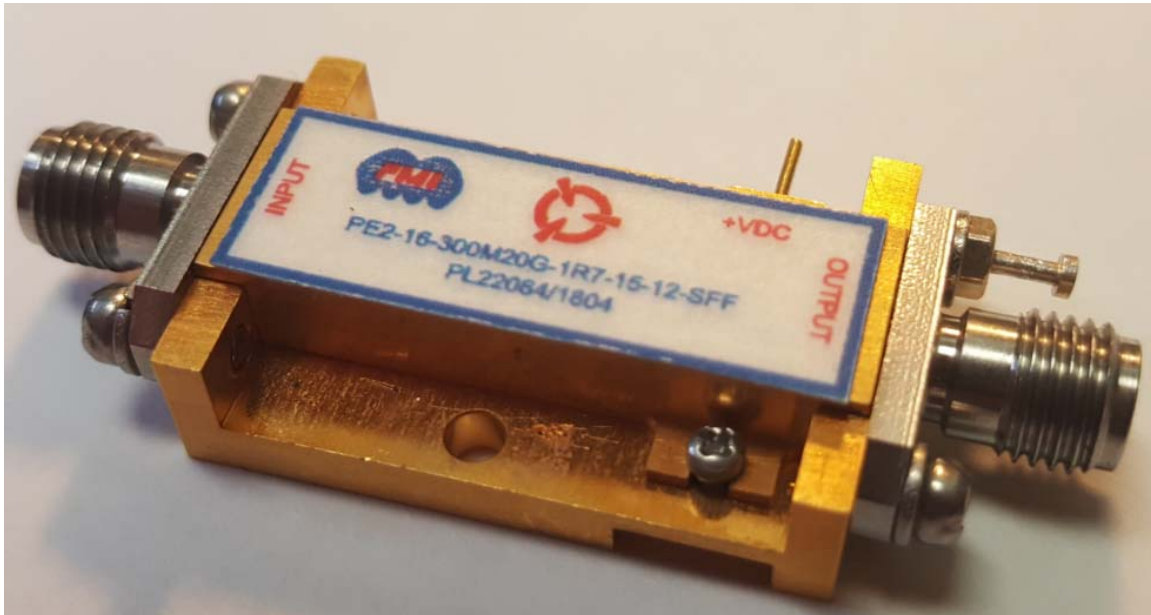




**TYPICAL CHARACTERISTICS
ON
PE2-16-300M20G-1R7-15-12-SFF**

PMI MODEL NUMBER PE2-16-300M20G-1R7-15-12-SFF IS A LOW NOISE AMPLIFIER THAT WORKS FROM 300 MHz TO 20 GHz. THIS AMPLIFIER HAS A VERY LOW NOISE FIGURE OVER THIS BROAD FREQUENCY RANGE. THE UNIT REQUIRES A SINGLE POSITIVE VOLTAGE SUPPLY.



January 25, 2018

**Designed By: Dave Durbin
Drafting By: Michael Hanken
Tested and Reported By:
Dave Durbin**



TYPICAL CHARACTERISTICS ON PE2-16-300M20G-1R7-15-12-SFF

Outline Drawing

DESCRIPTION:

PLANAR MONOLITHICS INDUSTRIES MODEL NUMBER PE2-16-300M20G-1R7-15-12-SFF IS A LOW NOISE AMPLIFIER THAT WORKS FROM 300MHz TO 20GHz. THIS AMPLIFIER HAS A VERY LOW NOISE FIGURE OVER THIS BROAD FREQUENCY RANGE. THIS LOW NOISE AMPLIFIER PROVIDES 16dB OF SMALL SIGNAL GAIN WHILE REQUIRING ONLY A SINGLE SUPPLY OF +12V. THE P1dB OUTPUT POWER OF 15dBm ALLOWS THIS LOW NOISE AMPLIFIER TO FUNCTION AS A LO DRIVER FOR BALANCED, IQ OR IMAGE REJECT MIXERS.

