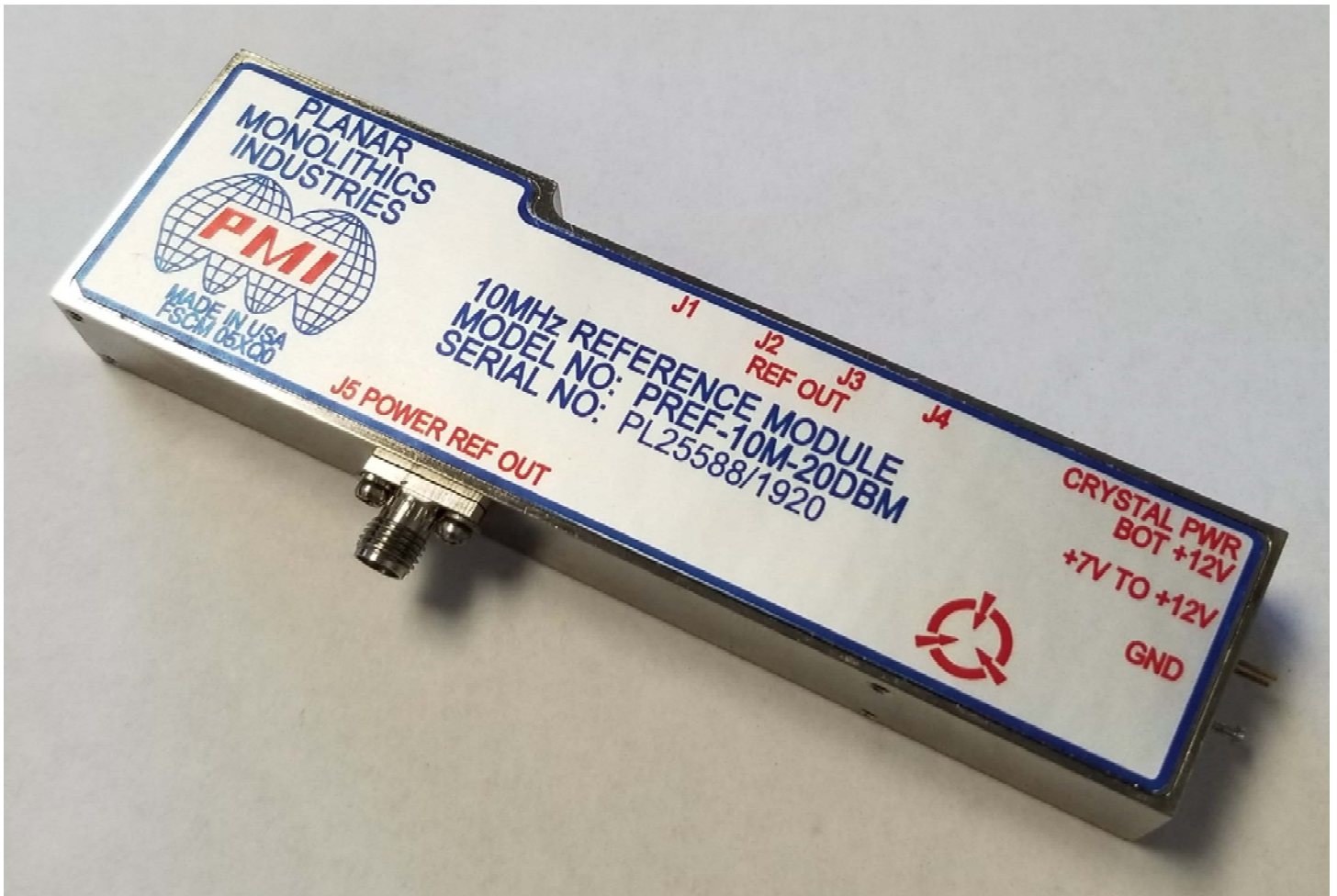




**TYPICAL CHARACTERISTICS
ON
PREF-10M-20DBM**

PLANAR MONOLITHICS INDUSTRIES MODEL NUMBER PREF-10M-20DBM IS A 10MHz REFERENCE SOURCE WITH 5 OUTPUTS. THE POWER REF OUT HAS A +20 dBm OUTPUT WHILE THE 4 REF OUTPUTS HAVE A NOMINAL 0 dBm OUTPUT. THIS UNIT IS DESIGNED TO PROVIDE A MULTI-OUTPUT REFERENCE SOURCE IN A SYSTEM REQUIRING MULTIPLE 10MHz REFERENCE SOURCES AT THE SAME TIME, ALL HAVING THE SAME STABILITY AND PHASE NOISE.



PREPARED 5/14/2019



**TYPICAL CHARACTERISTICS
ON
PREF-10M-20DBM**

TABLE OF CONTENTS:

1. OUTLINE DRAWING.....	PAGE 3
2. SUMMARY DATA.....	PAGE 4
3. +25°C PLOTTED DATA.....	PAGE 5
4. -40°C PLOTTED DATA.....	PAGE 6
5. +85°C PLOTTED DATA.....	PAGE 7



TYPICAL CHARACTERISTICS ON PREF-10M-20DBM

OUTLINE DRAWING

DESCRIPTION:
 PLANAR MONOLITHICS INDUSTRIES MODEL NUMBER PREF-10M-20DBM IS A 10MHz REFERENCE SOURCE WITH 5 OUTPUTS. THE POWER REF OUT HAS A +20 dBm OUTPUT WHILE THE 4 REF OUTPUTS HAVE A NOMINAL 0 dBm OUTPUT. THIS UNIT IS DESIGNED TO PROVIDE A MULTI-OUTPUT REFERENCE SOURCE IN A SYSTEM REQUIRING MULTIPLE 10MHz REFERENCE SOURCES AT THE SAME TIME, ALL HAVING THE SAME STABILITY AND PHASE NOISE.

