TYPICAL CHARACTERISTICS
ON
LM-0518-10-1W-SHS-2-FM

PLANAR MONOLITHICS INDUSTRIES MODEL NUMBER LM-0518-10-1W-SHS-2-FM IS A HIGH POWER LIMITER THAT OPERATES FROM 500 MHz TO 18 GHz THAT HANDLES 100 WATTS PEAK POWER WITH A PULSE WIDTH OF 1 us.

Tuesday, April 2, 2024

Designed and Reported By: M. Laulis

Tested By: John R.

7309-A Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731
Email: sales@pmi-rf.com

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Outline Drawing

REVISIONS

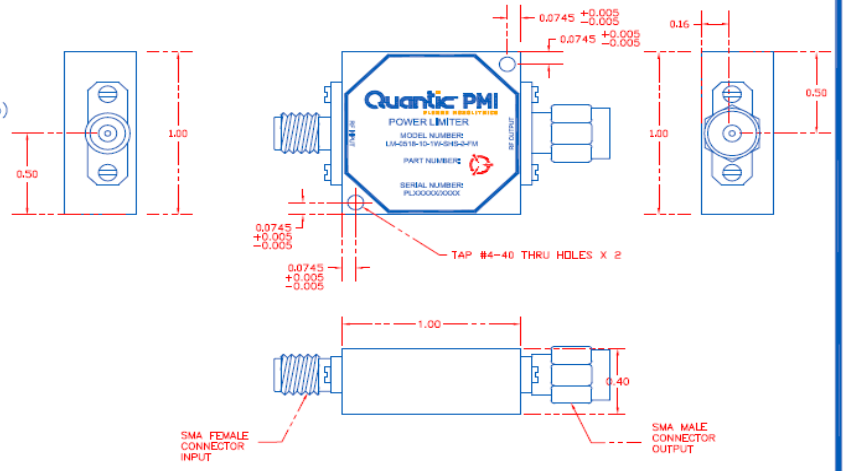
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	8/16/23	
	A2	ECN # 24-0073	9/19/24	

DESCRIPTION:

PLANAR MONOLITHICS INDUSTRIES MODEL NUMBER LM-0518-10-1W-SHS-2-FM IS A HIGH POWER LIMITER THAT OPERATES FROM 500 MHz TO 18 GHz THAT HANDLES 100 WATTS PEAK POWER WITH A PULSE WIDTH OF 1 us.

SPECIFICATIONS:

- FREQUENCY: 500 MHz to 18 GHz
- INSERTION LOSS @-20 dBm: 2.5 dB (Max) 2.0 dB (Typ)
- VSWR@-20 dBm: 2.0:1 (MAX) 1.5:1 (Typ)
- LEAKAGE @ 1 WATT: +15 dBm (Max) +10 dBm (Typ)
- PEAK POWER: 100 WATTS
- PULSE WIDTH: 1 us
- DUTY CYCLE: 0.1%
- CONNECTOR (INPUT): SMA FEMALE
- CONNECTOR (OUTPUT): SMA MALE
- SIZE: 1.00 X 1.00 X 0.40 (H)
- WEIGHT: 1.5 OZ. MAXIMUM
- FINISH: PAINTED BLUE



PMI CONFIDENTIAL AND PROPRIETARY

ENVIRONMENTAL RATINGS

- TEMPERATURE: -54°C TO +85°C (OPERATING); -65°C TO +100°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 213B COND. B
- VIBRATION: MIL-STD-202F, METHOD 204B COND. B
- ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND. A

