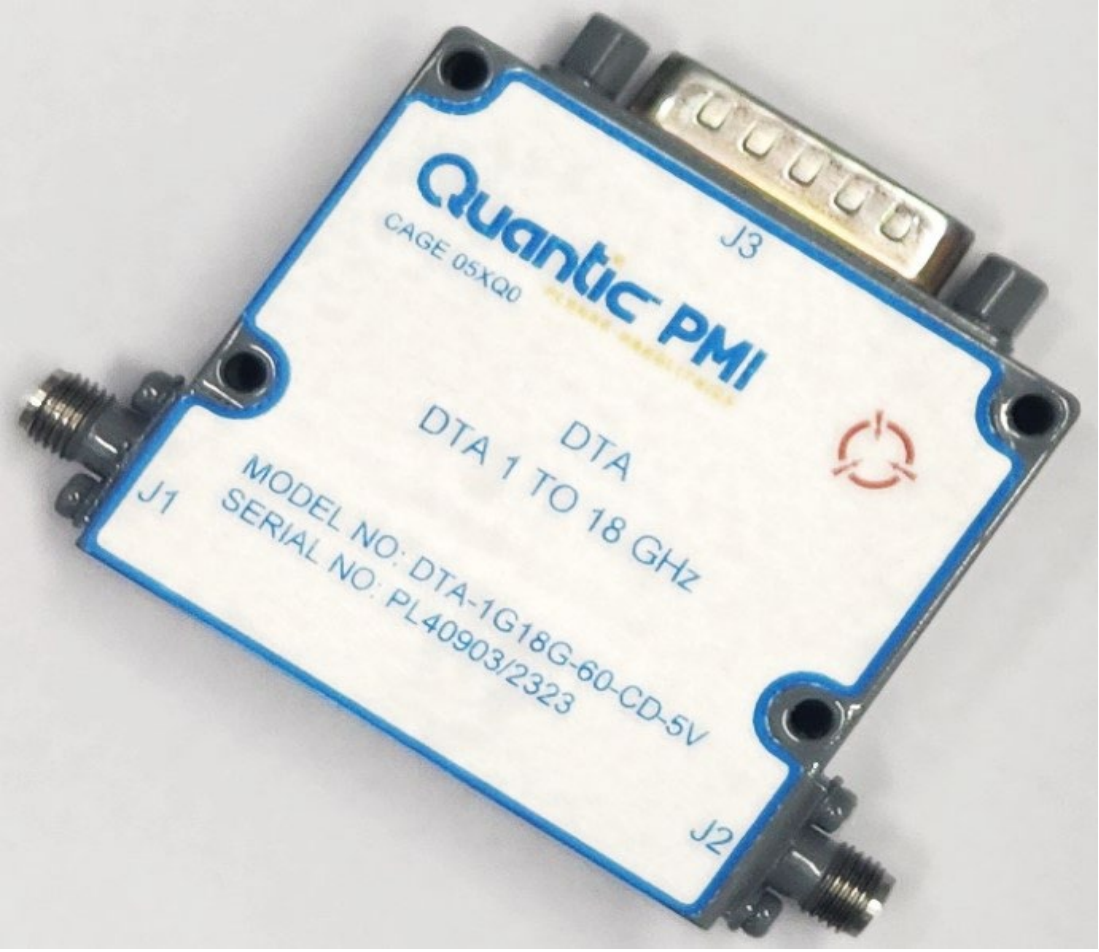
TYPICAL CHARACTERISTICS
ON
DTA-1G18G-60-CD-5V



Monday, April 8, 2024

Designed and Reported By: M. Laulis

Tested By: K. Mansfield

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Email: sales@pmi-rf.com

TYPICAL CHARACTERISTICS ON DTA-1G18G-60-CD-5V

Outline Drawing

DESCRIPTION:

PMI MODEL NUMBER DTA-1G18G-60-CD-5V IS A NON-REFLECTIVE 10 BIT PROGRAMMABLE 60 dB PIN DIODE ATTENUATOR WITH STEP RESOLUTION AS LOW AS 0.06 dB OVER THE FREQUENCY RANGE OF 1.0 TO 18.0 GHz.

SPECIFICATIONS:

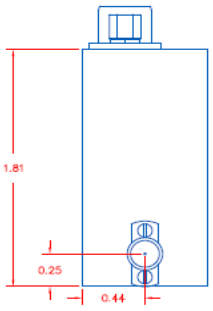
- FREQUENCY: 1 GHz TO 18.0 GHz
- MEAN ATTENUATION RANGE 60dB
- INSERTION LOSS 4.8 dB MAX
- VSWR: 2.0 :1 MAX
- FLATNESS UP TO
  - 20 dB ±1.0 dB TYP
  - 40 dB ±1.25 dB TYP
  - 60 dB ±3.0 dB TYP
- ACCURACY OF ATTENUATION
  - 0 dB TO 20 dB ±1.0 dB TYP
  - 20 dB TO 40 dB ±1.5 dB TYP
  - 40 dB TO 60 dB ±2.0 dB TYP
- MINIMUM ATTENUATION STEP 0.06 dB
- SURVIVAL POWER: 1W Average from -65C to +25C
- SWITCHING TIME
  - ON TIME 1.0 uSEC MAX
  - OFF TIME 0.5 uSEC MAX
- DC POWER SUPPLY +5V @ 350mA MAX
- CONNECTORS 2 SMA & 15 PIN D-SUB Shipped with Mating D-SUB
- WEIGHT 3.0 oz (85 gm) Approximate
- FINISH PAINTED BLUE
- LOGIC INPUT
  - LOGIC "0" (BIT OFF) -0.3 to +0.8V
  - LOGIC "1" (BIT ON) +2.0 to +5.0V

ENVIRONMENTAL RATINGS:

- TEMPERATURE: -50°C TO +100°C (OPERATING) -65°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 213B COND. B
- VIBRATION: MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107

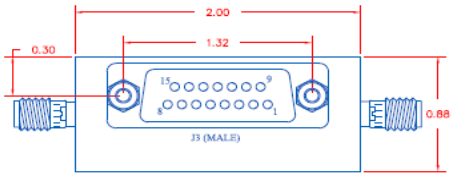
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

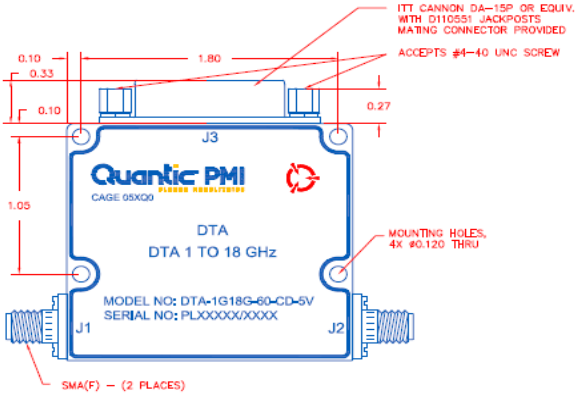
PIN NO:	J3 PIN FUNCTIONS
1	GND
2	Not Connected
3	0.13 dB
4	GND
5	0.25 dB
6	0.5 dB
7	1.0 dB
8	2.0 dB
9	4.0 dB
10	8.0 dB
11	16.0 dB
12	32.0 dB (MSB)
13	+V
14	Not Connected
15	0.06 dB (LSB)



REVISIONS

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	3/27/24	





PMI CONFIDENTIAL AND PROPRIETARY

7309-A GROVE ROAD
FREDERICK, MARYLAND 21704 USA
TEL: (301)-662-5019, FAX: (301)-662-1731
WEB: www.quanticpmi.com
EMAIL: sales@quanticpmi.com
ISO 9001 CERTIFIED

