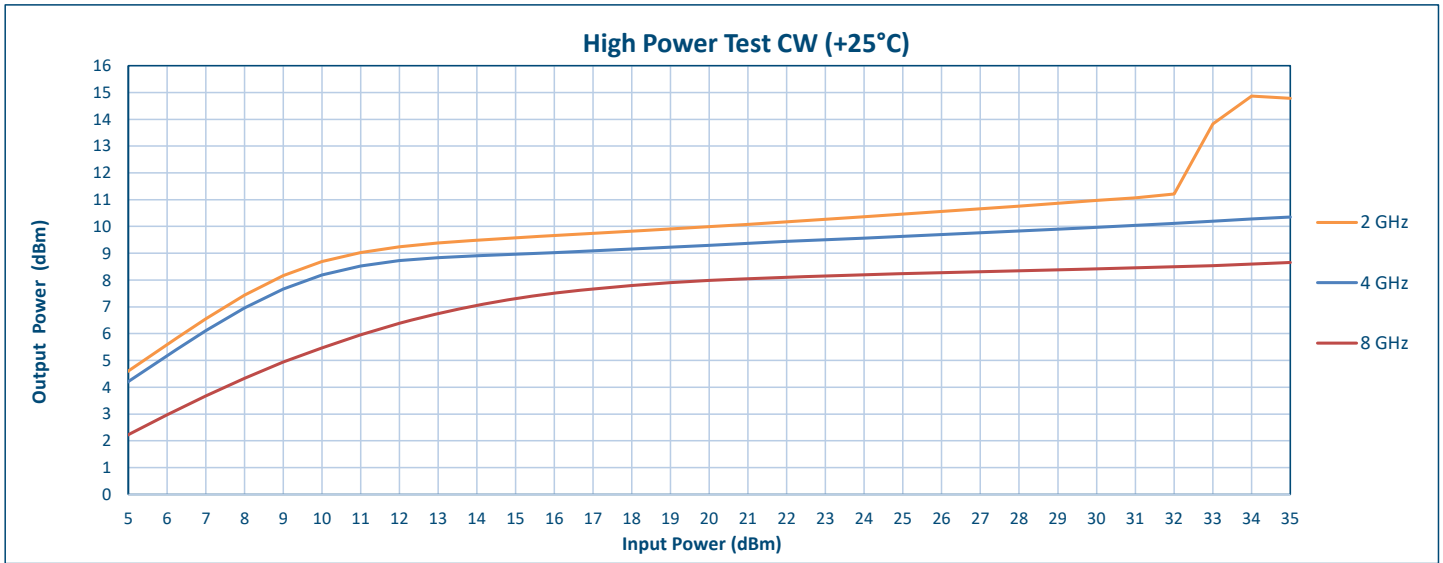
Response Limiting Curve Vs Frequency (+95°C)



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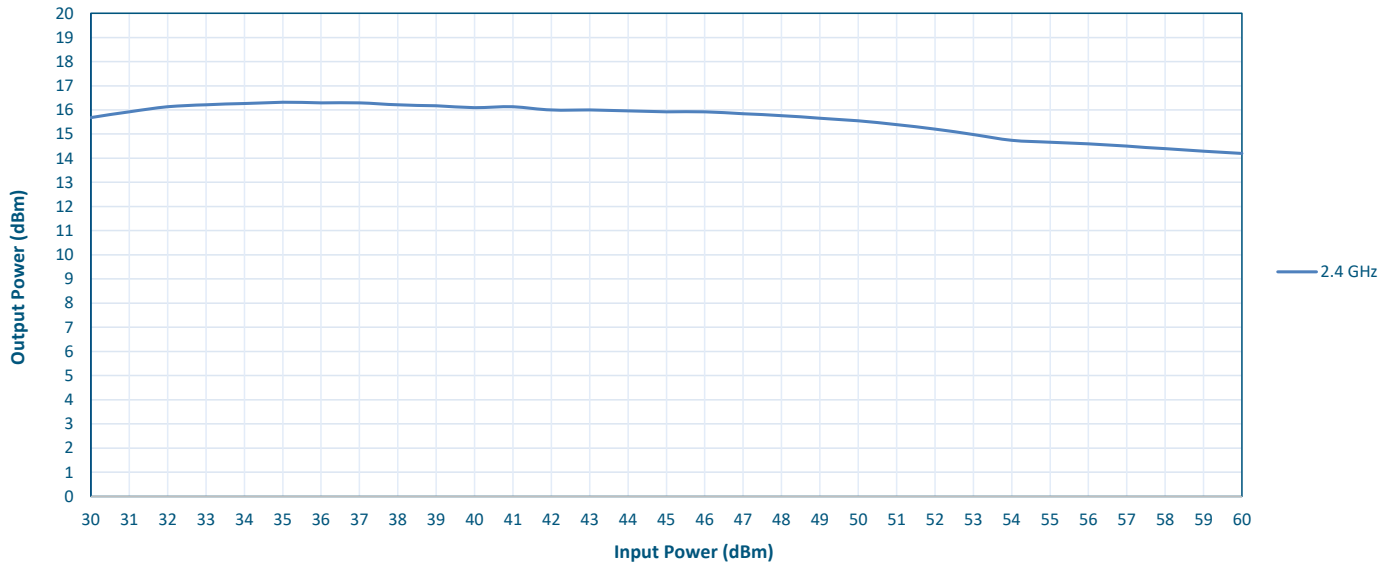


