

TEST REPORT

ON

6.0 TO 10.0 GHz

HIGH SPEED

FREQUENCY DISCRIMINATOR

PMI MODEL No:

FD-0518-10

**With Option 610
Serial Number: PM409037**

**Designed
By
Dr. A. GORWARA**

**Tested
By
R. AFABLE**

**Reported
By
P. WOOD**

MARCH 31, 2005

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6.0 TO 10.0 GHz, HIGH SPEED, FREQUENCY DISCRIMINATOR PMI MODEL No: FD-0518-10 with Option 610

KEY FEATURES:

- 6.0 TO 10.0 GHz
- 100 OHMS IMPEDENCE
- 20 nS VIDEO RISE TIME



● FREQUENCY RANGE	: 6.0 TO 10.0 GHz (OTHER FREQUENCIES AVAILABLE)
● INPUT VSWR	: 1.5:1 TYPICAL, 2.0:1 MAXIMUM
● OPERATING INPUT RF POWER	: +10 dBm NOMINAL ± 0.1 dBm
● VIDEO IMPEDENCE	: 100 Ohms NOMINAL
● VIDEO OUTPUT RISE TIME	: 20 nS
● VIDEO OUTPUT SLOPE	: 50 mV / GHz
● ACCURACY	: ± 200 MHz TYPICAL, ± 300 MHz MAXIMUM
● SURVIVAL RF POWER	: +15 dBm
● DC POWER SUPPLY (POSITIVE)	: +15 VDC @ +75 mA
● DC POWER SUPPLY (NEGATIVE)	: -15 VDC @ -75 mA
● SIZE	: 2.00" X 1.80" X 0.50"
● WEIGHT	: <4 oz.
● INPUT & OUTPUT RF CONNECTORS	: SMA FEMALE STANDARD (OTHER OPTIONS AVAILABLE)
● DC POWER CONNECTORS	: SOLDER PIN STANDARD (OTHER OPTIONS AVAILABLE)

PRODUCT FEATURE—SPECIFICATIONS

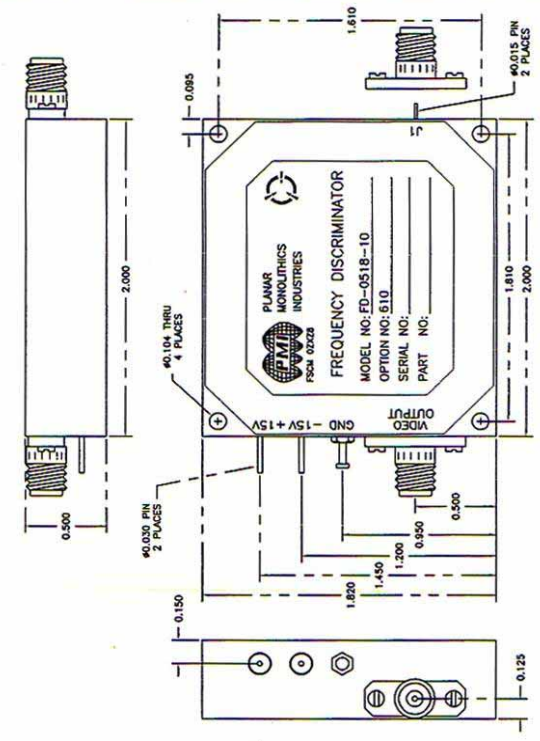
ZONE	REV.	DESCRIPTION	DATE	APPROVED
		ORIGINAL RELEASE JOB# P409037XN	3/9/05	

DESCRIPTION

PMI MODEL FD-0518-10 OPTION: 610 IS A 6 TO 10 GHz FREQUENCY DISCRIMINATOR HAVING A VSWR OF 2.0:1 MAXIMUM AND 1.5:1 TYPICAL AND A FREQUENCY DISCRIMINATOR ACCURACY OF ± 200 MHz.