ALL DIMENSIONS ARE IN INCHES
TOLERANCES: X.XX ±0.020, X.XXX ±0.010

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ISO 9001 CERTIFIED

APPROVALS	DATE
DRAWN MDL	8/16/23
REDRAW	
ISSUED	

TITLE: PRODUCT FEATURE
LM-0518-10-1W-SHS-2-FM
500MHZ TO 18GHZ HIGH POWER LIMITER

SIZE	FSCM NO.	DWG NO.	REV.
A	05XQ0	27046980	A2

SCALE N:S SHEET 1 OF 2

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TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	Test Results			QA QC
			+25°C	+85°C	-54°C	
1	Frequency Range:	0.5 GHz TO 18 GHz	**0.5 GHz TO 18 GHz**	**0.5 GHz TO 18 GHz**	**0.5 GHz TO 18 GHz**	
2	Insertion Loss: @ -20 dBm	2.5 dB Max. 2.0 dB Typ.	**1.98 dB See Graph**	**2.42 dB See Graph**	**1.7 dB See Graph**	
3	VSWR: @ -20 dBm	2.0:1 Max. 1.5:1 Typ.	**1.76:1 See Graph**	**1.73:1 See Graph**	**1.99:1 See Graph**	
4	RF Power Handling:	1 W CW Max.	**1 W CW Pass See Graphs**	**1 W CW Pass See Graphs**	**1 W CW Pass See Graphs**	
		100W PEAK (1µs PULSE WIDTH, 0.1% DUTY CYCLE)	**100W PEAK (1µs PULSE WIDTH, 0.1% DUTY CYCLE) Tested Survival up to 100W**			
5	Leakage Power @ 1 W CW:	15 dBm MAX 10 dBm Typ.	**14.24 dBm See Graph**	**13.31 dBm See Graph**	**14.88 dBm See Graph**	

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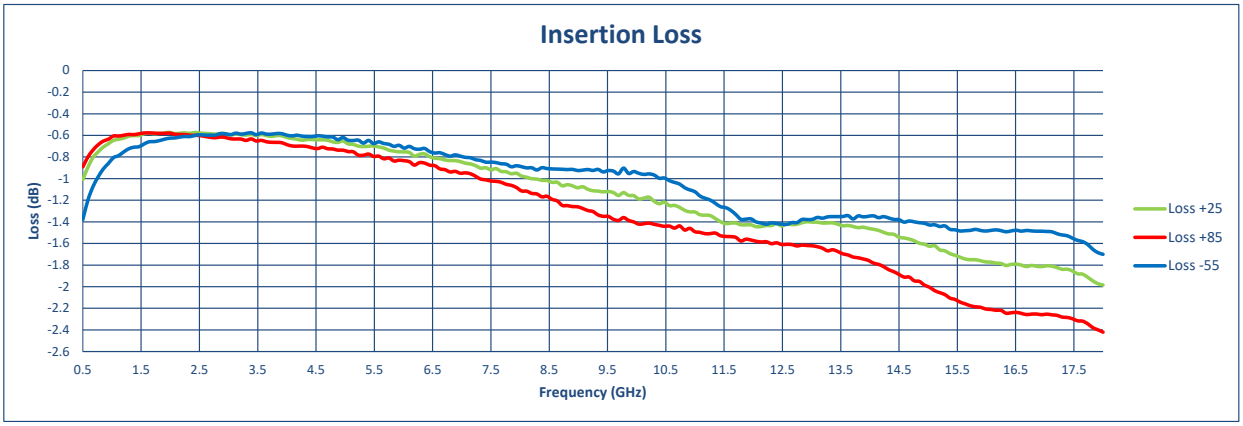