APPROVALS	DATE
DRAWN DPD	3/27/24
REDRAWN	
ISSUED	

TITLE: PRODUCT FEATURE DTA-1G18G-60-CD-5V

SIZE	FSCM NO.	DWG NO.	REV.
A	05XQ0	27048580	A1

SCALE N:S SHEET 1 OF 1

TYPICAL CHARACTERISTICS ON DTA-1G18G-60-CD-5V

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS			QA QC
			-50° C	+25° C	+100° C	
1	Frequency Range:	1 GHz – 18 GHz	**1 GHz – 18 GHz**			
2	Insertion Loss:	4.8 dB Max.	**4.36 dB**	**4.53 dB**	**4.34 dB**	
3	VSWR:	2.0:1 Max.	**1.87:1**	**1.84:1**	**1.83:1**	
4	Flatness to 20 dB:	± 1.0 dB Typ.	**±2.24 dB**	**±0.76 dB**	**±0.54 dB**	
6	Flatness to 40 dB:	± 1.25 dB Typ.	**±3.77 dB**	**±0.82 dB**	**±1.56 dB**	
7	Flatness to 60 dB:	± 3.0 dB Typ.	**±6.63 dB**	**±2.67 dB**	**±3.07 dB**	
8	Accuracy of Attenuation 0 to 20 dB:	± 1.0 dB Typ.	**±1.03 dB**	**±0.42 dB**	**±0.72 dB**	
9	Accuracy of Attenuation 20 to 40 dB:	± 1.5 dB Typ.	**±1.69 dB**	**±1 dB**	**±3.39 dB**	
10	Accuracy of Attenuation 40 to 60 dB:	± 2.0 dB Typ.	**±2.61 dB**	**±1.25 dB**	**±5.78 dB**	
11	Switching Speed:	1.0 us Max. On 0.5 us Max. Off	**0.88 us On 0.46 us Off**			
12	DC Supply:	+5 VDC @ 350 mA Max.	**286 mA**	**291 mA**	**300 mA**	

QA/QC Approval: _____ **Date:** _____

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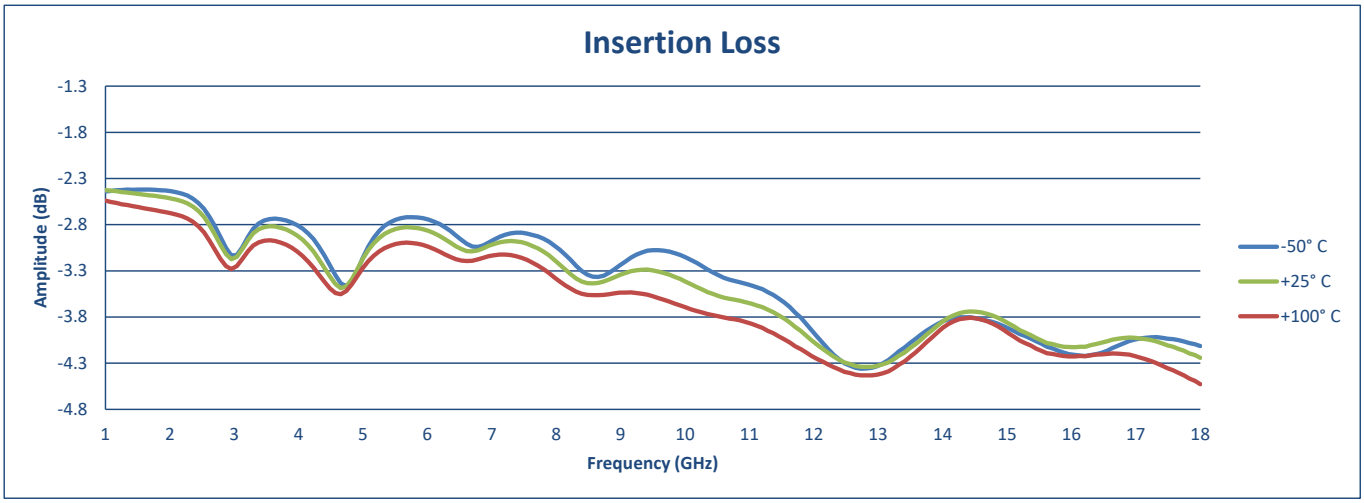