SPECIFICATIONS

- FREQUENCY RANGE.....6.0 TO 10.0 GHz
- VSWR INPUT.....2.0:1 MAXIMUM
1.5:1 TYPICAL
- OPERATING INPUT POWER.....+10 dBm NOMINAL, ± 0.1 dBm
- VIDEO IMPEDANCE.....100 OHMS NOMINAL
- VIDEO OUTPUT RISE TIME.....20 nSec
- VIDEO OUTPUT SLOPE.....50 mV/GHz
- FREQUENCY DISCRIMINATOR ACCURACY.....± 200 MHz TYP., ± 300 MHz MAX.
- RF INPUT POWER, SURVIVAL.....+15 dBm
- POWER PLUS.....+15 VDC @ +75 mA
- POWER MINUS.....-15 VDC @ -75 mA
- SIZE.....2.00" x 1.80" x 0.50"
- WEIGHT.....< 4 oz.



PLANAR MONOLITHICS INDUSTRIES, INC.
 FREQUENCY DISCRIMINATOR
 MODEL NO: FD-0518-10
 OPTION NO: 610
 SERIAL NO:
 PART NO:

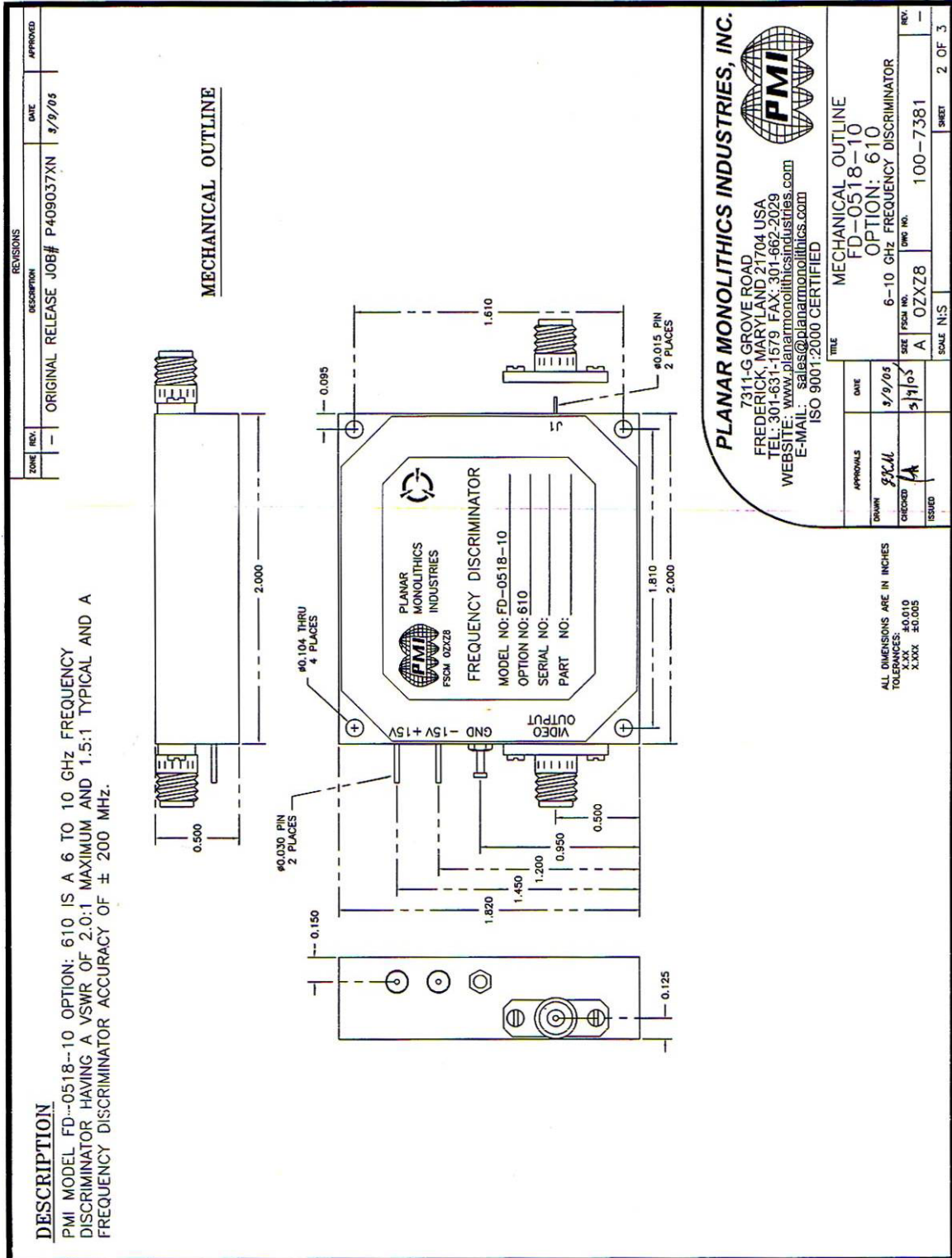
ENVIRONMENTAL RATINGS.