SPECIFICATIONS:

PARAMETER:	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FREQUENCY RANGE:	0.3-10GHz			10-16GHz			16-18GHz			18-20GHz		
GAIN (dB):	12.5	16	-	12	14.5	-	11.5	13.5	-	11	13	-
GAIN VARIATION OVER TEMP. (dB/°C):	-	0.01	-	-	0.02	-	-	0.02	-	-	0.02	-
NOISE FIGURE (dB):	-	2	3	-	2	3	-	2.5	3.25	-	2.7	3.8
COMPRESSION P1dB (dBm):	-	15	-	-	13	-	-	12.5	-	-	12	-
THIRD ORDER INTERCEPT IP3 (dBm):	-	25	-	-	23	-	-	20	-	-	20	-

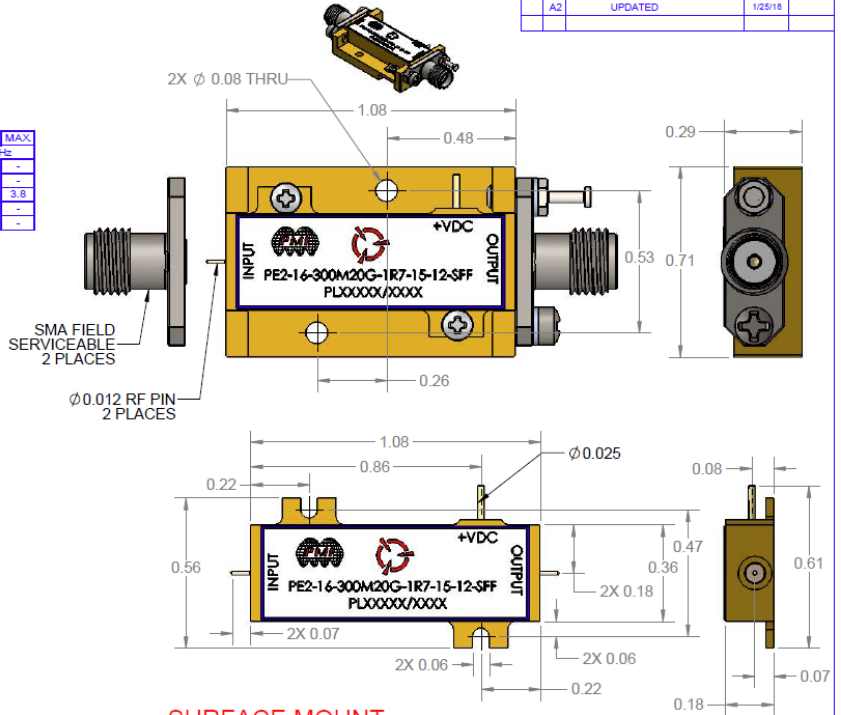
- INPUT VSWR: 2.0 : 1 MAX
- OUTPUT VSWR: 2.0 : 1 TYP. 2.3 : 1 MAX
- MAX POWER IN: +18dBm
- POWER: +12 TO +15 VDC @ 100mA MAX
- CONNECTORS: SMA FEMALE (FIELD SERVICEABLE)
- SIZE: 1.08" X 0.71" X 0.29"
- FINISH: GOLD PLATED

ENVIRONMENTAL RATINGS:

- TEMPERATURE: -40°C TO +85°C (OPERATING)
-65°C TO +150°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 2138 COND. B
- VIBRATION: MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202F, METHOD 106C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND. A

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION. SPECIFICATIONS MAY VARY OVER TEMPERATURE.

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	8/1/2017	
	A2	UPDATED	1/25/18	



**SURFACE MOUNT
(CARRIER REMOVED)**



PMI CONFIDENTIAL AND PROPRIETARY

APPROVALS		DATE	TITLE	
DESIGN	M. HANKEN	8/1/2017	OUTLINE	
TESTING			PE2-16-300M20G-1R7-15-12-SFF	
FUNCTION			REV. B	05XQ0
				27031840
			SCALE: NONE	SHEET 1 OF 1