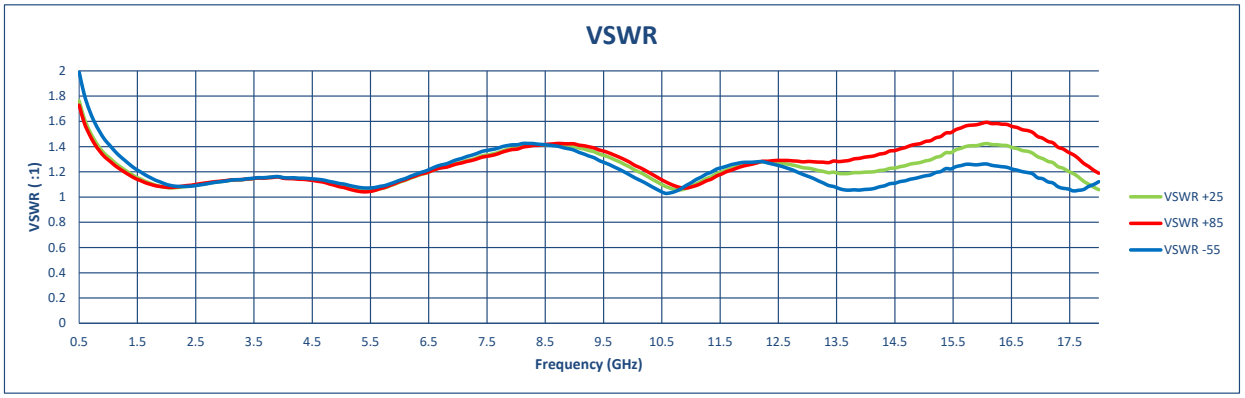

Recovery Time

Full Pulse

12 GHz @ 40 dBm

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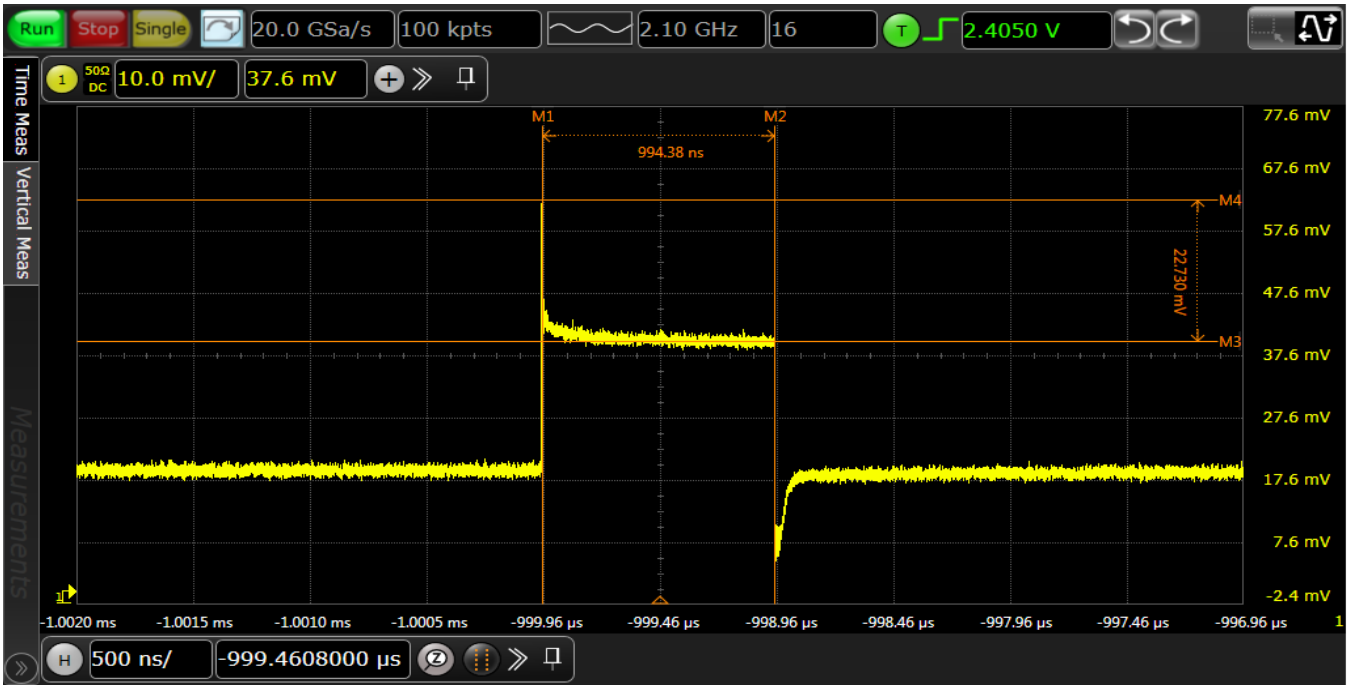
Recovery Time