- TEMPERATURE.....-55°C TO +85°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 107D COND. A

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

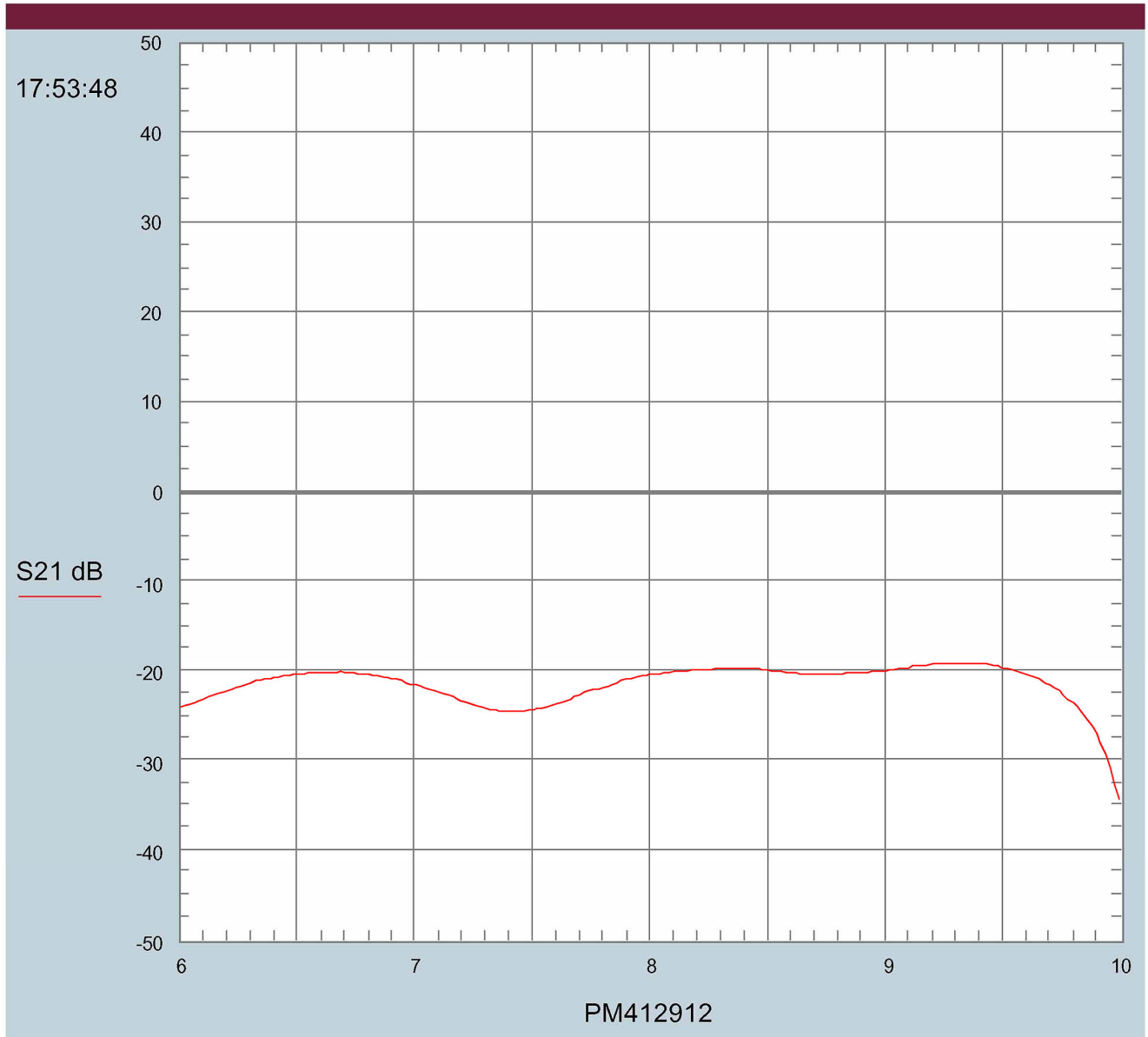
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PRODUCT FEATURE—MECHANICAL DRAWING