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



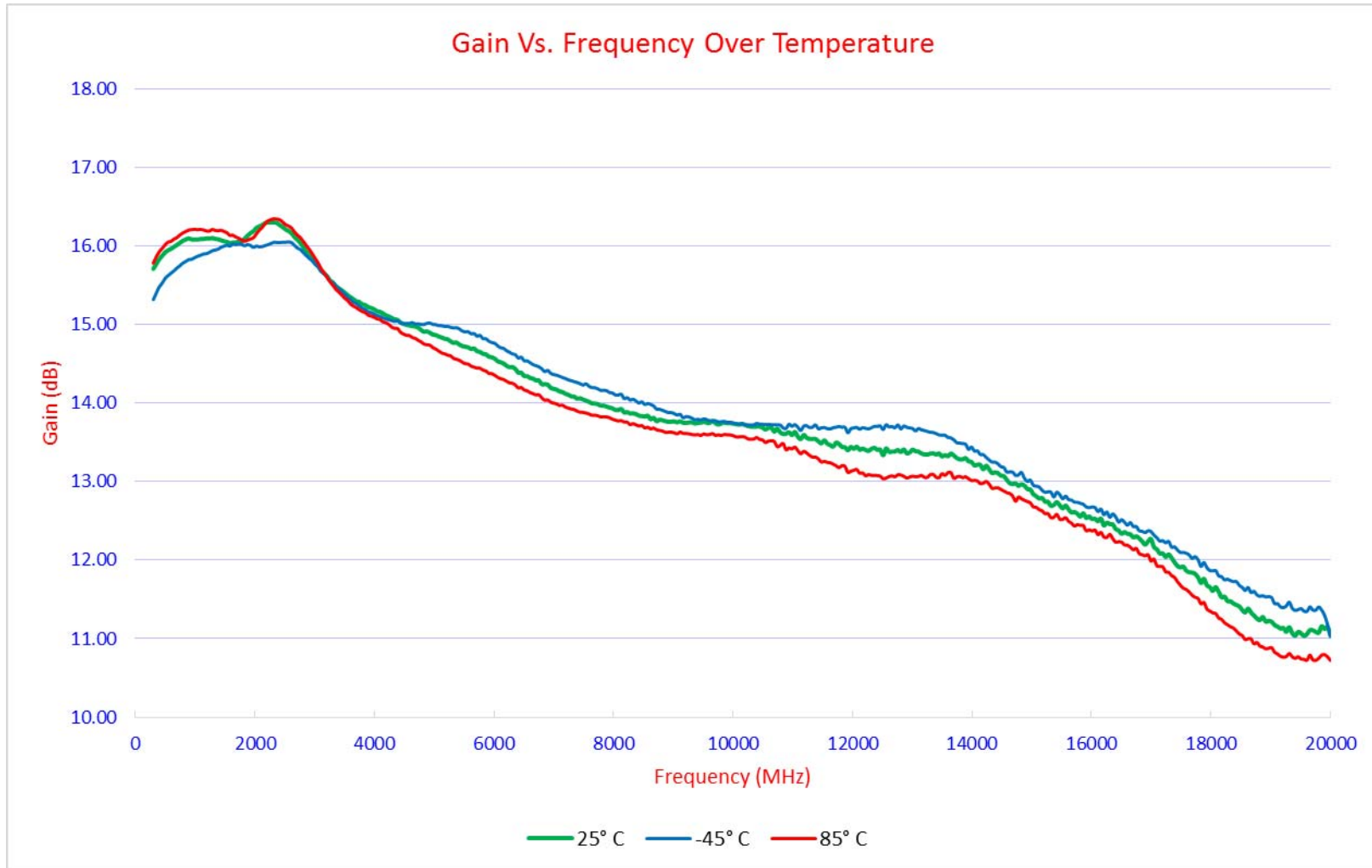
**TYPICAL CHARACTERISTICS
ON
PE2-16-300M20G-1R7-15-12-SFF**