12 GHz @ 40 dBm

Single Pulse

12 GHz @ 40 dBm



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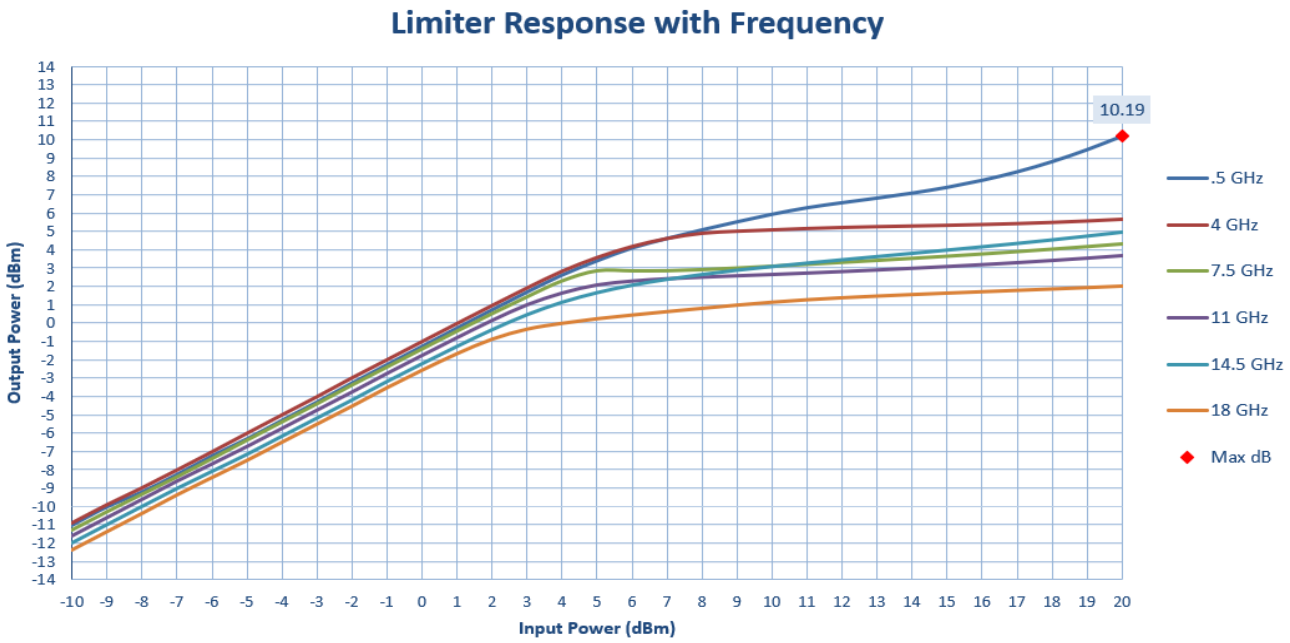
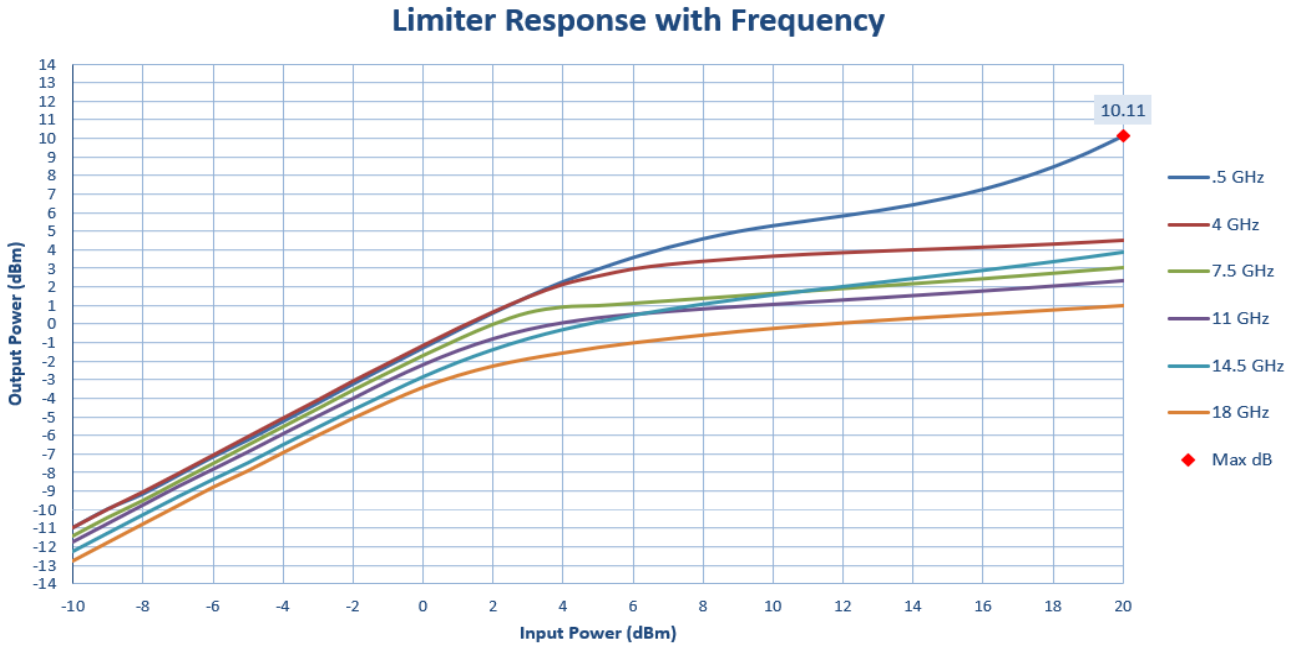
Limiter Responce
25°C



