



**TYPICAL CHARACTERISTICS
ON
ADM-10M18G-SFF-110VAC**

PMI MODEL NO. ADM-10M18G-SFF-110VAC IS A STATE-OF-THE-ART 10 MHz TO 18.0 GHz INTEGRATED SUBSYSTEM THAT ALLOWS USERS TO INPUT RF SIGNALS AND PROVIDE AUTOMATIC DETECTION WHEN SIGNAL LEVELS FALL BELOW -30 dBm AND AUTOMATICALLY SWITCH IN A LOW NOISE AMPLIFIER SUCH THAT LOW LEVEL SIGNALS CAN REMAIN DETECTABLE. THE PURPOSE OF THIS MODULE IS TO PROVIDE OPTIMUM RF SIGNAL LEVELS TO A RF/FIBER CONVERTER MODULE.



Designed By: PMI Engineering

**Tested & Reported By:
Matthew Berry
David Durbin
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November 3, 2015

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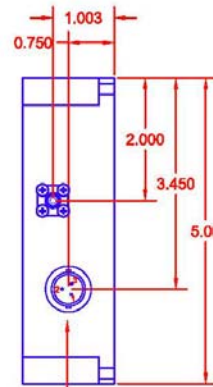
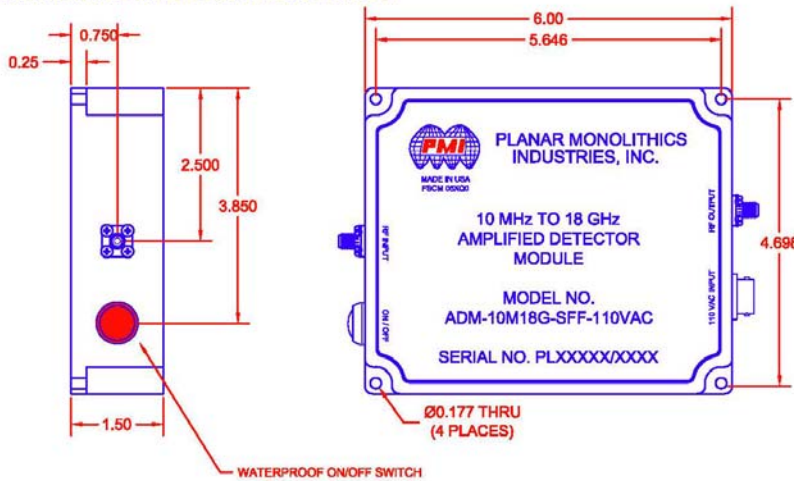
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REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE	8/18/18	
	2	SPECIFICATION CHANGES	11/4/2018	

MECHANICAL OUTLINE



PIN OUT TABLE	
PIN	FUNCTION
1	LIVE
2	NEUTRAL
3	GND

WATERPROOF 3 POSITION CIRCULAR CONNECTOR
DIGIKEY PART NO. HR1787-ND OR EQUIVALENT

ENVIRONMENTAL RATINGS

- TEMPERATURE: ————— -20 °C TO +50 °C (OPERATING)
 -40 °C TO +85 °C (STORAGE)
- HUMIDITY: ————— MIL-STD-202F, METHOD 103B COND. B
- SHOCK: ————— MIL-STD-202F, METHOD 213B COND. B
- ALTITUDE: ————— MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: — MIL-STD-202F, METHOD 107D COND. A

NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

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

PMI CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.
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ISO 9001 CERTIFIED



APPROVALS		DATE	TITLE	
DRAWN	<i>M. Berry</i>	08/18/18	PRODUCT FEATURE ADM-10M18G-SFF-110VAC	
CHECKED			SIZE	REV.
ISSUED			A 05XQ0	2
			DWG NO.	
			27025451	
			SCALE: N:S	SHEET 1 OF 5



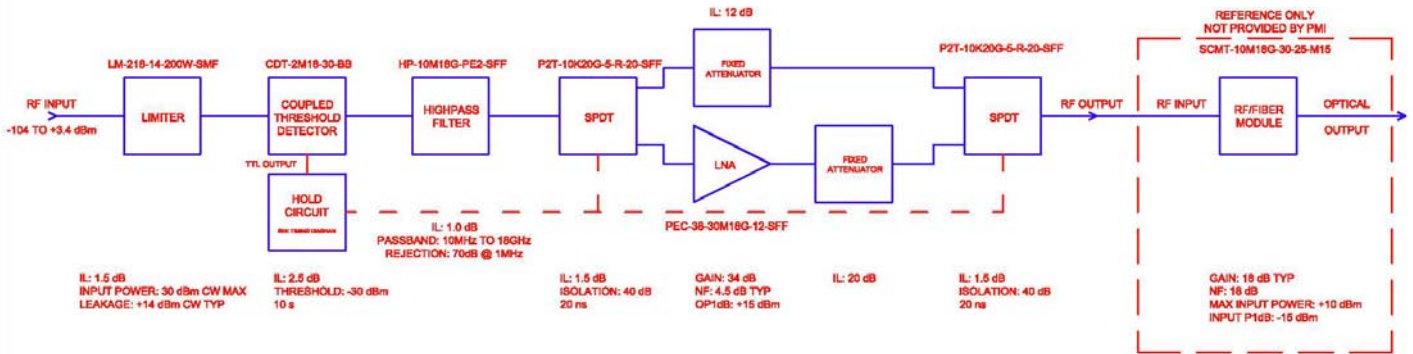
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FUNCTIONAL BLOCK DIAGRAM



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APPROVALS		DATE	TITLE		
DRAWN <i>M. Perry</i>		08/18/15	PRODUCT FEATURE ADM-10M18G-SFF-110VAC		
CHECKED			SIZE A	PDCM NO. 05XQ0	DWG NO. 27025451
ISSUED			SCALE N:S		REV. 2
					SHEET 2 OF 5



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SPECIFICATIONS

- FREQUENCY RANGE: _____ 10 MHz TO 18.0 GHz
- RF INPUT POWER: _____ 1 WATT CW (+30 dBm) MAXIMUM
- THRESHOLD LEVEL: _____ -30 dBm
- INSERTION LOSS (INPUT TO OUTPUT): _____ 19 dB TYPICAL (RF > -29 dBm WITH INTERNAL FIXED 12 dB ATTENUATOR) - SEE SHEET 4
- RF GAIN: _____ 15 dB TYPICAL (RF > -31 dBm WITH INTERNAL FIXED 12 dB ATTENUATOR) - SEE SHEET 4
- NOISE FIGURE: _____ 37 dB TYPICAL (WITH NO LNA SELECTED & > 500 MHz) - SEE SHEET 4
11 dB TYPICAL (WITH LNA SELECTED & > 500 MHz) - SHEET 4
- OUTPUT P1dB: _____ 1.5 dBm (WITH INTERNAL FIXED 12 dB ATTENUATOR)
- INTERNAL SWITCH ISOLATION: _____ 40 dB TYPICAL
- GAIN TO NO GAIN, SWITCHING SPEED: _____ <1.5 μ s TYPICAL AND PER TIMING DIAGRAM - SEE SHEET 5
- INTERNAL FIXED ATTENUATOR VALUE: _____ 12 dB (USER CHANGEABLE FOR IN-SYSTEM OPTIMIZATION)
- AC POWER: _____ 110 VAC, 60 Hz (WATERPROOF RECEPTACLE, FEMALE SOCKETS, 3 POSITION)
- RF CONNECTORS: _____ SMA FEMALE
- SIZE: _____ 6.0" X 5.0" X 1.5"
- SEALING: _____ INTERNALLY SEALED - WEATHER PROOF
- FINISH: _____ BLUE EPOXY POLIMIDE COATING IAW MIL-C-22750, TYPE I OVER EPOXY POLIMIDE PRIMER IAW MIL-P-23377, TYPE I, CLASS 1 OR 3.

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REVISIONS			
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	1	ORIGINAL RELEASE	8/18/18
	2	SPECIFICATION CHANGES	11/6/2018

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CHECKED			SIZE	REV.
			A	2
SCALE			FORM NO.	DWG NO.
			05XQ0	27025451
			SCALE	SHEET
			N:S	3 OF 5

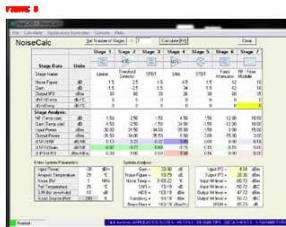
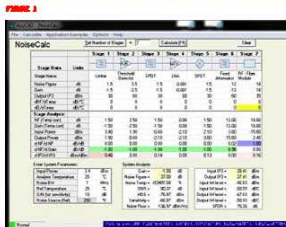


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CASCADE ANALYSIS			
FIGURE	POWER INPUT	POWER OUTPUT TO MITEQ RF/FIBER	WITH OR WITHOUT LNA
1	+3.4 dBm	-15.63 dBm	WITHOUT LNA
2	-29 dBm	-48 dBm	WITHOUT LNA
3	-30 dBm	-15 dBm	WITH LNA
4	-104 dBm	-89 dBm	WITH LNA

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ISSUED			DWG NO. 27025451	REV. 2
SCALE N:S			SHEET 4 OF 5	

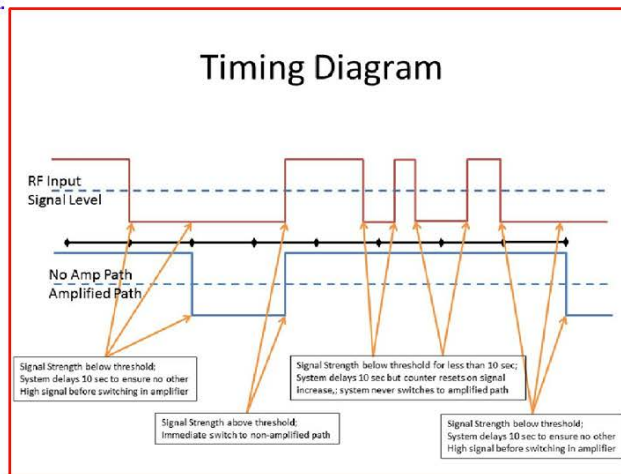


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CHECKED			SIZE	FIG. NO.	DWG. NO.
ISSUED			A	05XQ0	27025451
			SCALE	N:S	SHEET 5 OF 5



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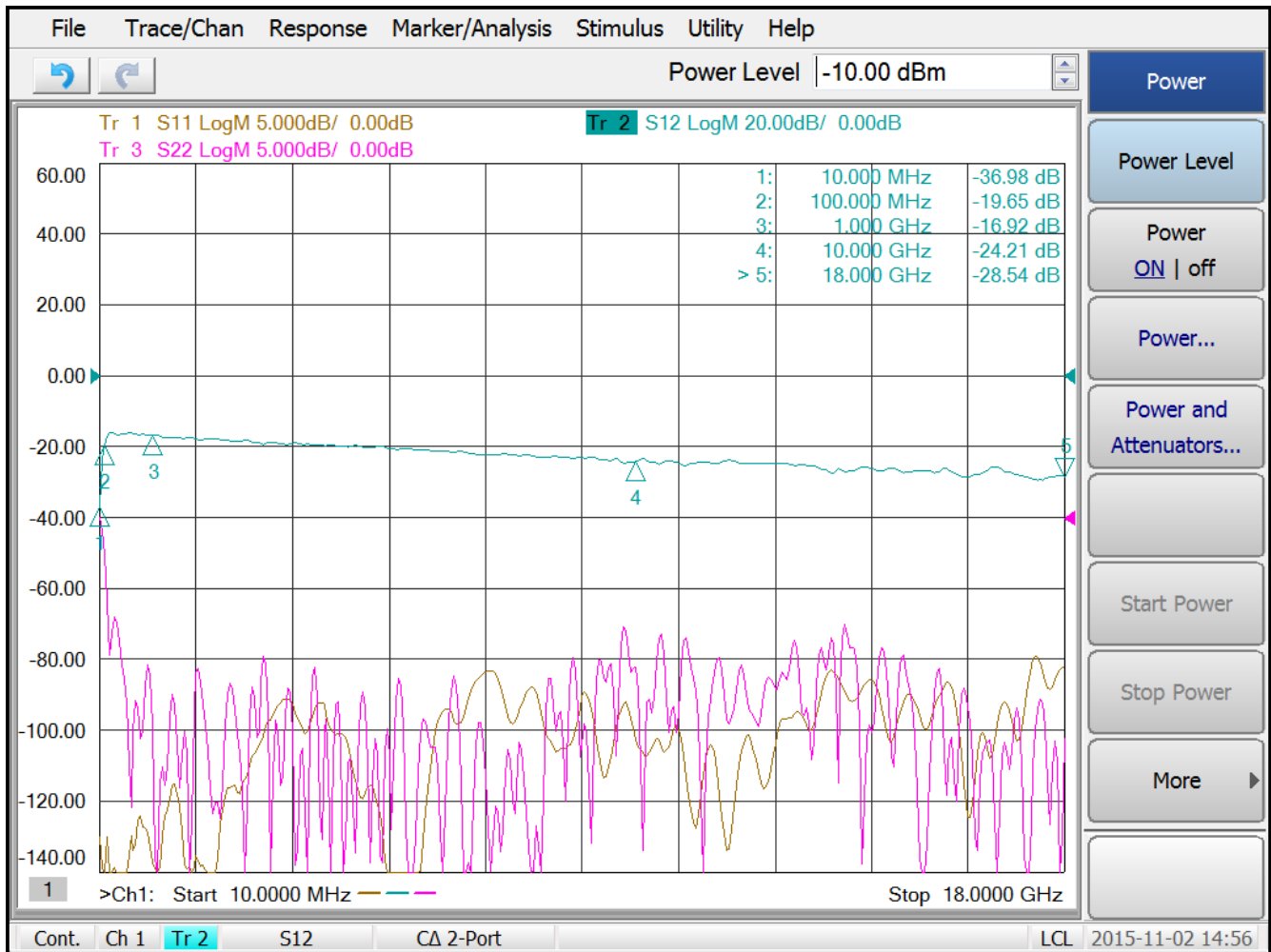
TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range	10 MHz to 18.0 GHz	10 MHz to 18.0 GHz (See Plots)	
2	RF Input Power	1 Watt CW (+30 dBm) Maximum	1 Watt CW (+30dBm) Maximum	
3	Threshold Level	-30 dBm	-30dBm Nom.	
4	Insertion Loss	19 dB Typical ¹	16.92dB Min 36.98dB Max (See Plots)	
5	RF Gain	15 dB Typical ²	4.40dB Min 19.45dB Max (See Plots)	
6	Noise Figure	37 dB Typical ³ 11 dB Typical ⁴	36.02dB 14.17dB (See Plots)	
7	Output P1dB	1.5 dBm (With Fixed 12 dB Attenuator)	-3.45dBm (With 20dB Attenuator)	
8	Internal Switch Isolation	40 dB Typical	40dB Typ.	
9	Switching Speed (Gain to No Gain) (No Gain to Gain)	1.5 us Typical 10 s Typical	250 ns 8 s	
10	AC Power	110 VAC, 60 Hz	110 VAC, 60 Hz	

1. (RF > -29 dBm with Internal Attenuator Fixed @ 12 dB)
2. (RF > -31 dBm with Internal Attenuator Fixed @ 12 dB)
3. (With No LNA Selected & > 500 MHz)
4. (With LNA Selected & > 500 MHz)



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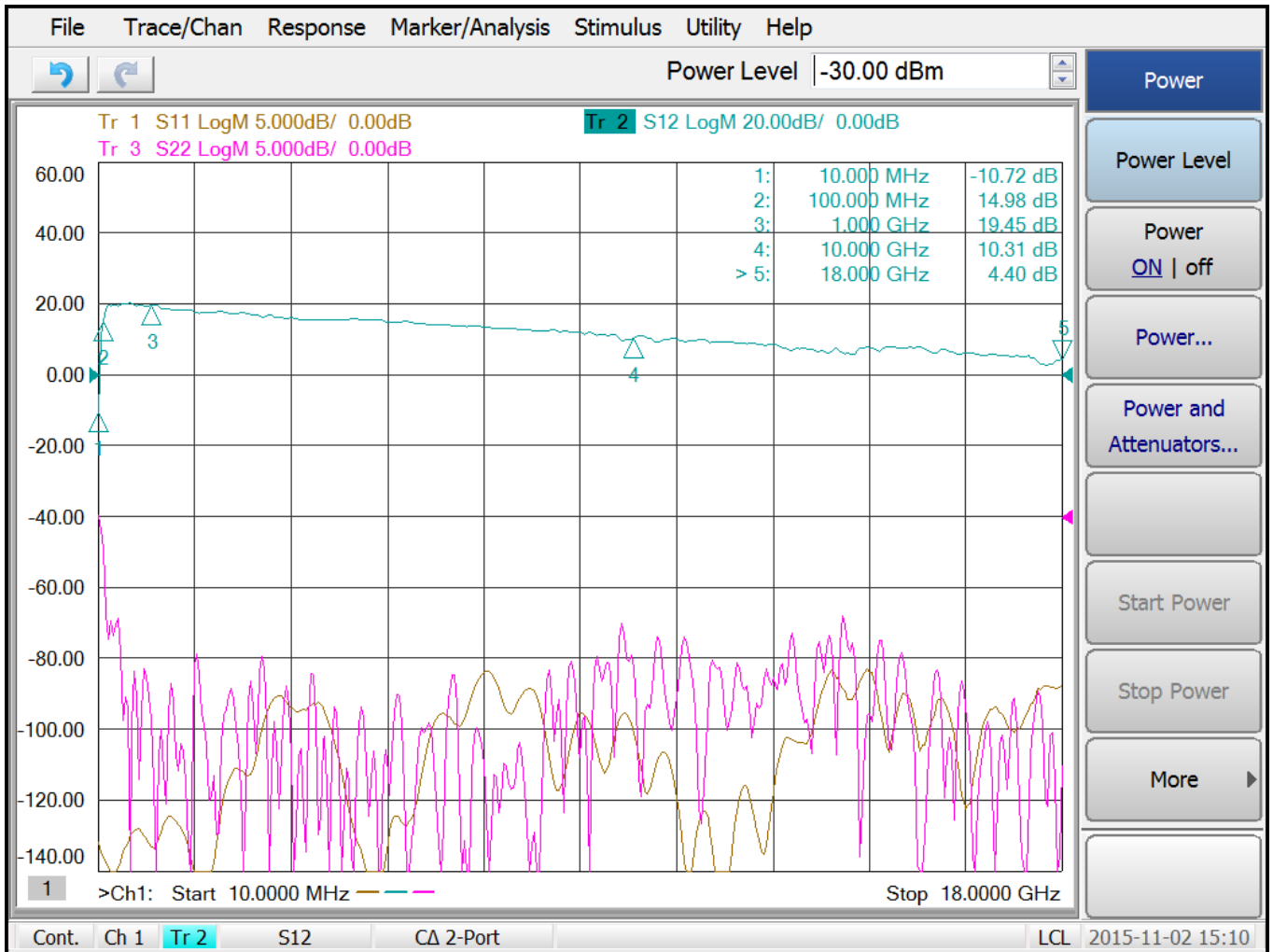
INSERTION LOSS PATH





TYPICAL CHARACTERISTICS ON ADM-10M18G-SFF-110VAC

GAIN PATH

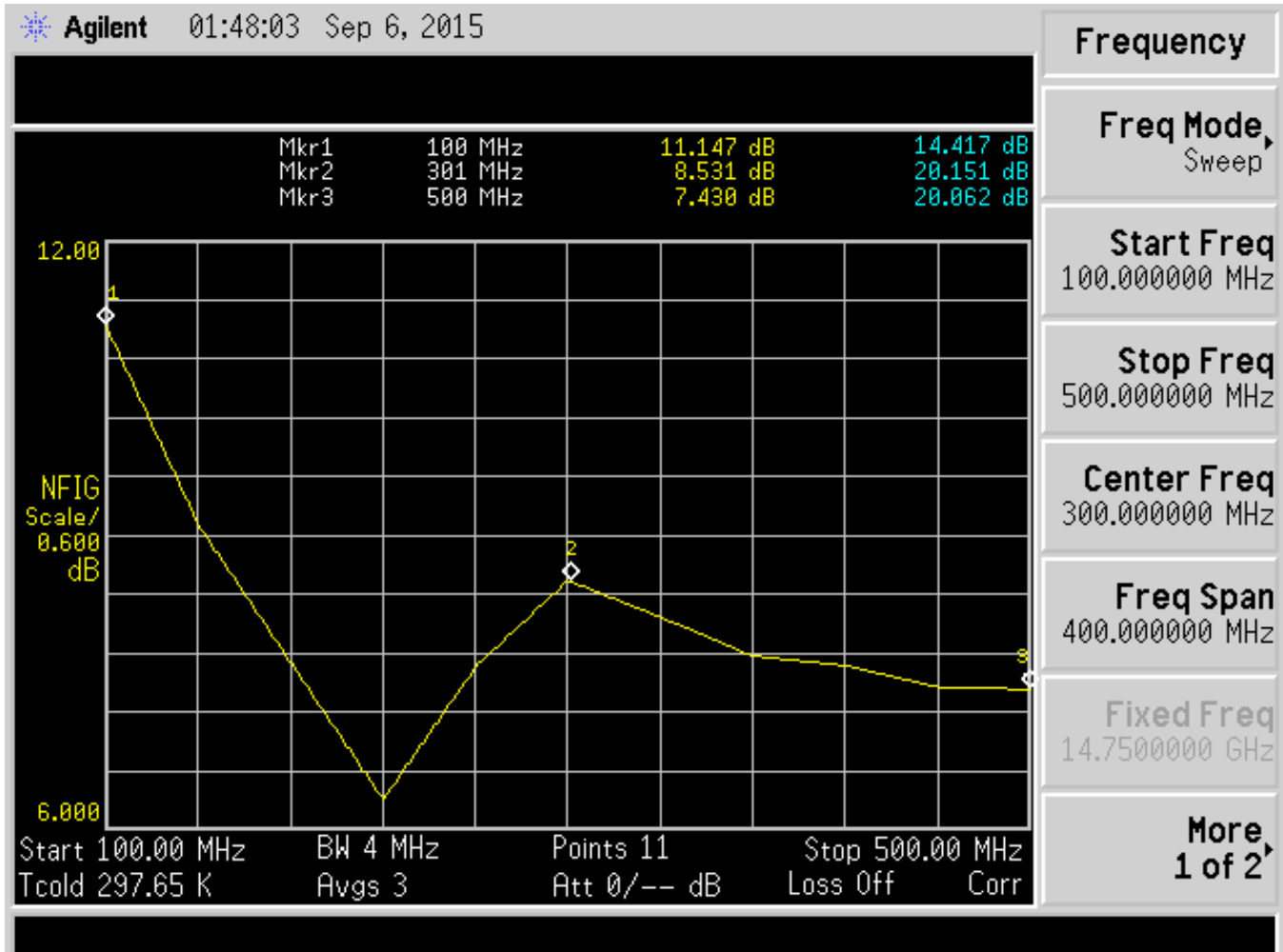




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NOISE FIGURE (100MHz – 500MHz)

GAIN PATH





**TYPICAL CHARACTERISTICS
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NOISE FIGURE (500MHz – 18GHz)

GAIN PATH