Summary Data

TEST ITEM NO:	PARAMETERS		SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	Frequency Range		300 MHz to 20 GHz	300 MHz to 20 GHz	
2	GAIN 0.3-20GHz	0.3-10GHz 10-16GHz 16-18GHz 18-20GHz	12.5 dB MIN, 16 dB TYP 12 dB MIN, 14.5 dB TYP 11.5 dB MIN, 13.5 dB TYP 11 dB MIN, 13 dB TYP	13.73 dB MIN 12.54 dB MIN 11.66 dB MIN 11.04 dB MIN	
3	Input VSWR (S11)		2.0:1 MAX.	1.8 : 1	
4	Output VSWR (S22)		2.0:1 TYP., 2.3:1 MAX.	2.1 : 1	
5	NOISE FIGURE	0.3-10GHz 10-16GHz 16-18GHz 18-20GHz	2 dB TYP, 3.0 dB MAX 2 dB TYP, 3.0 dB MAX 2.5 dB TYP, 3.25 dB MAX 2.7 dB TYP, 3.8 dB MAX	2.9 dB MAX 2.75 dB MAX 3.02 dB MAX 3.61 dB MAX	
6	COMPRESSION P1dB	0.3-10GHz 10-16GHz 16-18GHz 18-20GHz	+15 dBm TYP +13 dBm TYP +12.5 dBm TYP +12 dBm TYP	13.7 dBm MIN 12.39 dBm MIN 11.7 dBm MIN 11.7 dBm MIN	
7	THIRD ORDER INTERCEPT IP3	0.3-10GHz 10-16GHz 16-18GHz 18-20GHz	+25 dBm TYP +23 dBm TYP +20 dBm TYP +20 dBm TYP	22.1 dBm MIN 21 dBm MIN 19 dBm MIN 19 dBm MIN	
8	CURRENT @+12VDC TO +15VDC		100 mA MAX	86 mA	