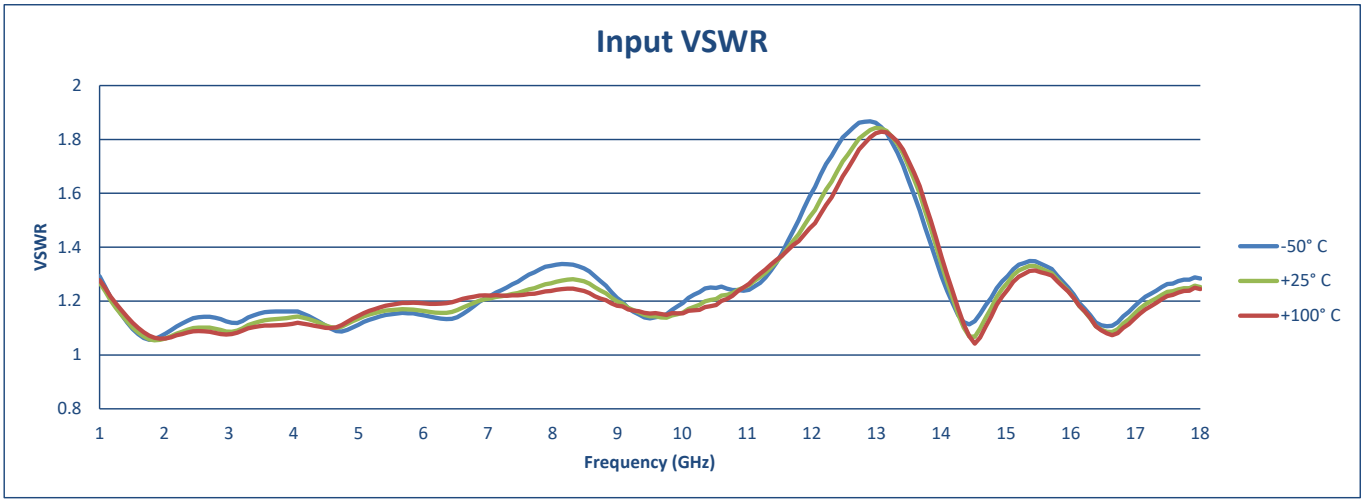

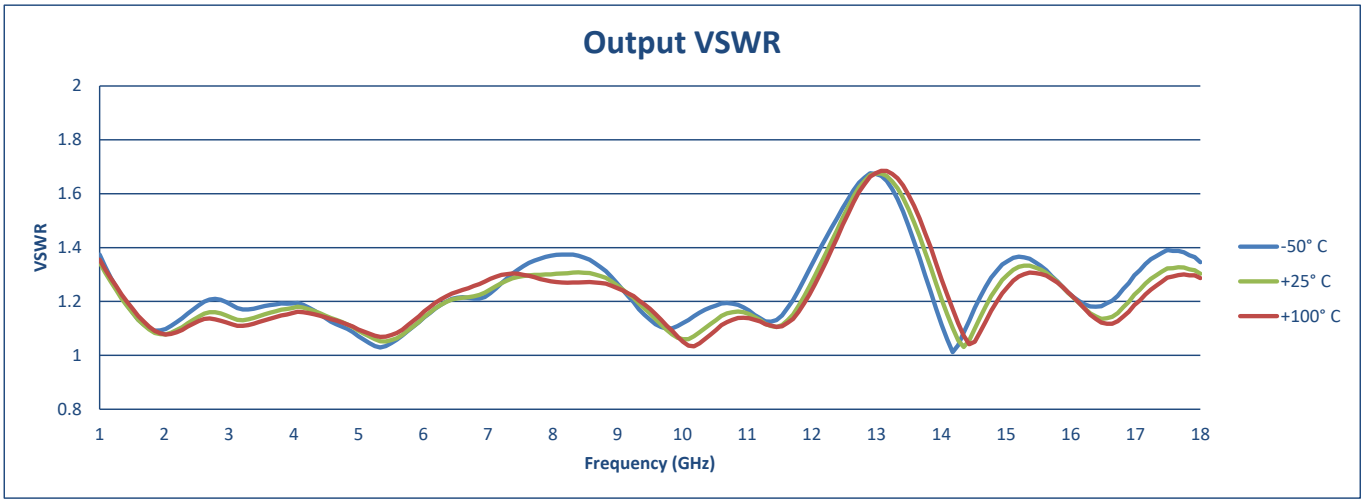

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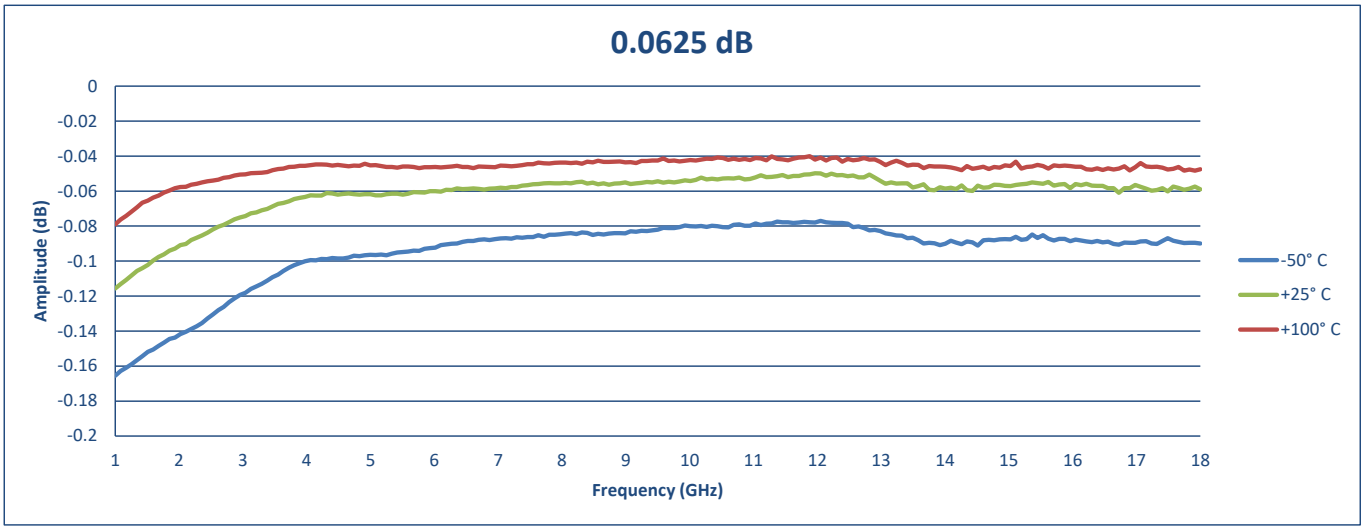

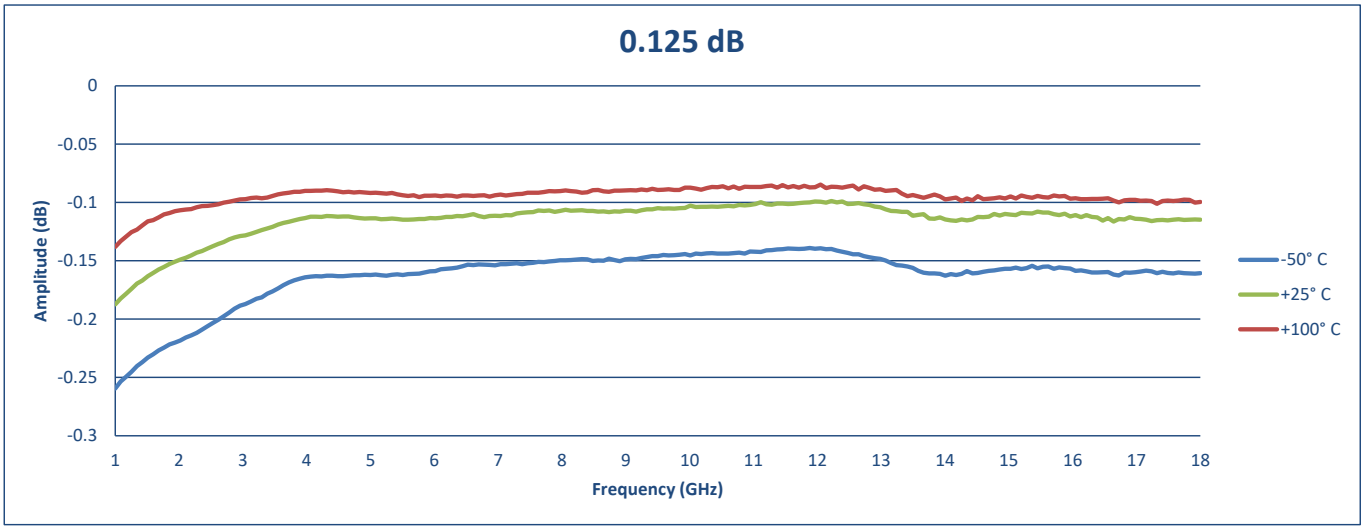

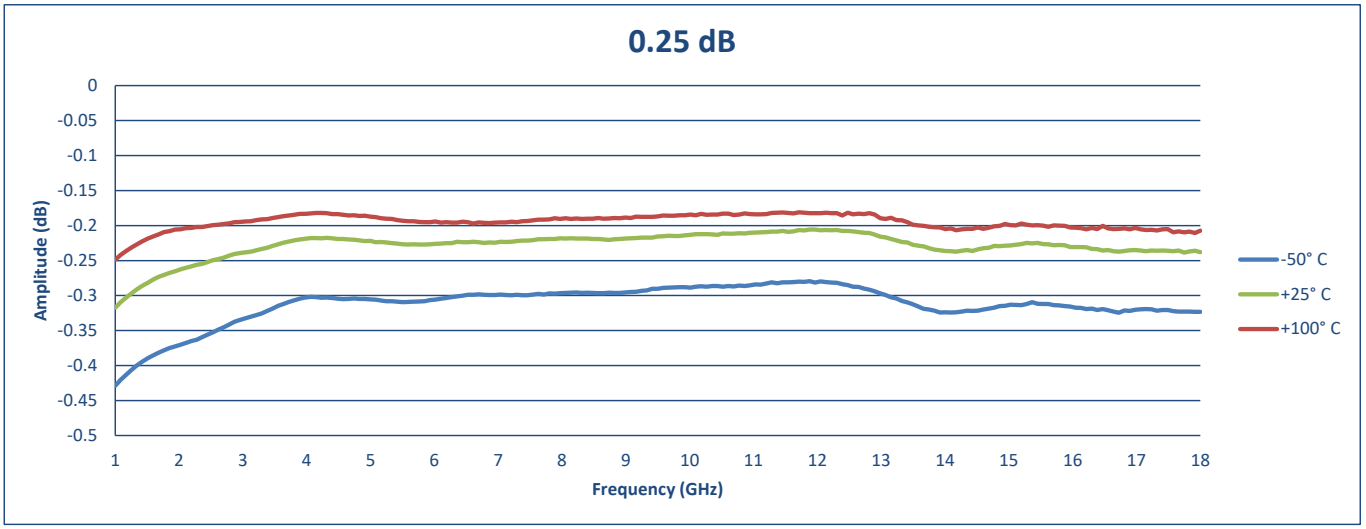

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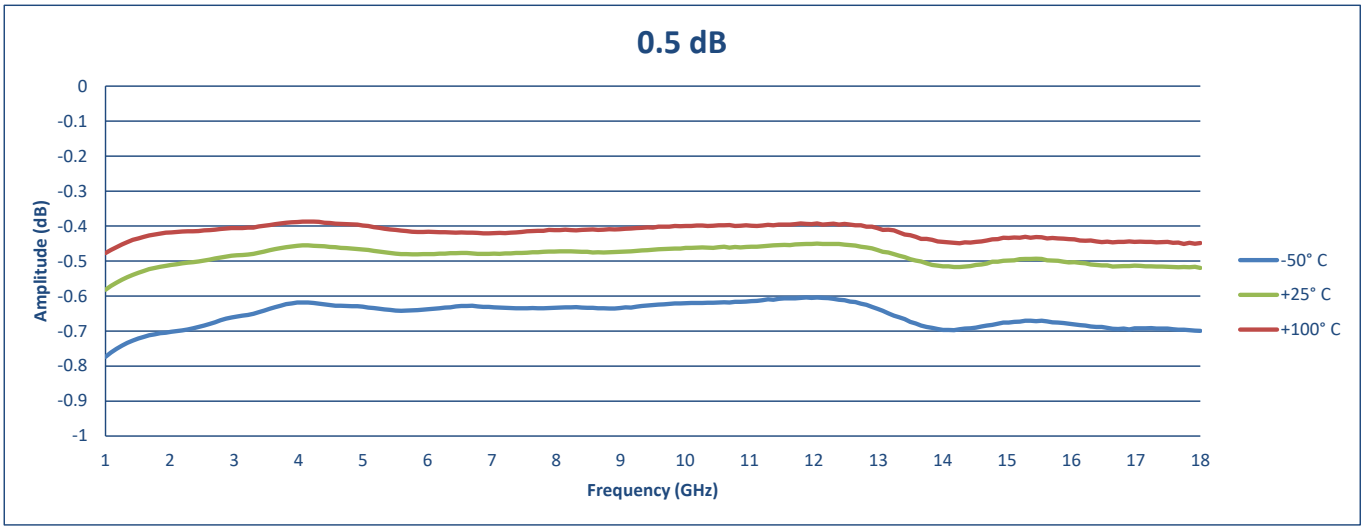