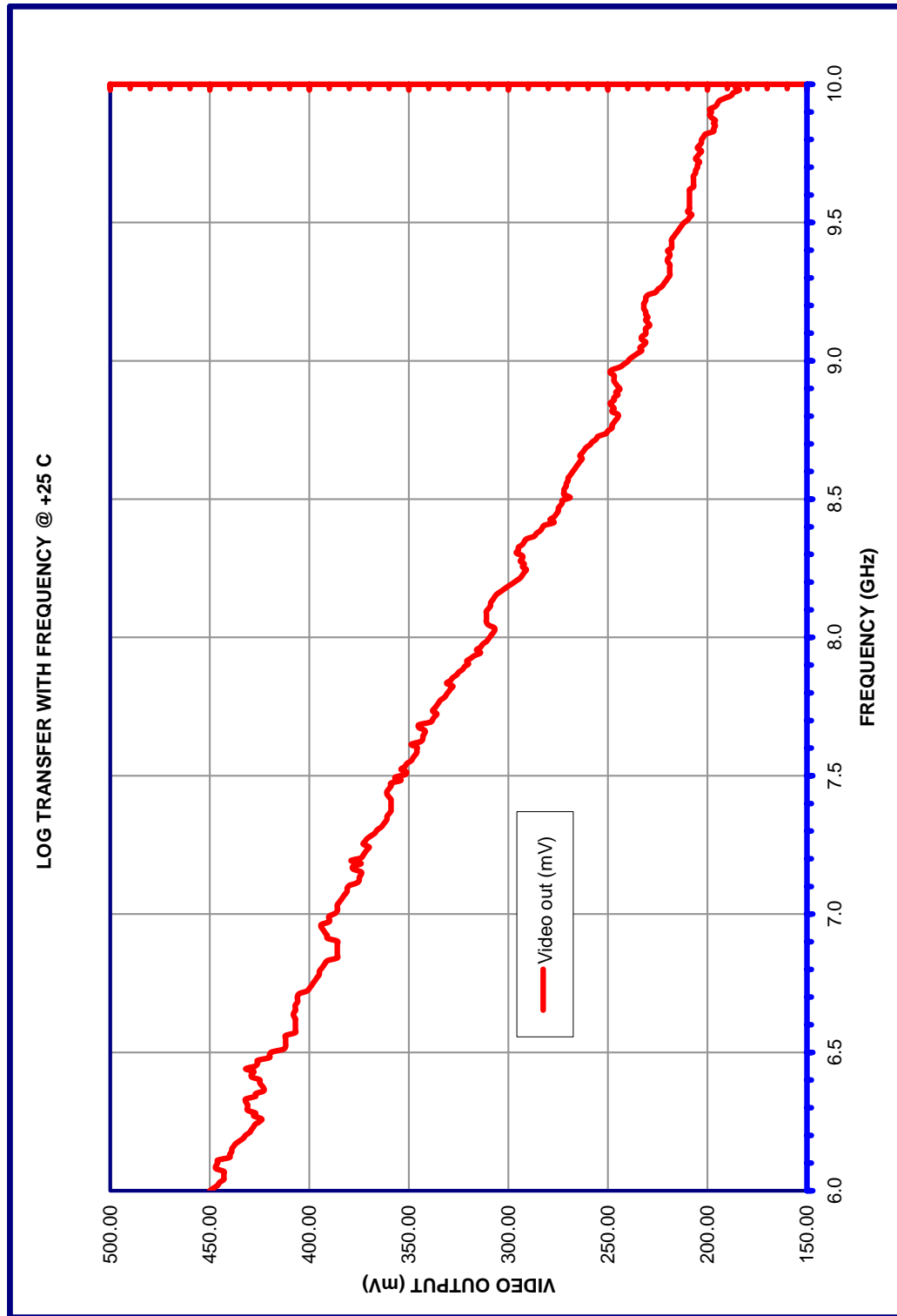


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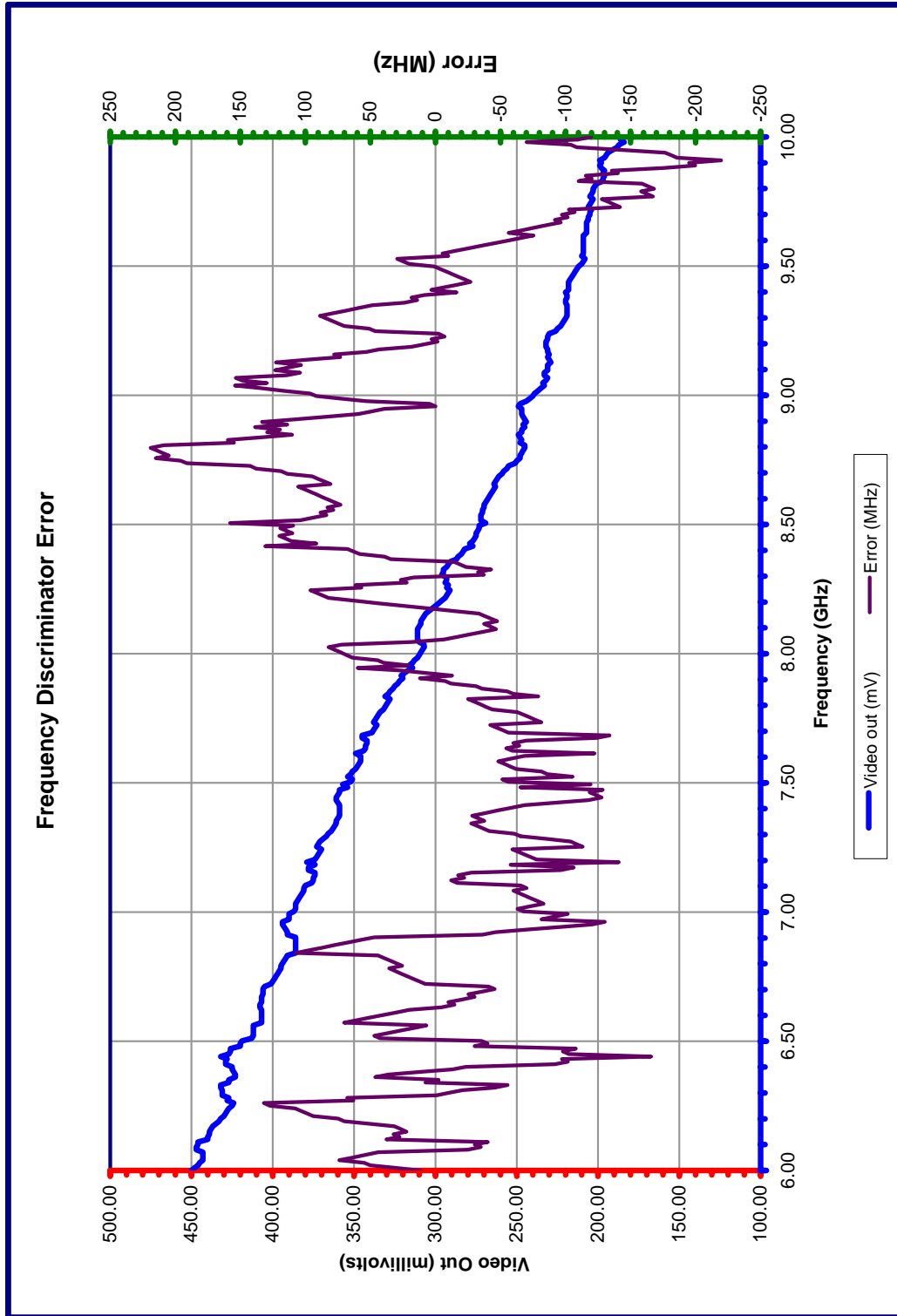
RETURN LOSS (VSWR)



LOG TRANSFER WITH FREQUENCY



LOG TRANSFER WITH ERROR



VIDEO OUTPUT SLOPE

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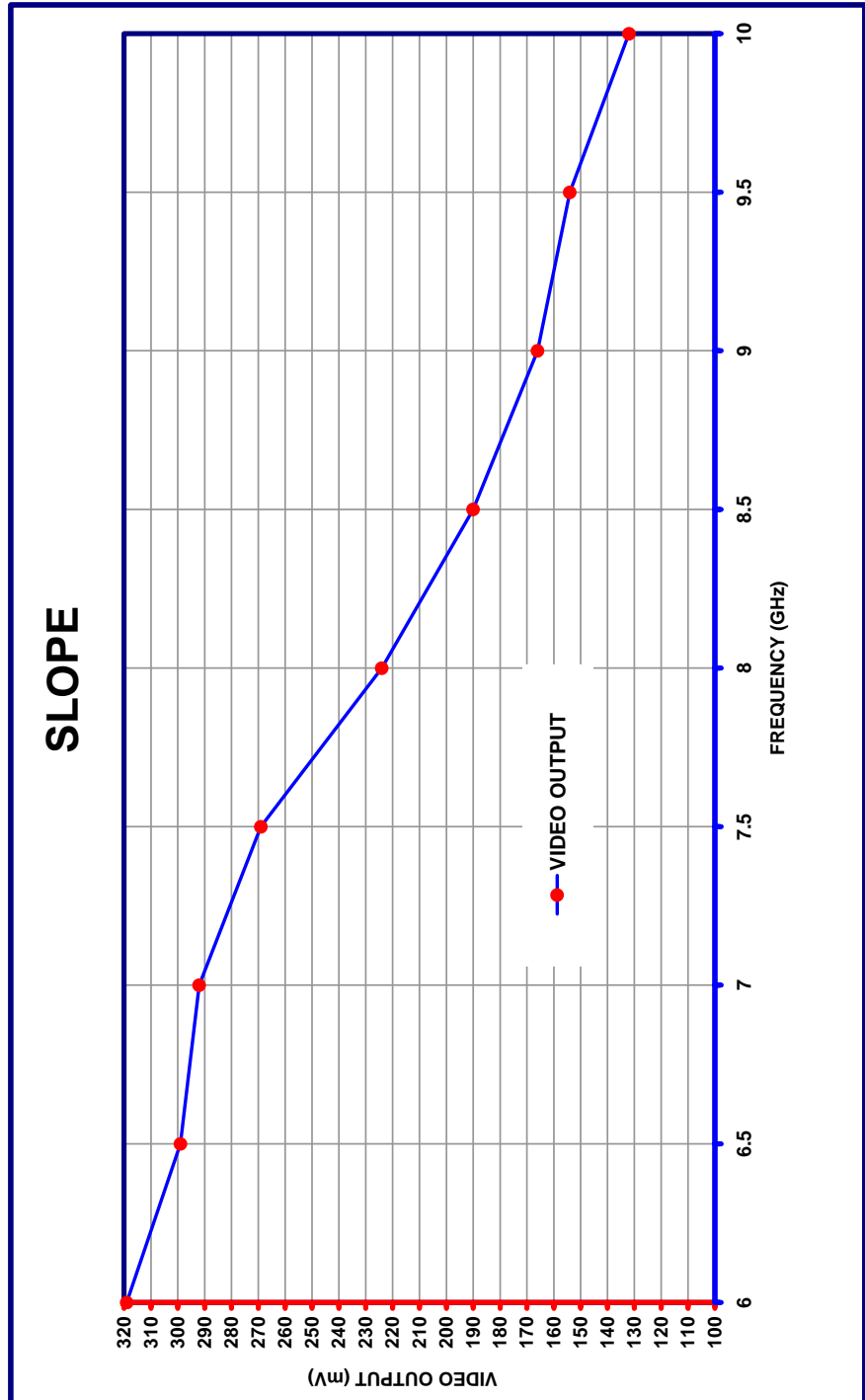
DATE: 02/28/05