DESCRIPTION TABLE:

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	10/20/19	

SPECIFICATIONS:

- FREQUENCY: 10 MHz
- POWER OUT:
 - POWER REF OUT (J5): +20 dBm
 - REF OUT (J1-J4): +3 dBm +/- 3 dB
- PHASE NOISE:
 - 100 Hz: -130 dBc/Hz
 - 1 KHz: -150 dBc/Hz
 - 10 KHz: -155 dBc/Hz
- STABILITY: +/- 0.1 ppm
- AGING: +/- 100 ppb (YEARLY)
- OUTPUT VSWR: 2:1 MAX
- DC POWER:
 - CRYSTAL PWR BOT +12V: +12VDC @ 700 mA (3 MIN WARMUP)
 - +7V TO +12V: +12VDC @ 500 mA (STEADY STATE)
 - +7 TO +12VDC @ 350 mA
- OUTPUT CONNECTORS:
 - J1-J4 REF OUT: SMPM MALE
 - J5 POWER REF OUT: SMA FEMALE (FIELD REPLACABLE)
- SIZE: 4.60" X 1.35" X 0.70"
- FINISH: NICKEL PLATED

ENVIRONMENTAL RATINGS:

- TEMPERATURE: -40°C TO +85°C (OPERATING)
- HUMIDITY: MIL-STD-810, 0 TO 95% NON-CONDENSING
- SHOCK: MIL-STD-810, 516.6 COMPLIANT, 20G, 11 ms DURATION
- VIBRATION: MIL-STD-810, METHOD 515, FIG. 3 (NON-OP)
- ALTITUDE: MIL-STD-810, 15000 FT

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION
 SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE

Dimensions and Features:

- Top view: 2.23 [56.6] (total length), 3X 0.35 [8.9] (hole spacing), 0.70 [17.8] (height), 4X 0.25 [6.4] (width), 4X SMPM MALE
- Front view: 4.60 [116.8] (length), 1.50 [38.1] (width), 1.35 [34.3] (height), 1.20 [30.5] (height), 1.65 [41.9] (width), FIELD REPLACABLE SMA FEMALE (12 MIL PIN)
- Side view: 2X 0.61 [15.5] (height), 2X 0.45 [11.4] (height), 0.50 [12.7] (width), 0.32 [8.1] (width)
- Bottom view: 0.25 [6.4] (width), 2X 0.08 [2] (width), 2X 3.44 [87.4] (length), 0.12 [3] (height), 0.62 [15.7] (width), 4X 2-56 UNC - 2B ∇ 0.17 [4.4] (hole spacing)

PMI CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.
 7311-F GROVE ROAD
 FREDERICK, MARYLAND 21704 USA
 TEL: (301) 662-5019 FAX: (301) 662-1731
 WWW.PMI-RF.COM (C) 2019 PLANAR

APPROVALS:

DATE	APPROVALS	DATE
	M. HANKEN	

REVISIONS:

REV	DESCRIPTION
1	ISSUED

SCALE: 1:1

SHEET: 1 OF 1



**TYPICAL CHARACTERISTICS
ON
PREF-10M-20DBM**

SUMMARY DATA FOR +25°C

TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	FREQUENCY :	10.0 MHz	10.0 MHz	
2	POWER REF OUT J5:	+20 dBm Typ	22.11 dBm See Plot	
3	REF OUT J1: REF OUT J2: REF OUT J3: REF OUT J4:	0 dBm TYP 0 dBm TYP 0 dBm TYP 0 dBm TYP	-1.39 dBm -1.42 dBm -1.38 dBm -1.38 dBm See Typical Plot	
4	DC POWER:	+12V @ 300 mA (3 MINUTE WARMUP) +12V @ 200 mA (STEADY STATE) +7V TO +12V @ 100 mA	251 mA 146 mA 20 mA	

SUMMARY DATA FOR -40°C

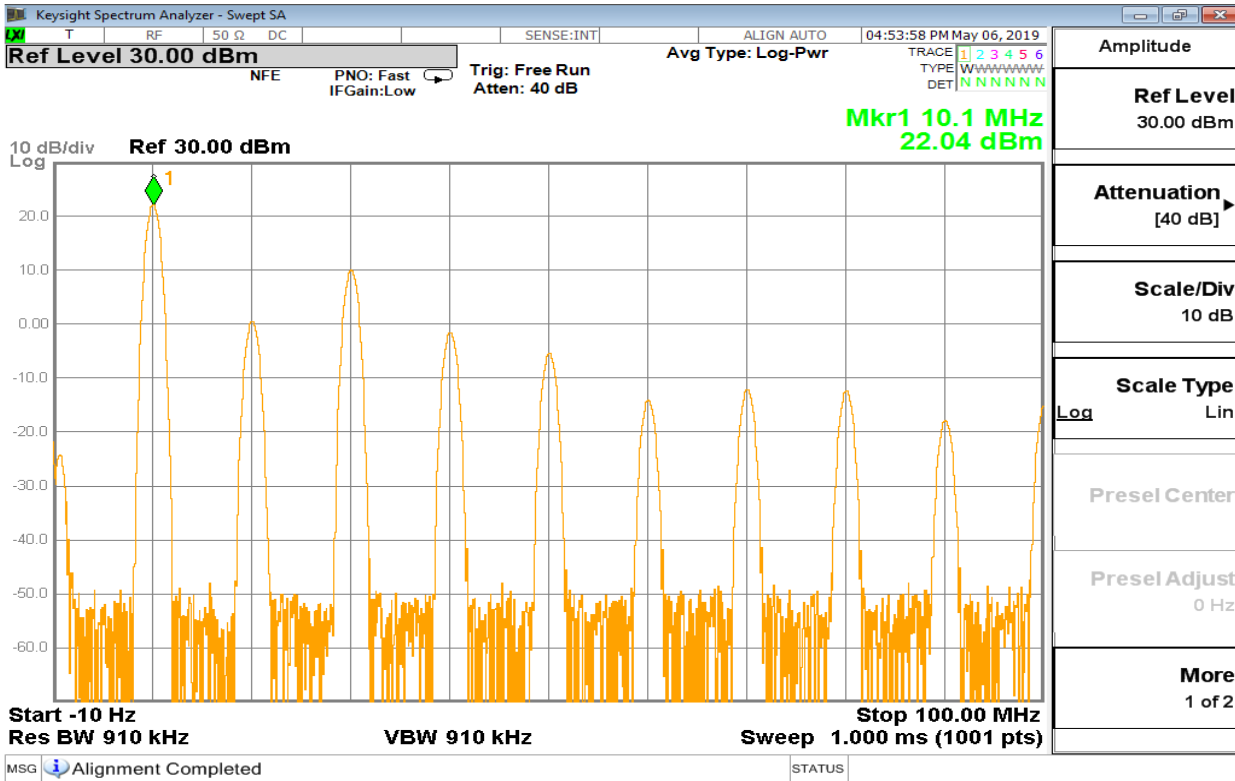
TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	FREQUENCY :	10.0 MHz	10.0 MHz	
2	POWER REF OUT J5:	+20 dBm Typ	22.13 dBm See Plot	
3	REF OUT J1: REF OUT J2: REF OUT J3: REF OUT J4:	0 dBm TYP 0 dBm TYP 0 dBm TYP 0 dBm TYP	-1.28 dBm -1.27 dBm -1.28 dBm -1.32 dBm See Typical Plot	
4	DC POWER:	+12V @ 300 mA (3 MINUTE WARMUP) +12V @ 200 mA (STEADY STATE) +7V TO +12V @ 100 mA	251 mA 251 mA 80 mA	