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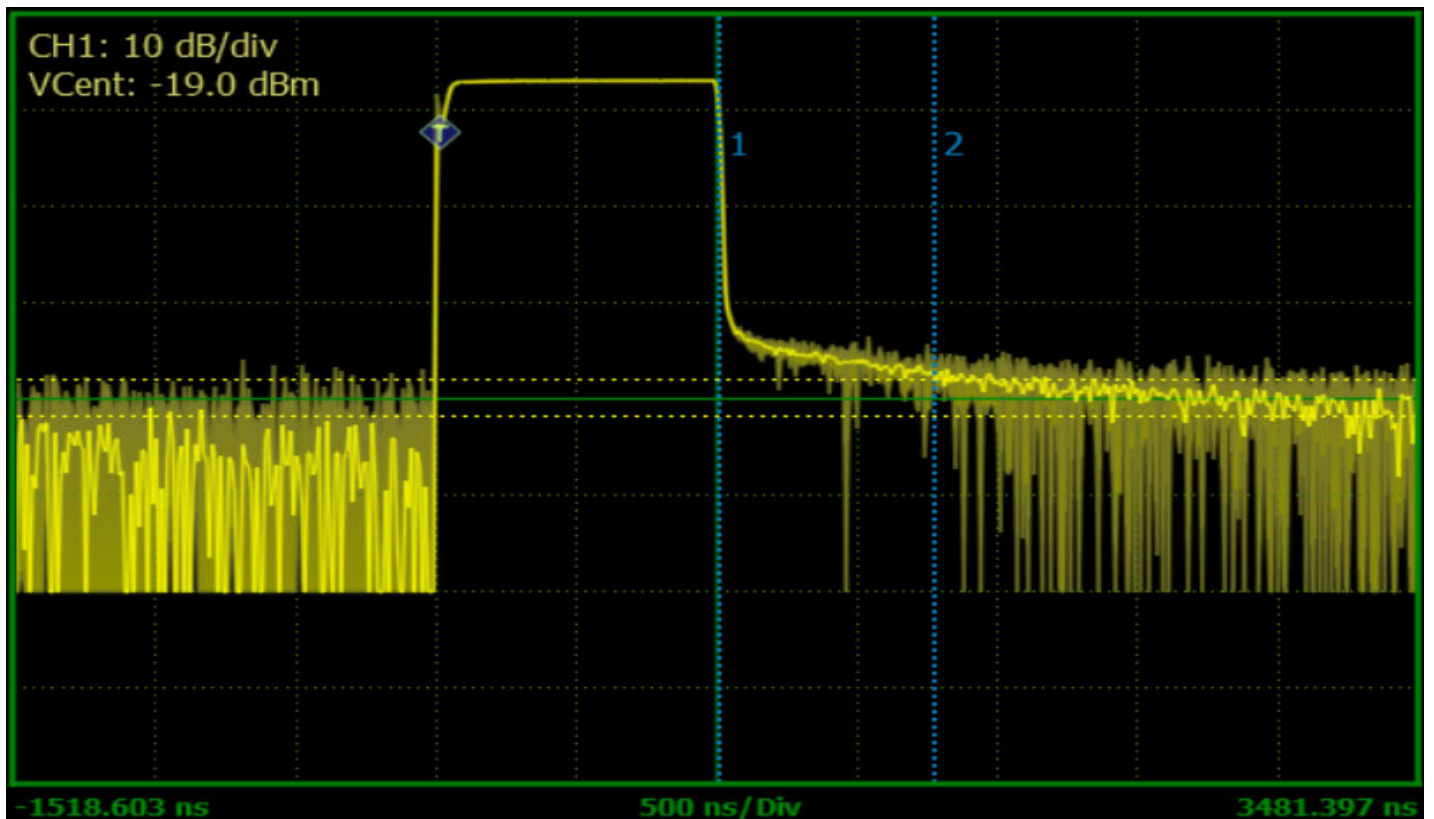


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Peak Power Test 2.4 GHz (1 μ s PW, 1% Duty Cycle)



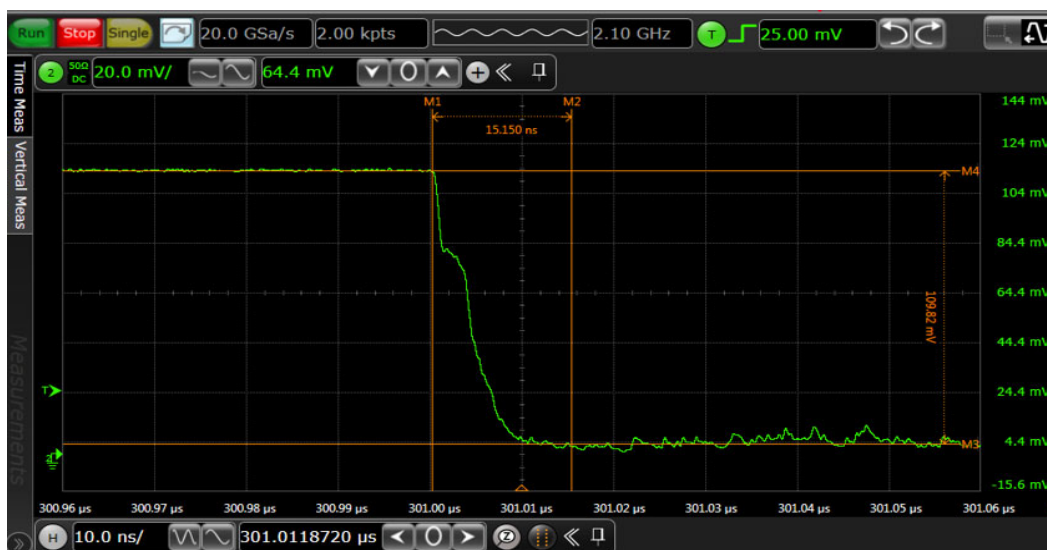
Recovery Time
Peak Pulse (2.4 GHz)
1 kW Input Power (1 μ s PW, 1% Duty Cycle)



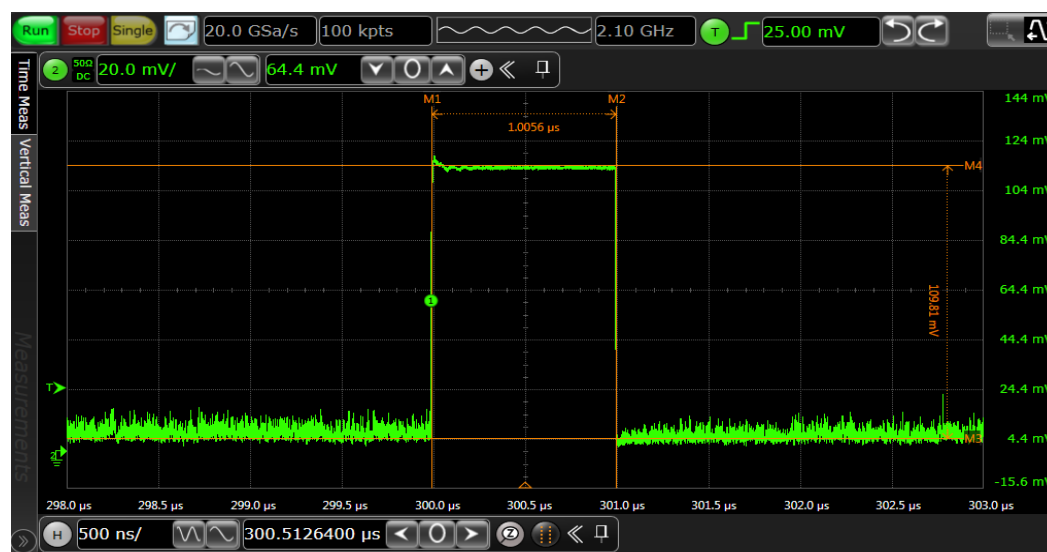
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Recovery Time
Peak Pulse 8 GHz
3 W Input Power
(1 μ s PW, 1% Duty Cycle)

Measurement with Crystal
Detector



Full Pulse
Peak Pulse 8 GHz
3 W Input Power
(1 μ s PW, 1% Duty Cycle)



RF Pulse Train
Peak Pulse 8 GHz
3 W Input Power
(1 μ s PW, 1% Duty Cycle)