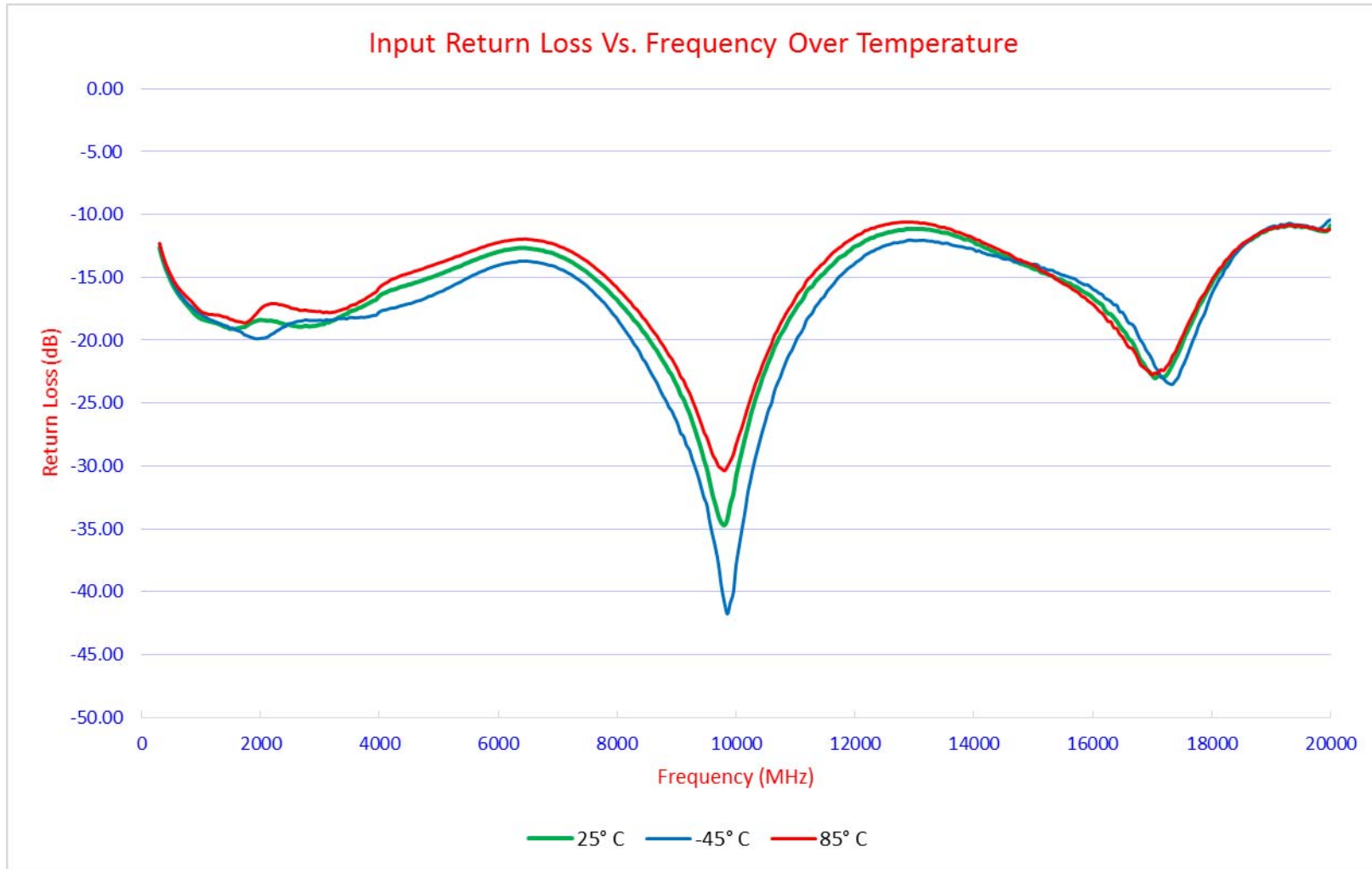


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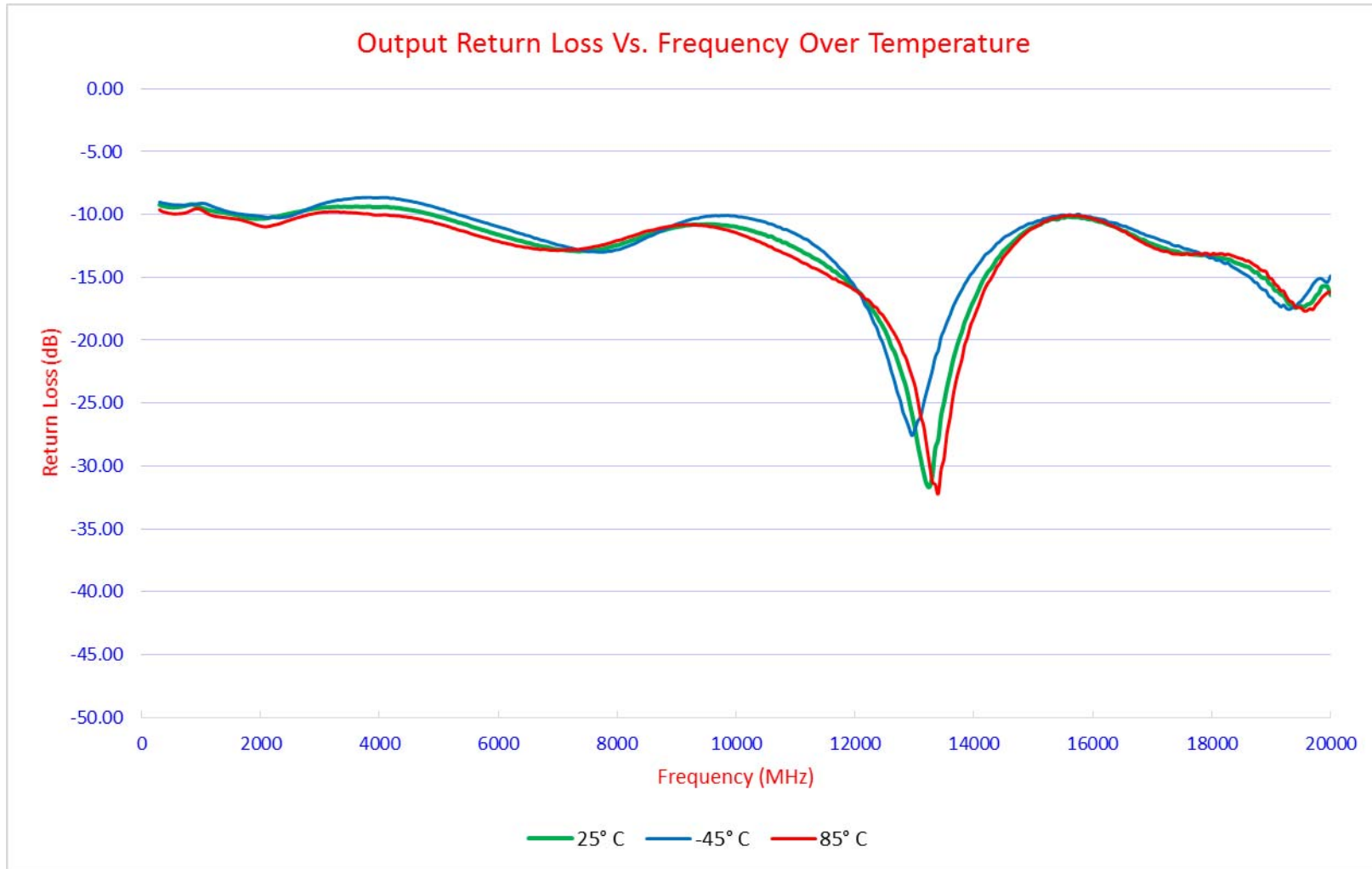