SUMMARY DATA FOR +85°C

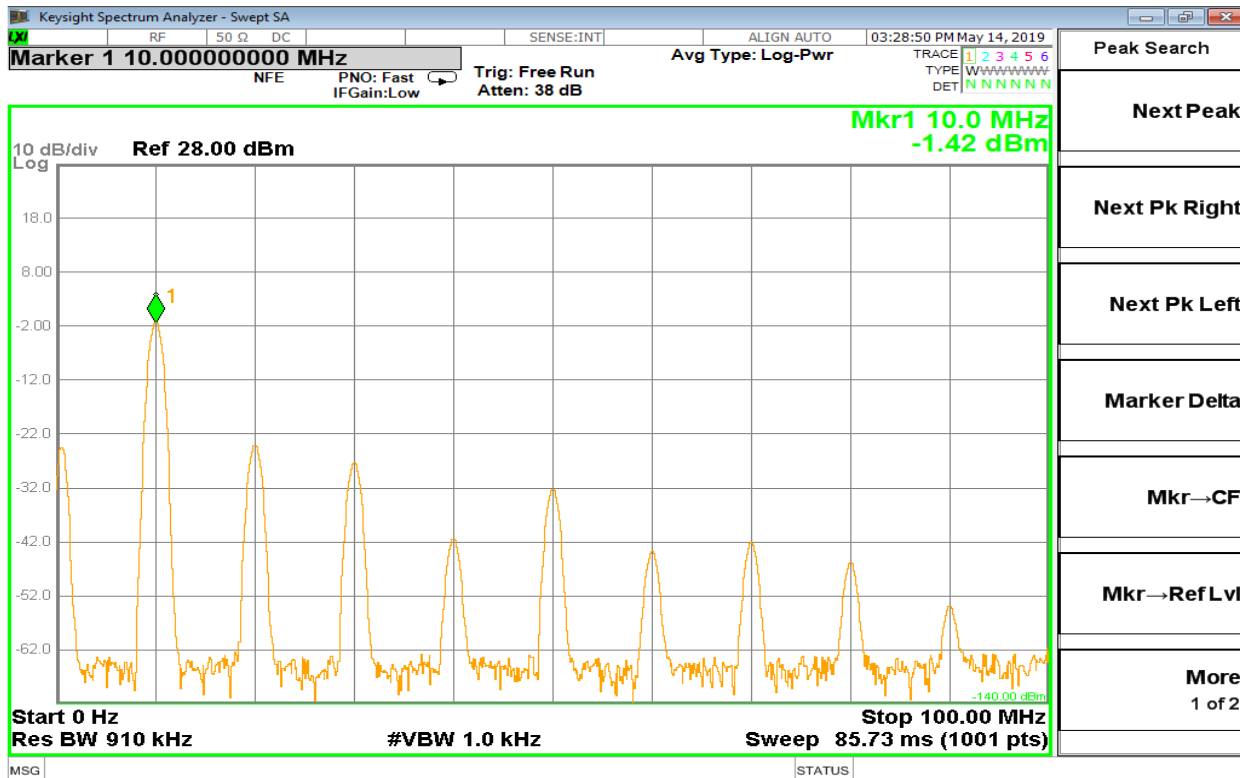
TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	FREQUENCY :	10.0 MHz	10.0 MHz	
2	POWER REF OUT J5:	+20 dBm Typ	21.53 dBm See Plot	
3	REF OUT J1: REF OUT J2: REF OUT J3: REF OUT J4:	0 dBm TYP 0 dBm TYP 0 dBm TYP 0 dBm TYP	-1.56 dBm -1.58 dBm -1.56 dBm -1.55 dBm See Typical Plot	
4	DC POWER:	+12V @ 300 mA (3 MINUTE WARMUP) +12V @ 200 mA (STEADY STATE) +7V TO +12V @ 100 mA	251 mA 39 mA 20 mA	