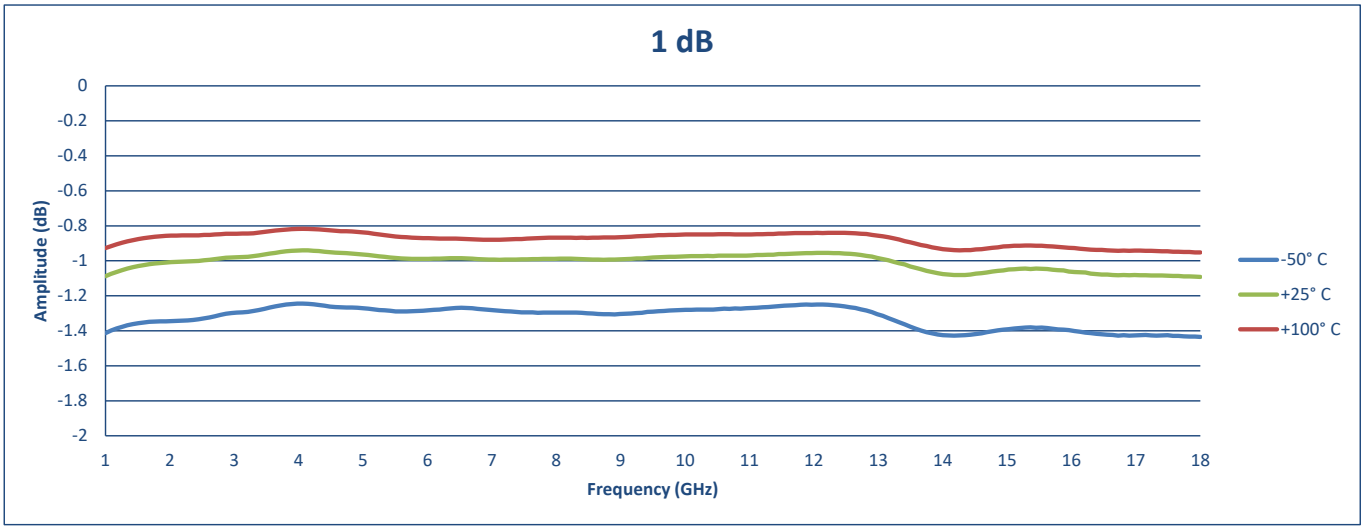

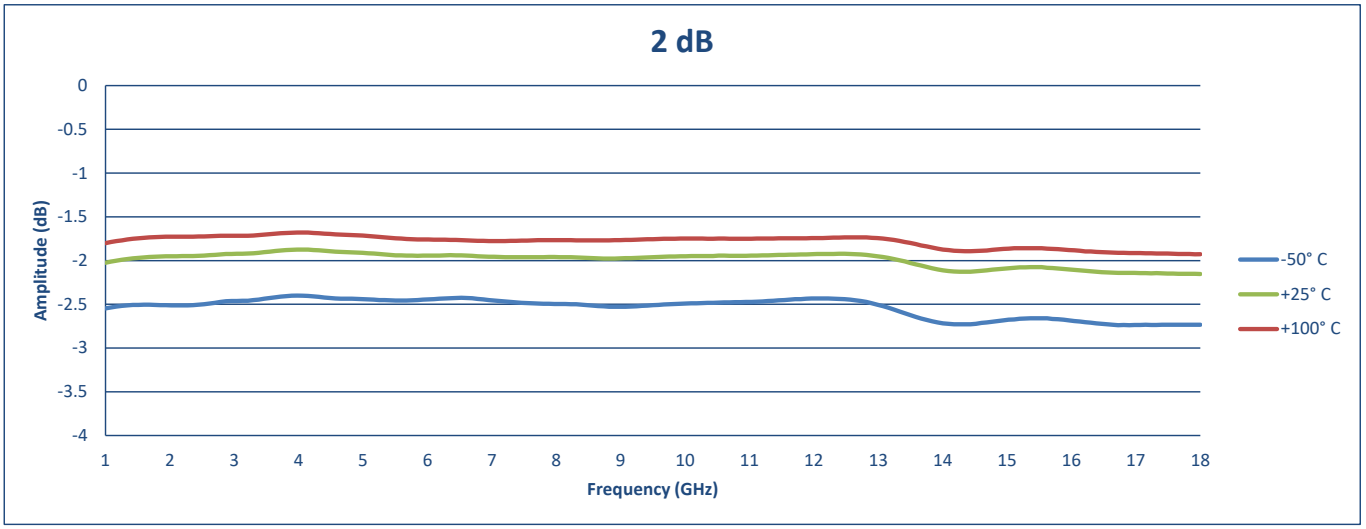

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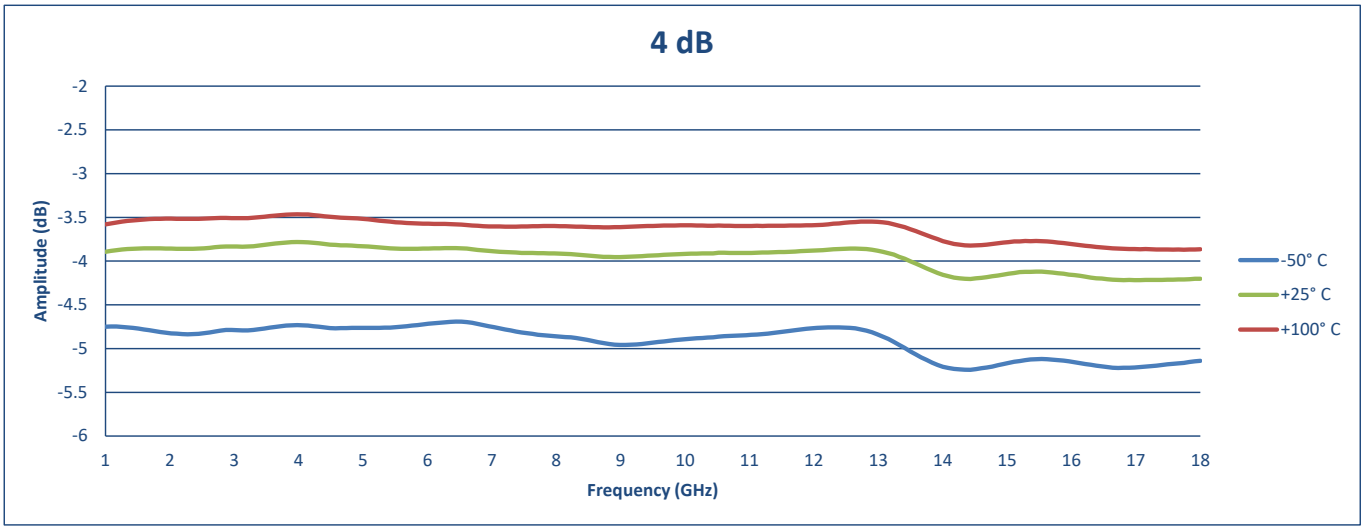