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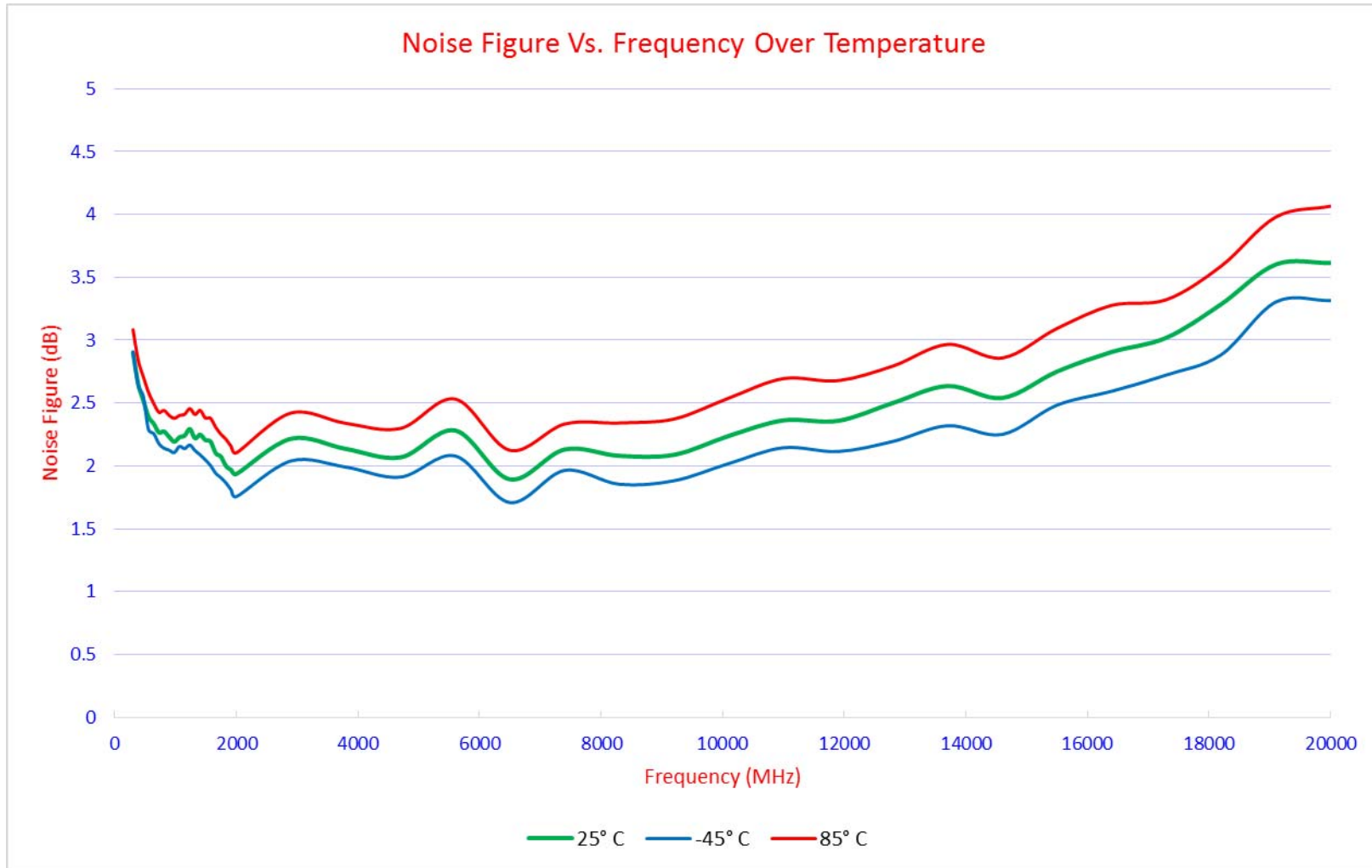