FD-0518-10 DL401020 610
 OPTION NUMBER:
 FREQUENCY DISCRIMINATOR

Intercept (mv) 631
 Slope (mv/db) -50

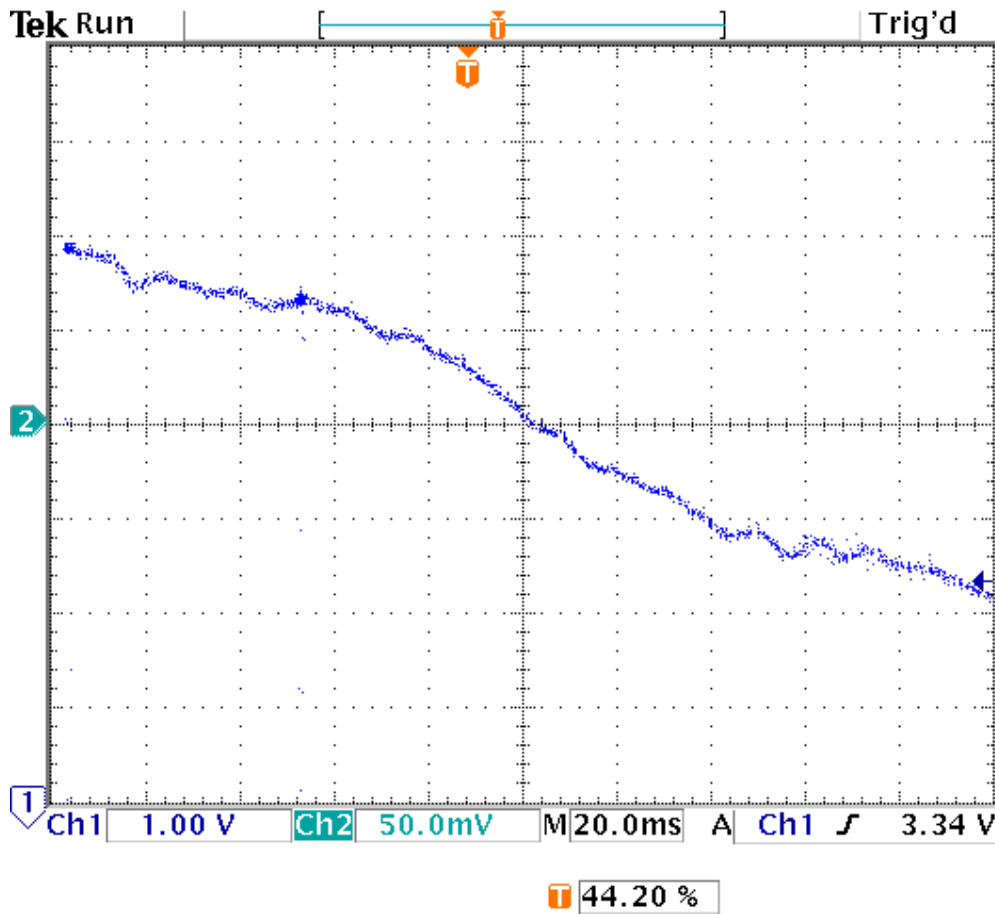
Frequency (GHz)
6
6.5
7
7.5
8
8.5
9
9.5
10

Measured Values (mv)	Error (mv)
319	-9
299	-4
292	14
269	17
224	-3
190	-12
166	-11
154	2
132	6



VIDEO OUTPUT SLOPE

Model Number: FD-0518-10
Frequency: 6 GHz TO 10 GHz
Blue Trace: Video Output (mV)



SUMMARY TEST DATA AS PRESENTED TO CUSTOMER

FORM: 003-FD-DTA



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**SUMMARY TEST DATA ON
 FREQUENCY DISCRIMINATOR**

CUSTOMER: <u>THINKUS</u>	JOB NO: <u>P409037XN</u>
MODEL NO: <u>FD-0518-10</u>	TESTED BY: <u>R.AFABLE</u>
OPTION NO: <u>610</u>	FREQUENCY: <u>6 – 10 GHz</u>
SERIAL NO: <u>PM412612</u>	DATE: <u>2/26/05</u>

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	VSWR INPUT	2.0:1 MAXIMUM 1.5:1 TYPICAL	1.20:1	✓
2	OPERATING INPUT POWER	+10 dBm NOMINAL, ± 0.1 dBm	+10 dBm	✓
3	IMPEDANCE	100 Ω (± 10%)	100 Ω	✓
4	LOG VIDEO OUTPUT RISE TIME	25 nSec MAXIMUM 20 nSec TYPICAL	20 nS	✓
5	LOG VIDEO OUTPUT SLOPE	50 mV/GHz	50.4 mV/GHz	✓
6	ACCURACY	± 300 MHz MAX. ± 200 MHz TYP.	± 250 MHz	✓
7	DC POWER @ +15V (NO LOAD)	+75 mA MAXIMUM +50 mA TYPICAL	16 mA	✓
8	DC POWER @ +15V (NO LOAD)	-75 mA MAXIMUM -50 mA TYPICAL	9 mA	✓

PRODUCTION MANAGER APPROVAL: _____ DATED: _____

QA / QC APPROVAL: RAMB _____ DATED: 3/10/05