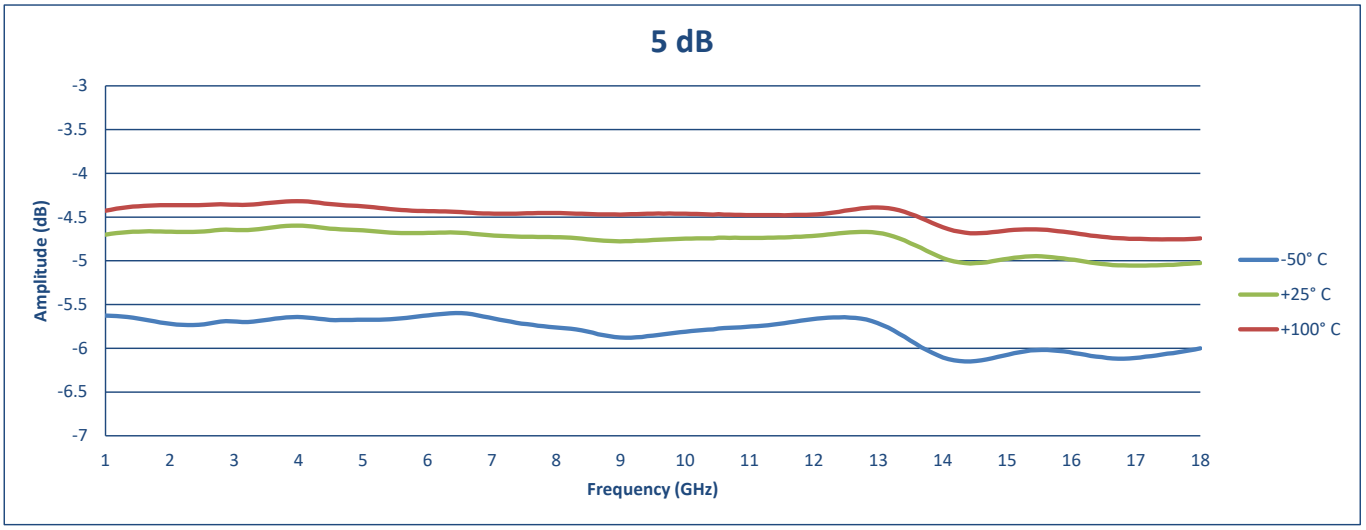

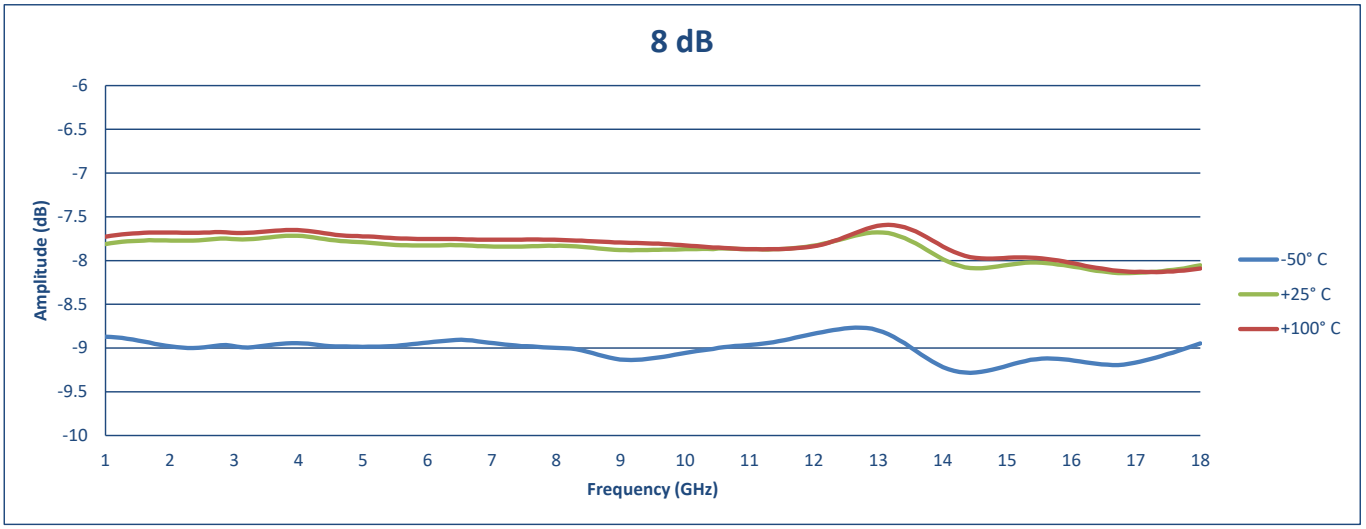

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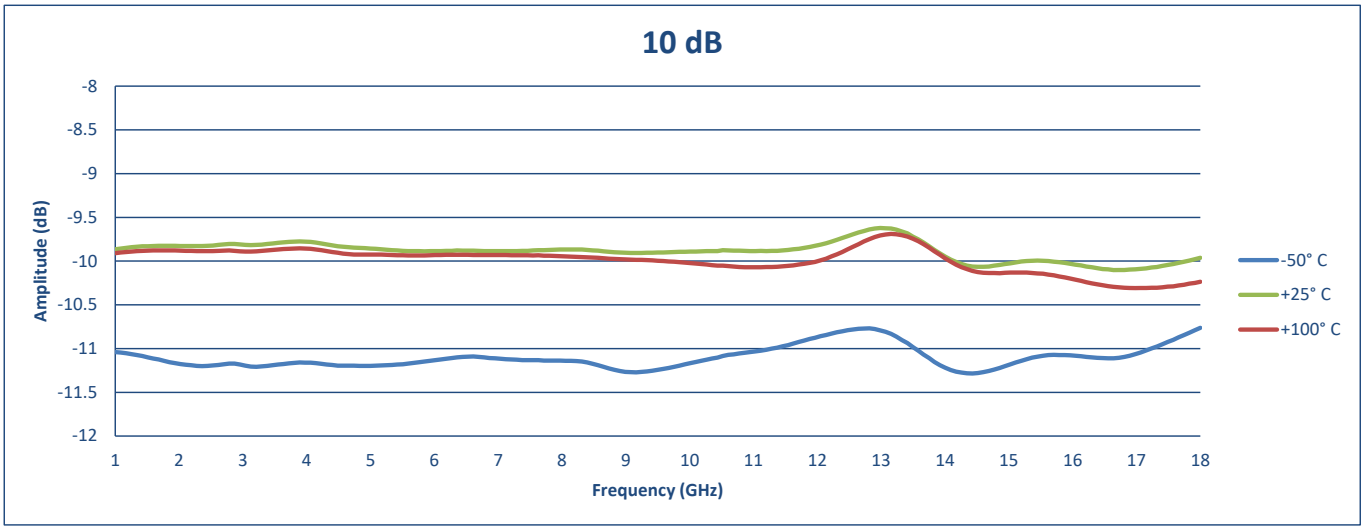