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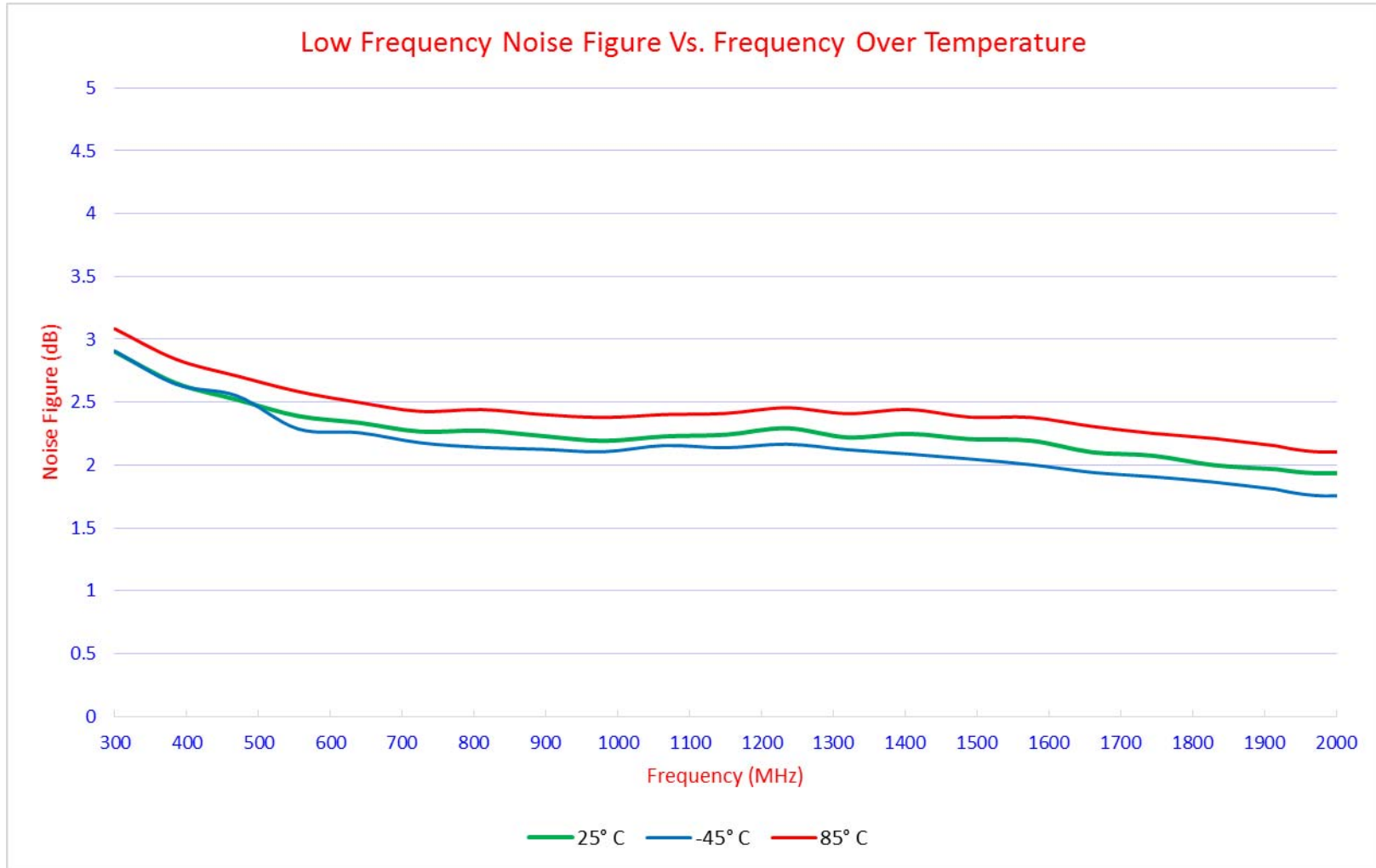