85°C



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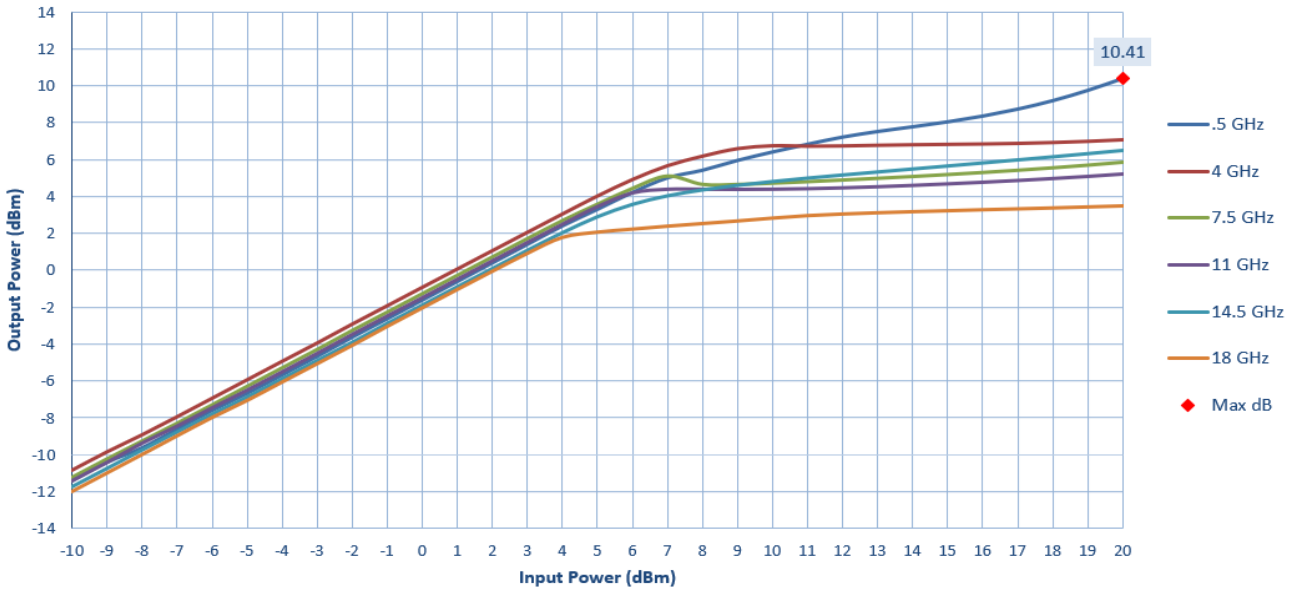
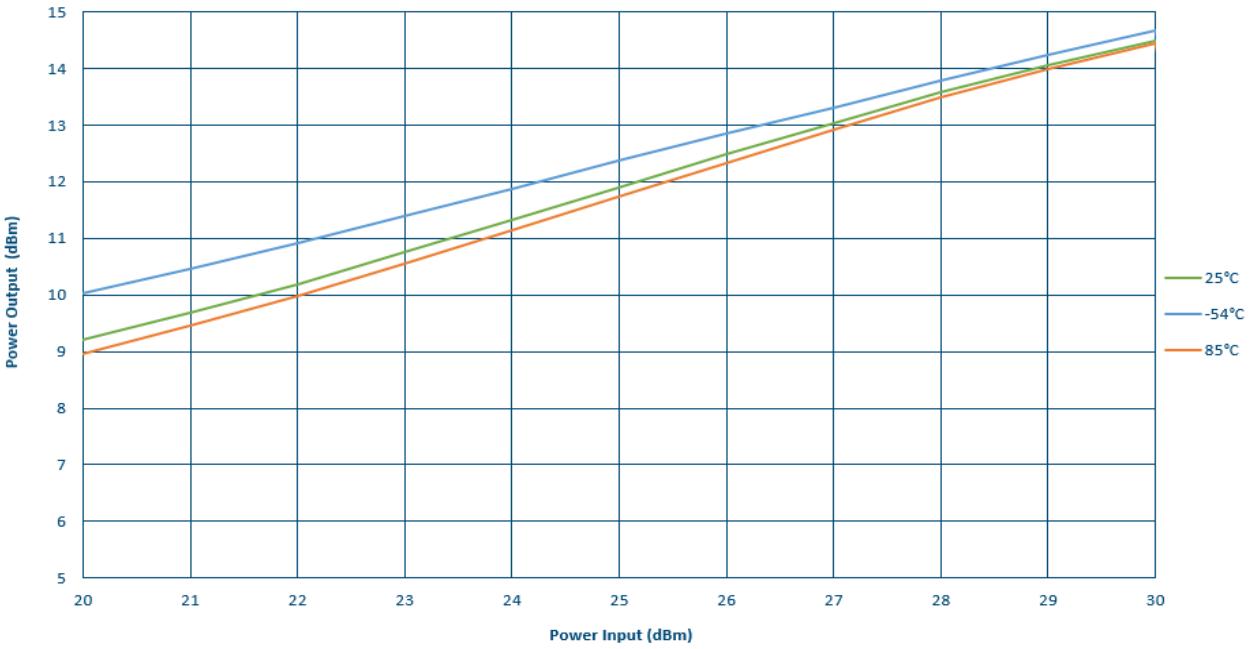
-54°C