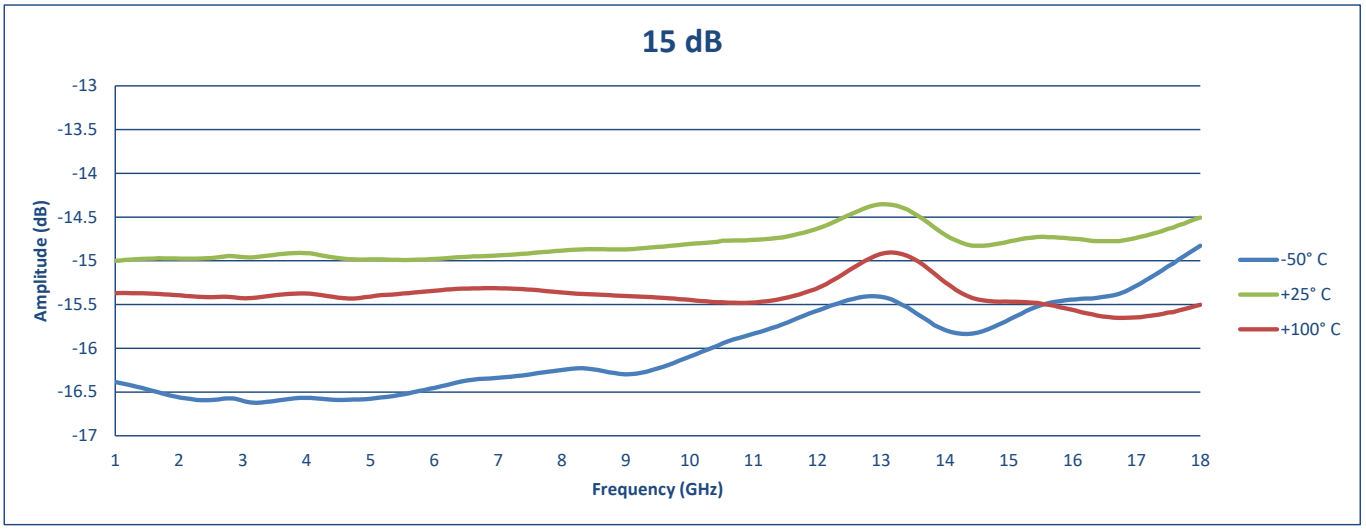

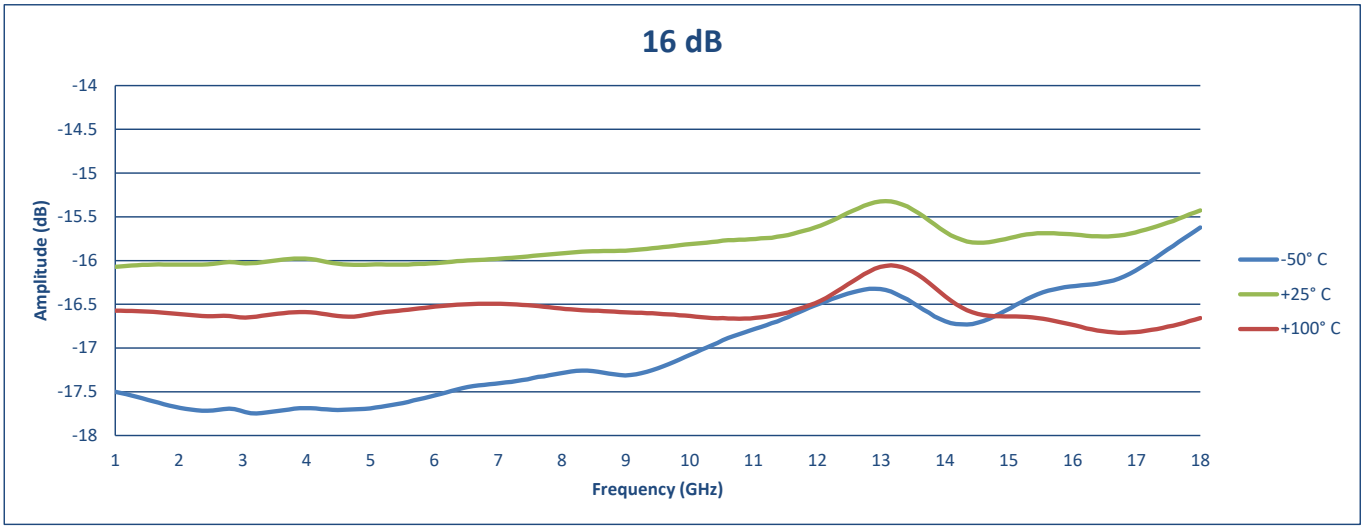

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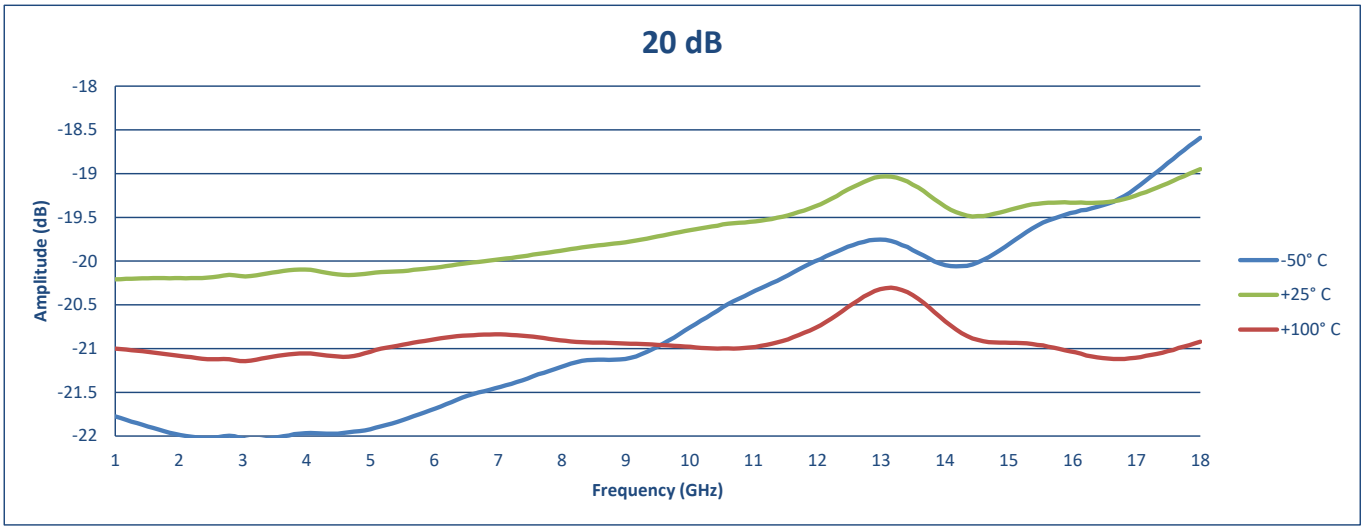