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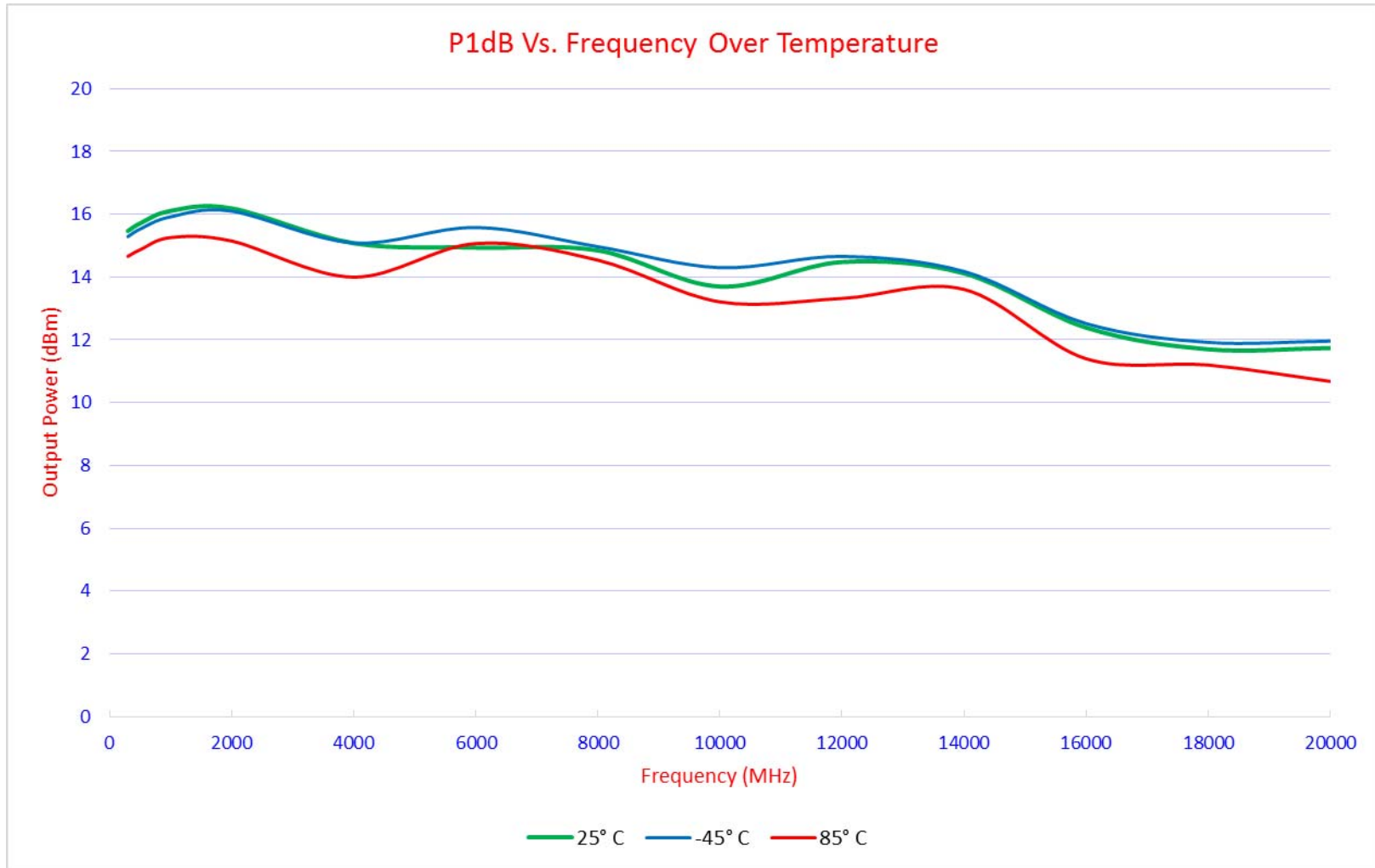


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PE2-16-300M20G-1R7-15-12-SFF**





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