Limiter Response with Frequency



Leakage Power

High Power Test Graph @ 0.5 GHz



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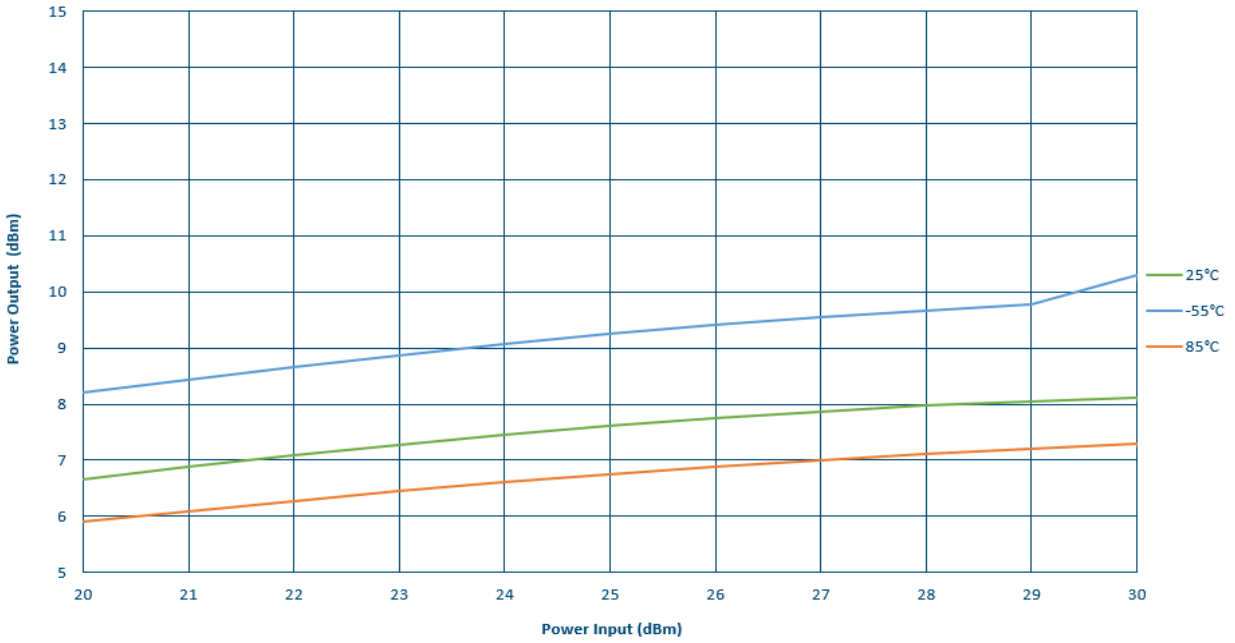
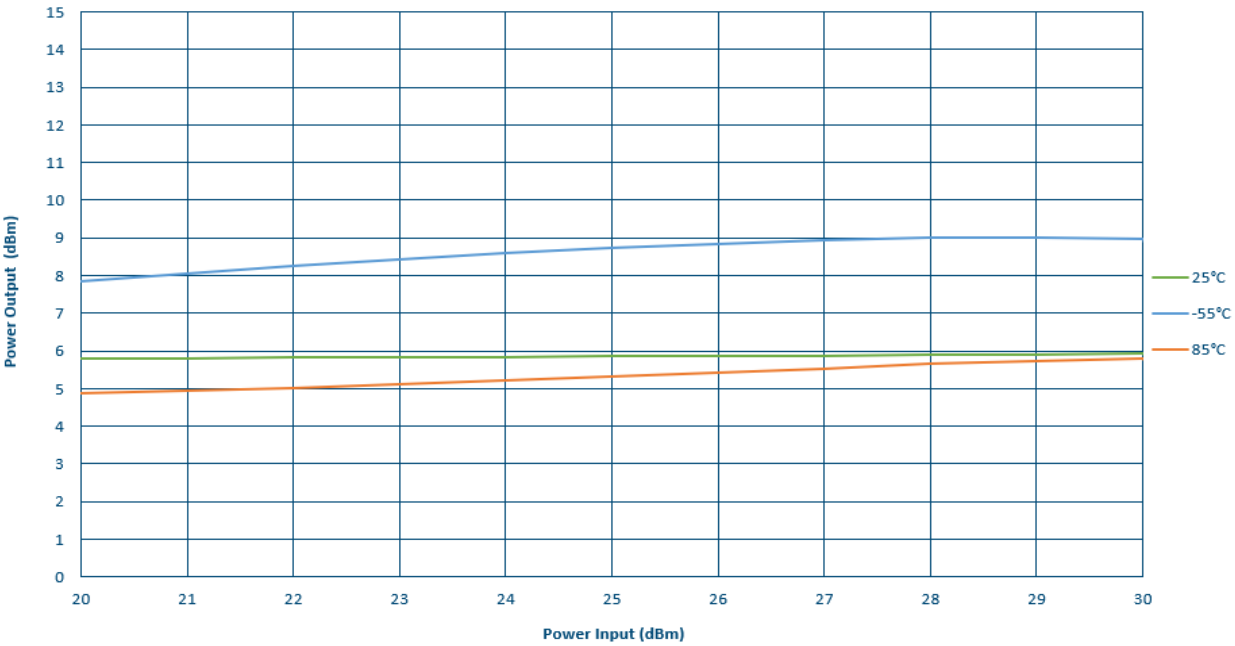
TYPICAL CHARACTERISTICS ON LM-0518-10-1W-SHS-2-FM

High Power Test Graph @ 8 GHz



High Power Test Graph @ 18 GHz



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