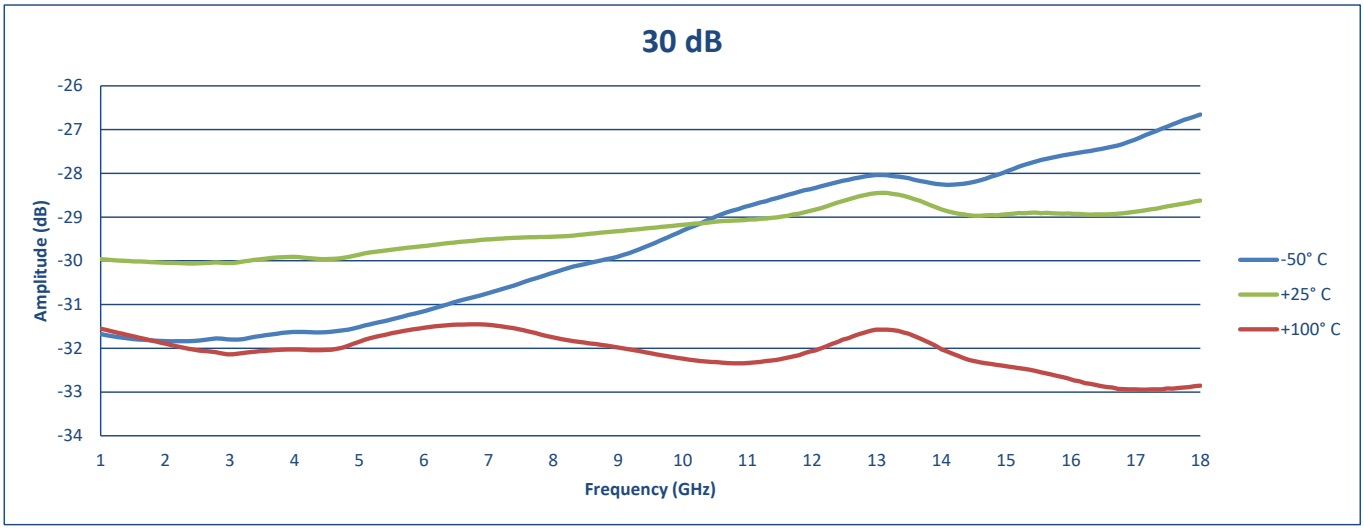

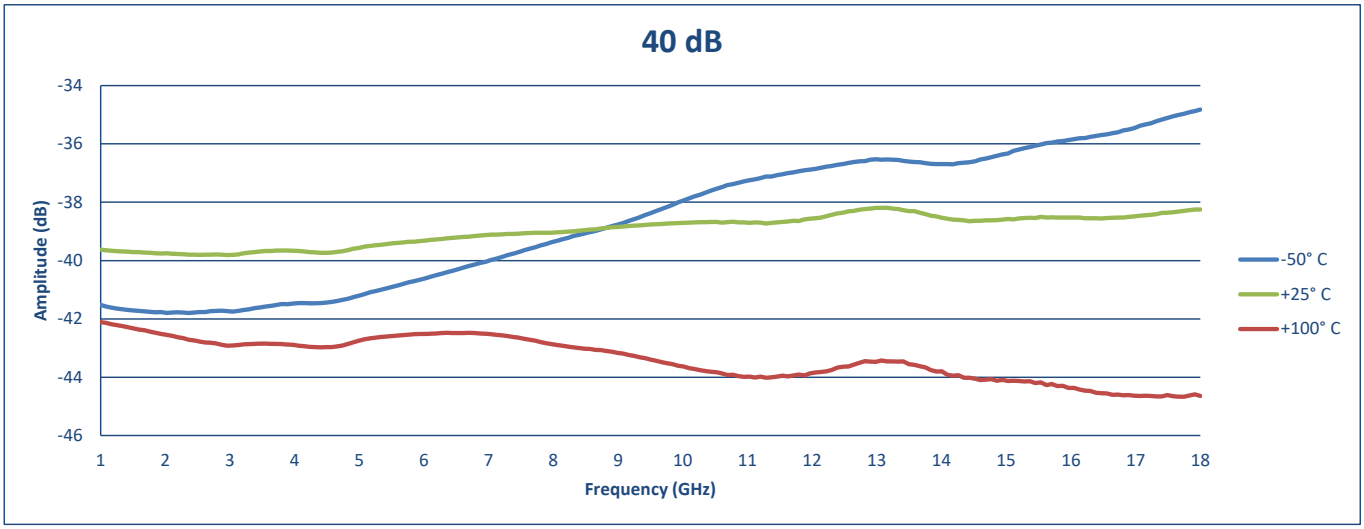

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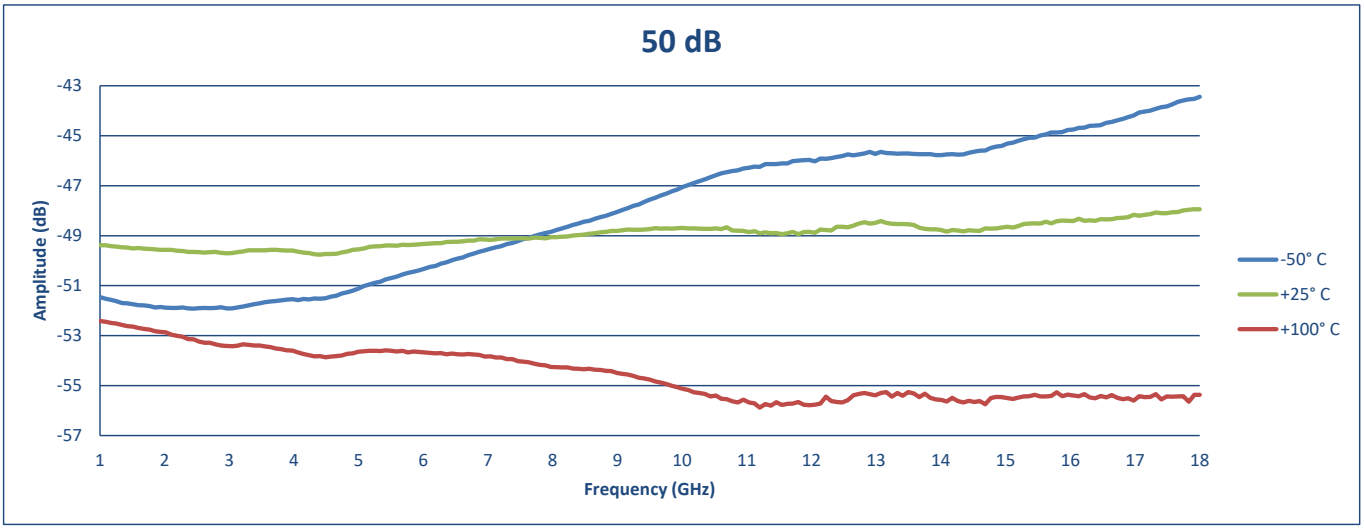

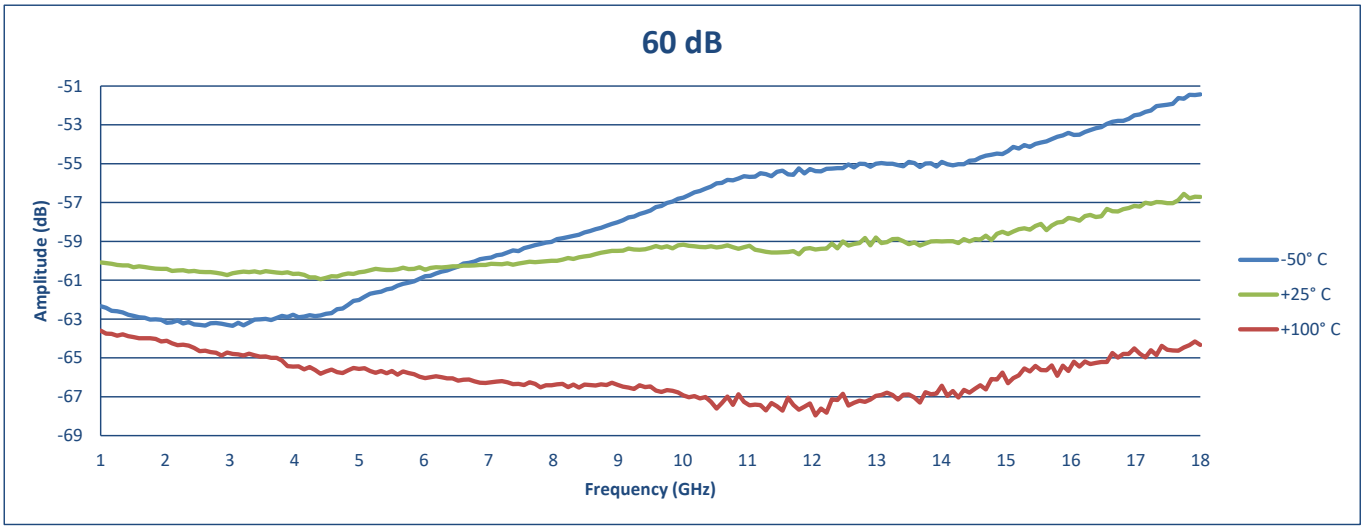

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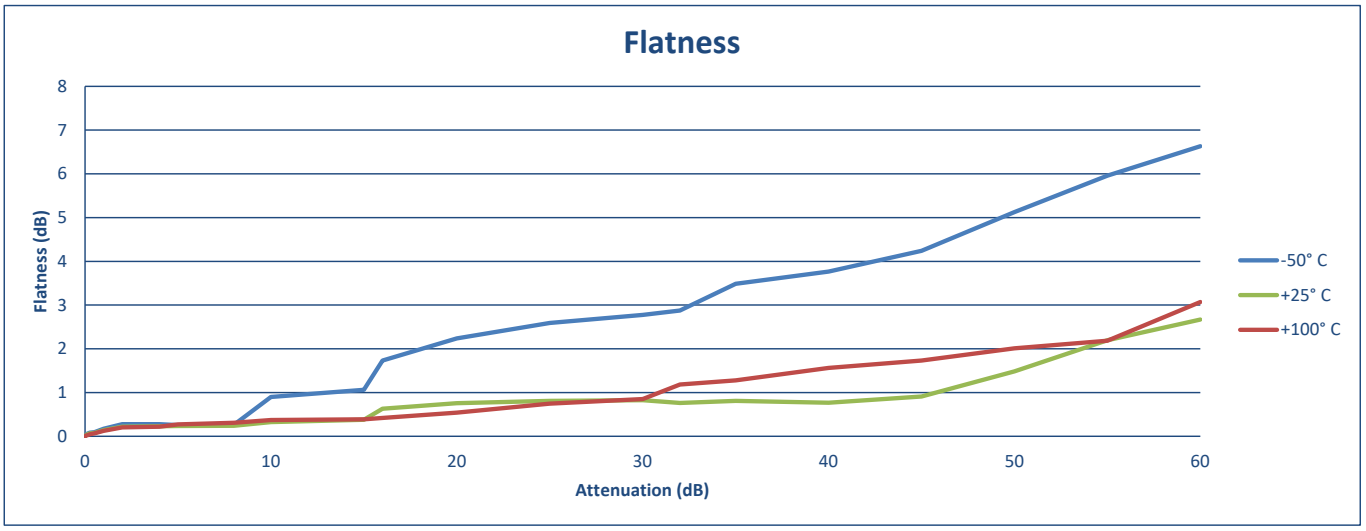