TYPICAL CHARACTERISTICS
ON
PREF-10M-20DBM
J5 OUT +25°C



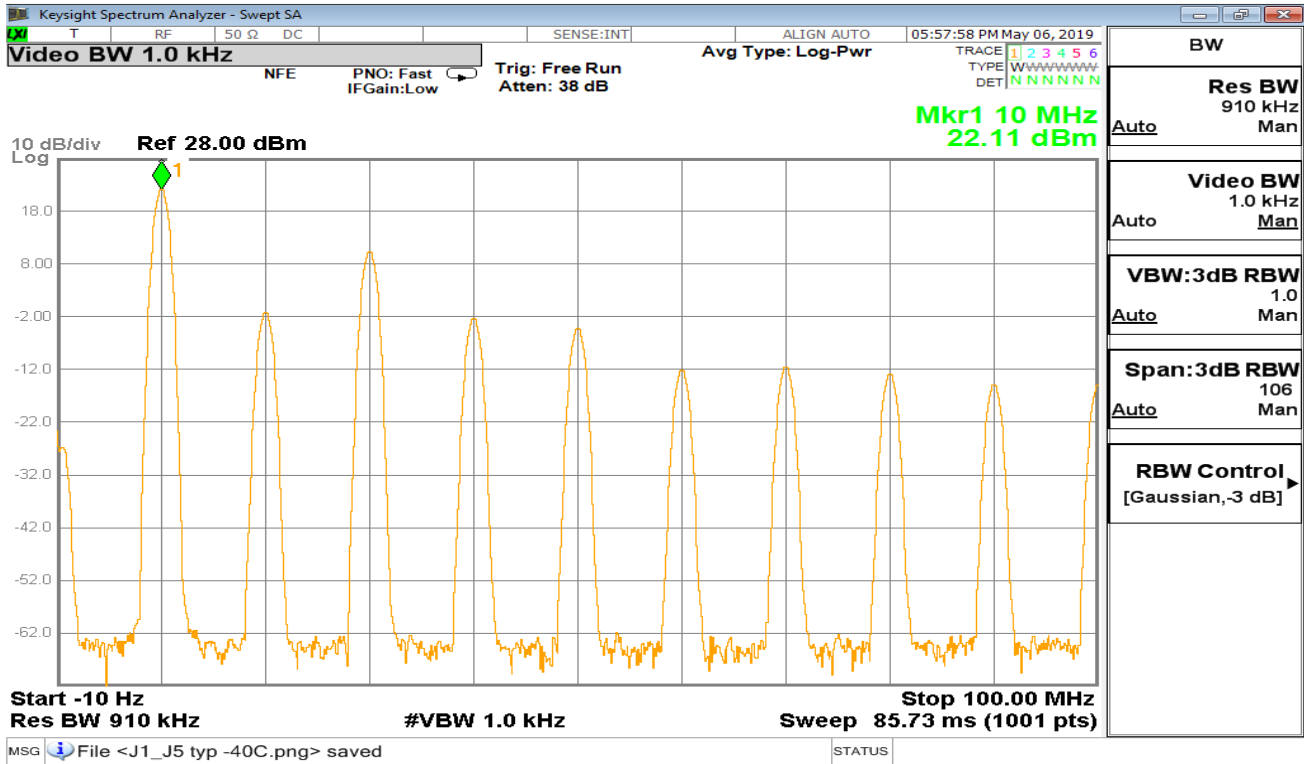
J1-J4 OUT +25°C



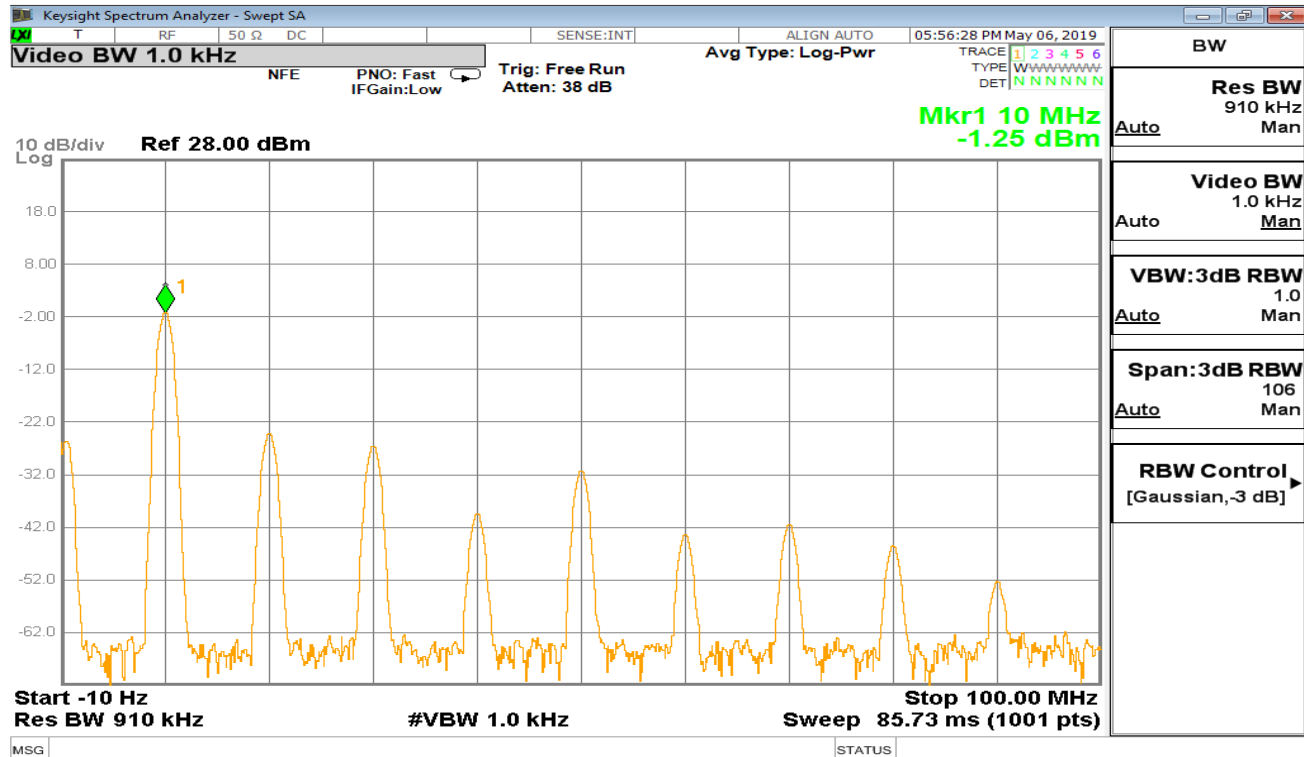


TYPICAL CHARACTERISTICS ON PREF-10M-20DBM

J5 OUT -40°C



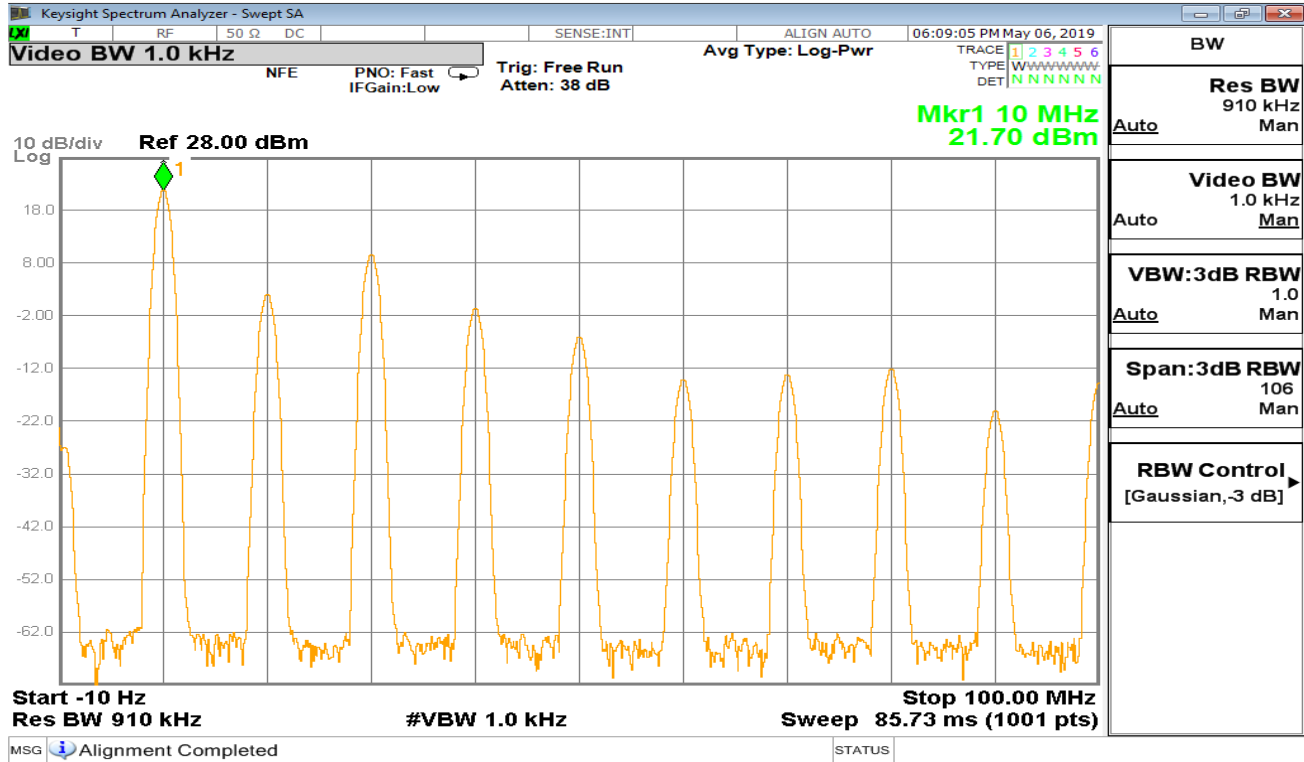
J1-J4 OUT -40°C





TYPICAL CHARACTERISTICS ON PREF-10M-20DBM

J5 OUT +85°C



J1-J4 OUT +85°C