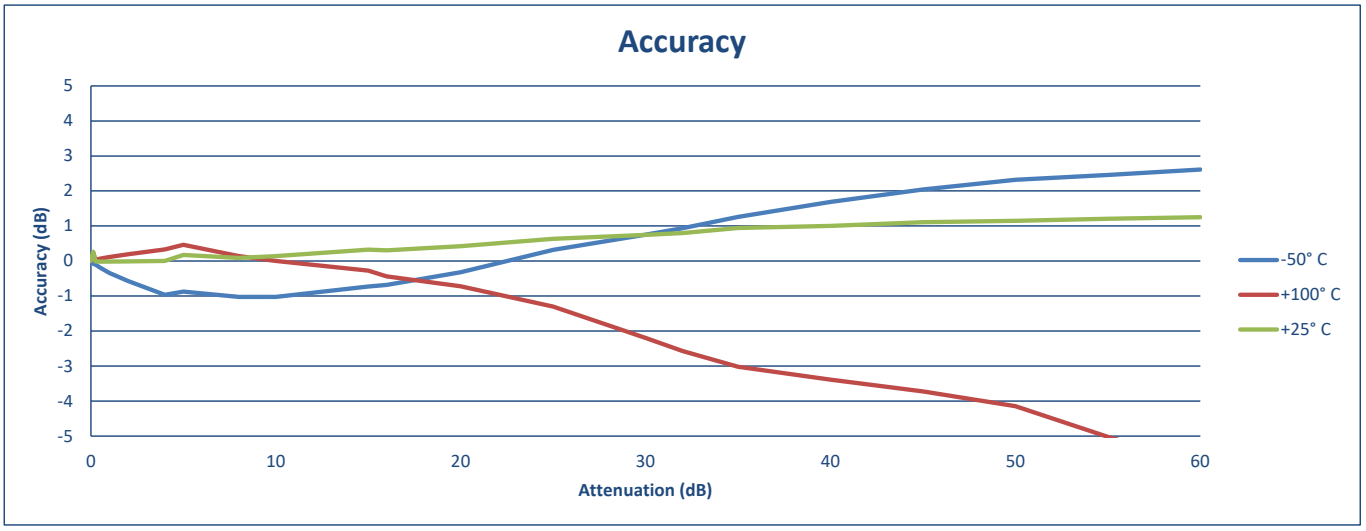

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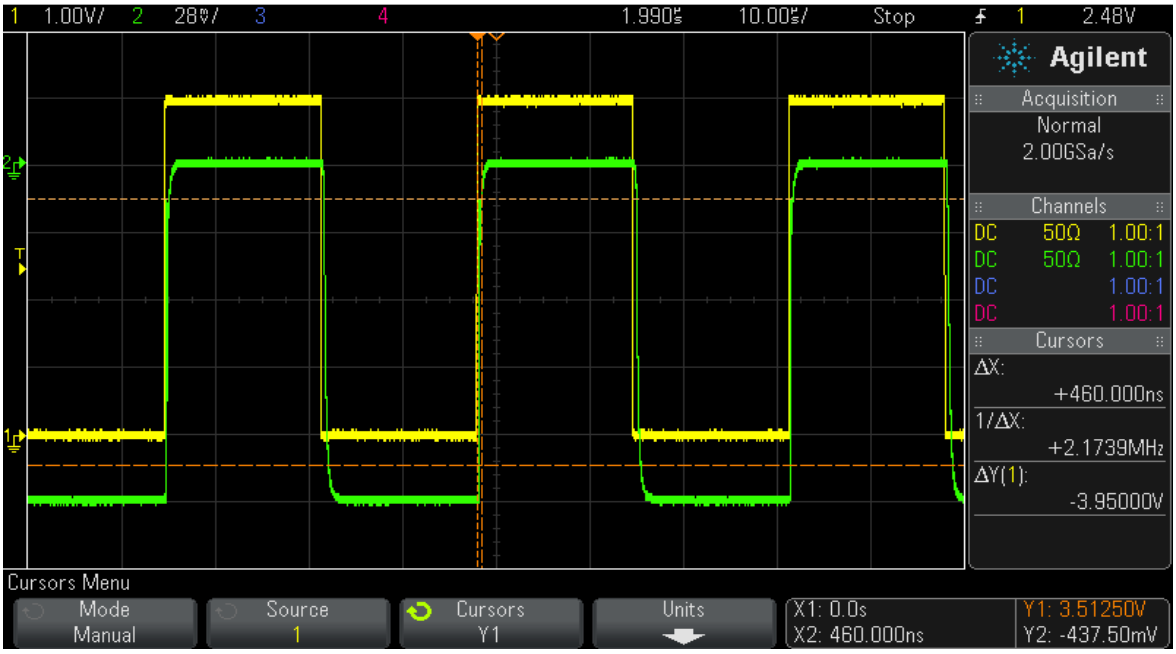
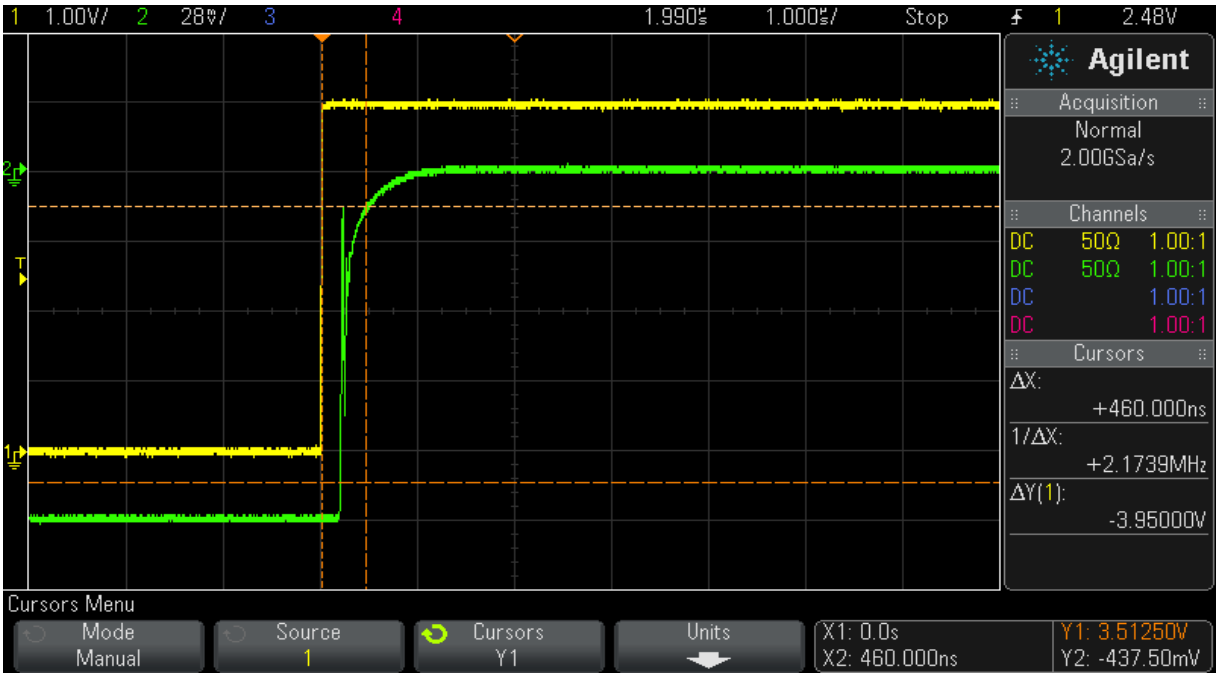
Switching Speed:

Full Pulse:



Off time:



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ON
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On time: