



TEST REPORT

ON

2 TO 18 GHz

SINGLE POLE SINGLE THROW

REFLECTIVE SWITCH MODULE

AMC MODEL No:

SWN-2184-1DR

OPTION HS25NS, HPR05W, -12V

Serial Number: 1MS5020190

DESIGNED

BY

E. Elder

TESTED

BY

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REPORTED

BY

E. Elder

March 14, 2005

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ISO9001 : 2000 CERTIFIED

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SINGLE POLE SINGLE THROW REFLECTIVE SWITCH MODULE

AMC MODEL No: SWN-2184-1DR OPTIONS HS25NS, HPR05W, -12V

FEATURES:

- **2 TO 18 GHz FREQUENCY RANGE**
- **25 nS HIGH SPEED CAPABILITIES**
- **0.5 W POWER HANDLING CAPABILITIES**
- **+5V, -12V SUPPLIES**



SPECIFICATIONS:

- | | | |
|------------------|---|---|
| ● FREQUENCY | : | 2 TO 18 GHz |
| ● INSERTION LOSS | : | 2.5 dB MAXIMUM |
| ● ISOLATION | : | 70 dB MINIMUM |
| ● VSWR | : | 2.0:1 |
| ● SPEED | : | DELAY ON: 25 nS MAXIMUM
DELAY OFF: 40 nS MAXIMUM |
| ● POWER HANDLING | : | 1 WATT CW, 10 WATTS PEAK 1 uS |
| ● CONTROL | : | TTL LOGIC "0" = ON, "1" = OFF |
| ● POWER SUPPLY | : | +5V @ 100 mA MAXIMUM
-12V @ 50 mA MAXIMUM |
| ● CONNECTORS | : | |
| RF | : | SMA FEMALE |
| CONTROL | : | SOLDER PIN |
| ● SIZE | : | 1.00" (L) x 1.00" (W) x 0.50" (H) |

PRODUCT FEATURE

ZONE	REV	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE JOB# 502040	2/11/05	

DESCRIPTION

AMC MODEL SWN-2184-1DR OPTION: HS25NS, HPR05W, -12V IS A HIGH SPEED, REFLECTIVE SINGLE POLE SINGLE THROW SWITCH DESIGNED TO OPERATE OVER THE FULL 2 TO 18 GHz FREQUENCY RANGE WITH 0.5 WATT POWER HANDLING.


SPECIFICATIONS

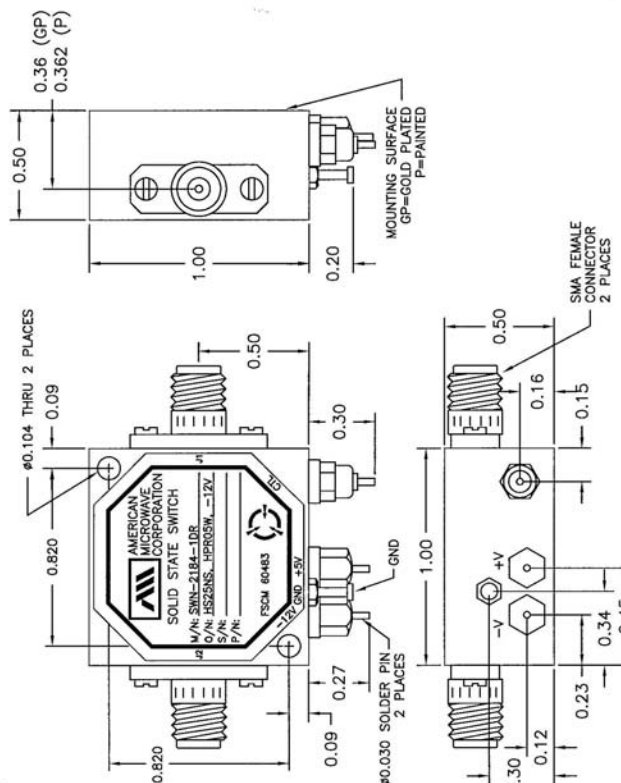
- FREQUENCY RANGE: 2 TO 18 GHz
- INSERTION LOSS: 2.5 dB MAXIMUM
- ISOLATION: 70 dB MINIMUM
- VSWR: 2.0:1
- DELAY ON: 25 nSec MAXIMUM
- DELAY OFF: 25 nSec MAXIMUM
- POWER HANDLING: 1 WATT CW, 10 WATTS PEAK 1 uSec
- CONTROL: TTL LOGIC "0" = ON
 TTL LOGIC "1" = OFF
- POWER SUPPLY: +5V @ 100 mA MAXIMUM
 -12V @ 50 mA MAXIMUM
- CONNECTORS: SMA FEMALE
 RF: SOLDER PIN
- CONTROL: SOLDER PIN
- SIZE: 1.00" (L) x 1.00" (W) x 0.50" (H)

OPTIONS:

- HS25NS: HIGH SPEED 25 nSec
- HPR05W: 0.5 WATT HIGH POWER HANDLING
- -12V: -12V POWER SUPPLY

BLOCK DIAGRAM





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

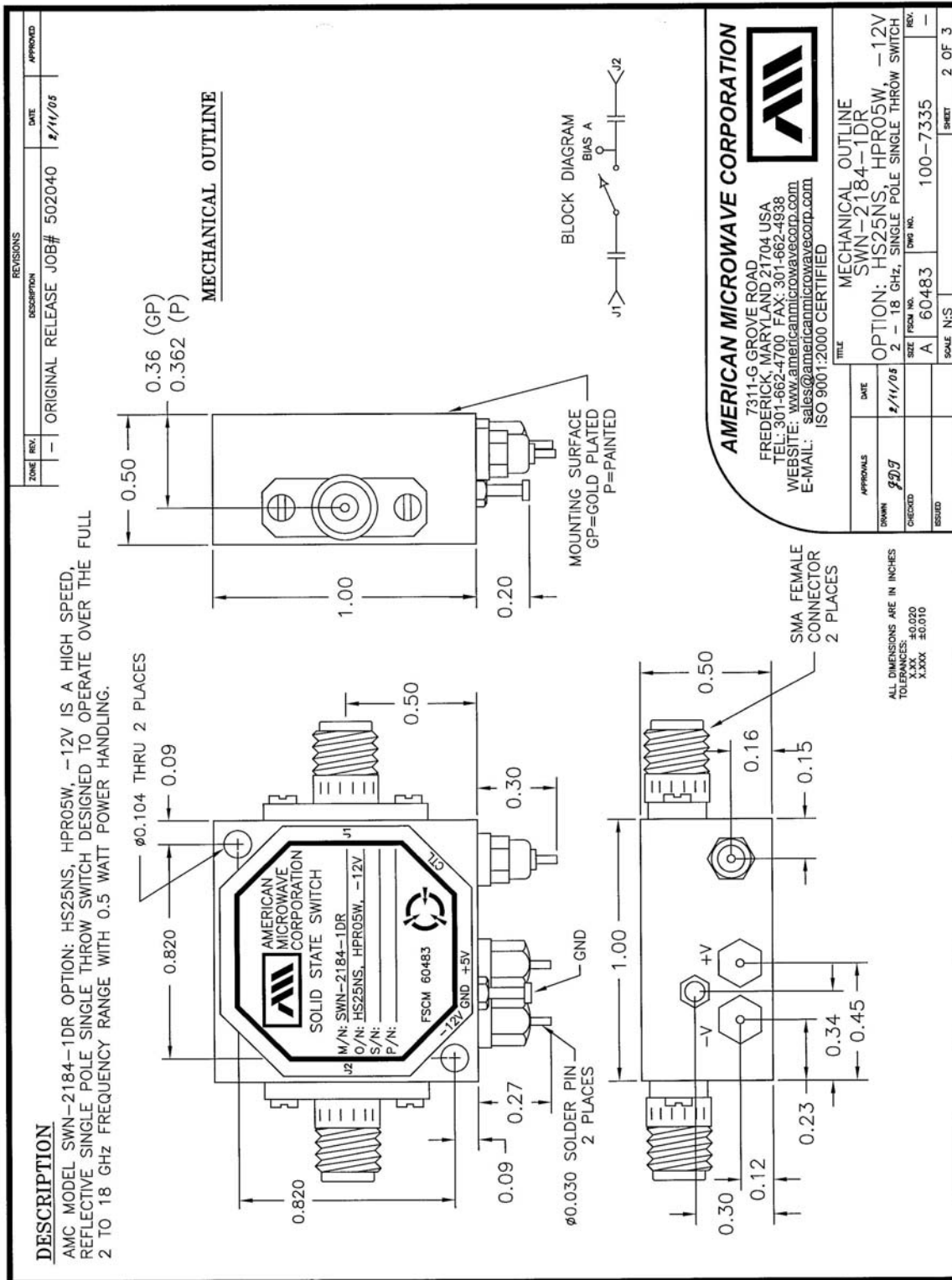
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 ISO 9001:2000 CERTIFIED

APPROVALS	DATE	TITLE	DRAWN	CHECKED	ISSUED	SCALE	SHEET	DF
	2/11/05	PRODUCT FEATURE	JDJ			100-7335	1	3

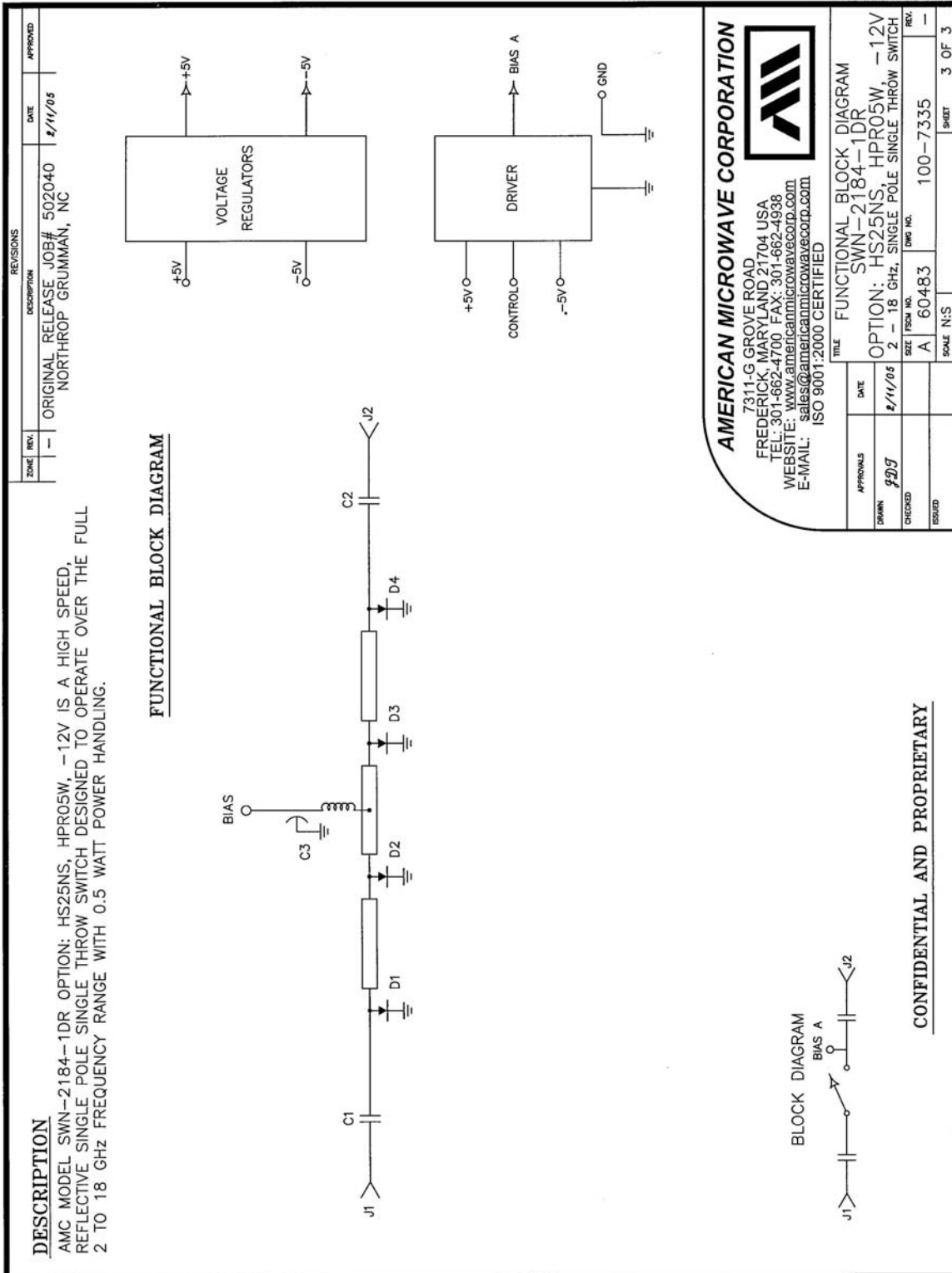


OUTLINE DRAWING





FUNCTIONAL SCHEMATIC



FINAL TEST DATA

FINAL TEST DATA SHEETS

FOR

AMC MODEL NUMBER

SWN-2184-1DR
OPTION HS25NS, HPR05W, -12V

Serial Number:

1MS502019

FINAL TEST DATA

AMC MODEL NO: SWN-2184-DR OPTIONS HS25NS, HPR05W, -12V, SERIAL NUMBER: 1MS502019

FORM: 584-SW-DTA
 DATE: _____



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FINAL TEST DATA
 ON
 MICROWAVE SWITCH

CUSTOMER: NORTHROP GRUMMAN TECHNICIAN: Ed Elder
 JOB NO: 502040 502056 NH 2/12/05
 MODEL NO: SWN-2184-1DR OPTION NO: HS25NS, HPR05W, -12V
 SERIAL NO: 1MS502019 SPECIFICATION:
 CURRENT DRAW: + 5 VDC @ 45 mA; - 12 VDC @ 3 mA FREQUENCY RANGE: 2 - 18 GHz

INSERTION LOSS (WORST CASE)			RETURN LOSS (WORST CASE)					
			INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2	1.89 dB @	2-18 GHz	10.78 dB:1	: 1	10.86 dB:1	: 1	∞ dB:1	: 1
	dB @	GHz	dB:1	: 1	dB:1	: 1	dB:1	: 1
	dB @	GHz	dB:1	: 1	dB:1	: 1	dB:1	: 1
	dB @	GHz	dB:1	: 1	dB:1	: 1	dB:1	: 1
	dB @	GHz	dB:1	: 1	dB:1	: 1	dB:1	: 1
	dB @	GHz	dB:1	: 1	dB:1	: 1	dB:1	: 1
	dB @	GHz	dB:1	: 1	dB:1	: 1	dB:1	: 1
	dB @	GHz	dB:1	: 1	dB:1	: 1	dB:1	: 1
	dB @	GHz	dB:1	: 1	dB:1	: 1	dB:1	: 1
	dB @	GHz	dB:1	: 1	dB:1	: 1	dB:1	: 1

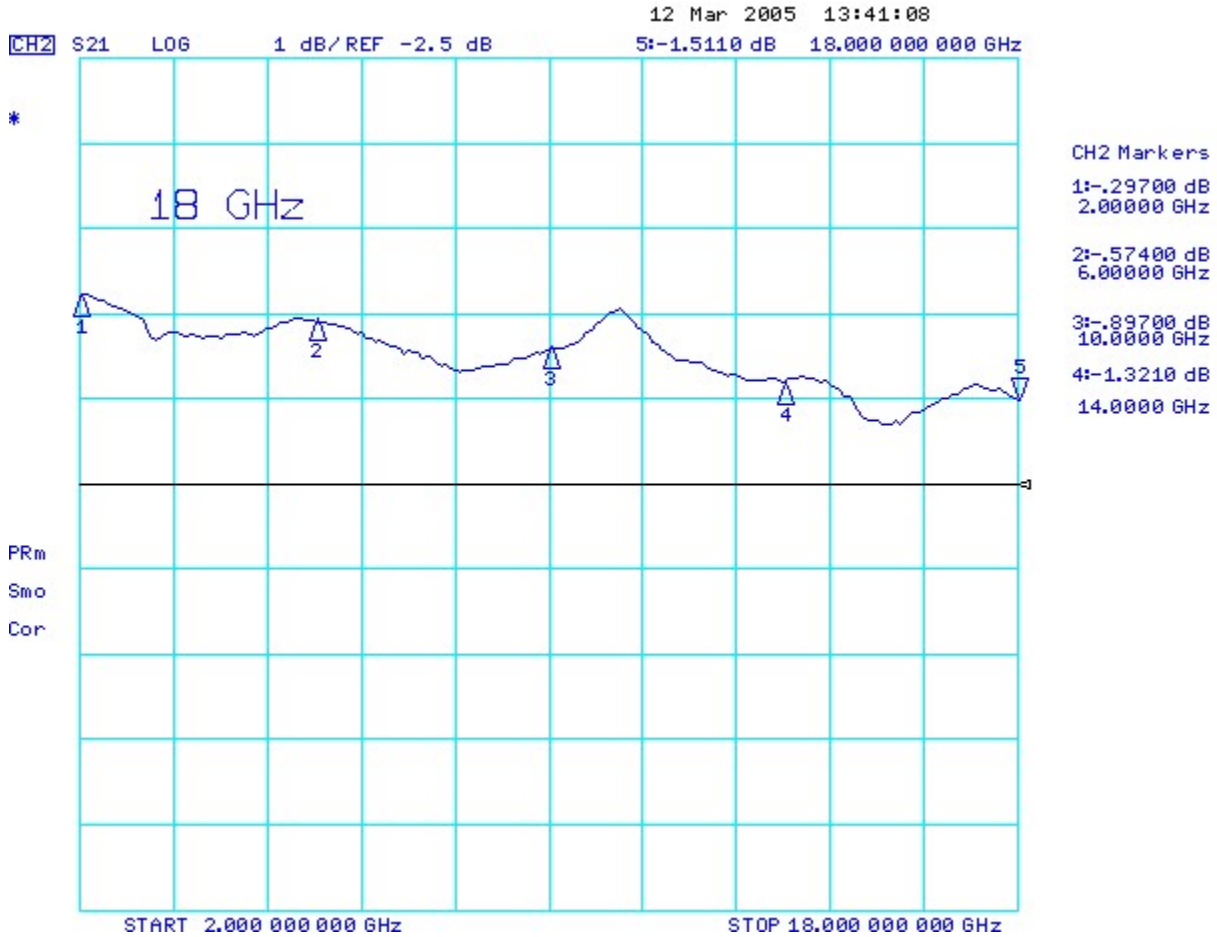
ISOLATION			SWITCHING SPEED			
			DELAY ON	RISE TIME	DELAY OFF	FALLTIME
J1-J2	70 dB @	2-18 GHz	16 nS	3 nS	40 nS	3 nS
	dB @	GHz	nS	nS	nS	nS
	dB @	GHz	nS	nS	nS	nS
	dB @	GHz	nS	nS	nS	nS
	dB @	GHz	nS	nS	nS	nS
	dB @	GHz	nS	nS	nS	nS
	dB @	GHz	nS	nS	nS	nS
	dB @	GHz	nS	nS	nS	nS
	dB @	GHz	nS	nS	nS	nS

NOTE: Any additional test data on back

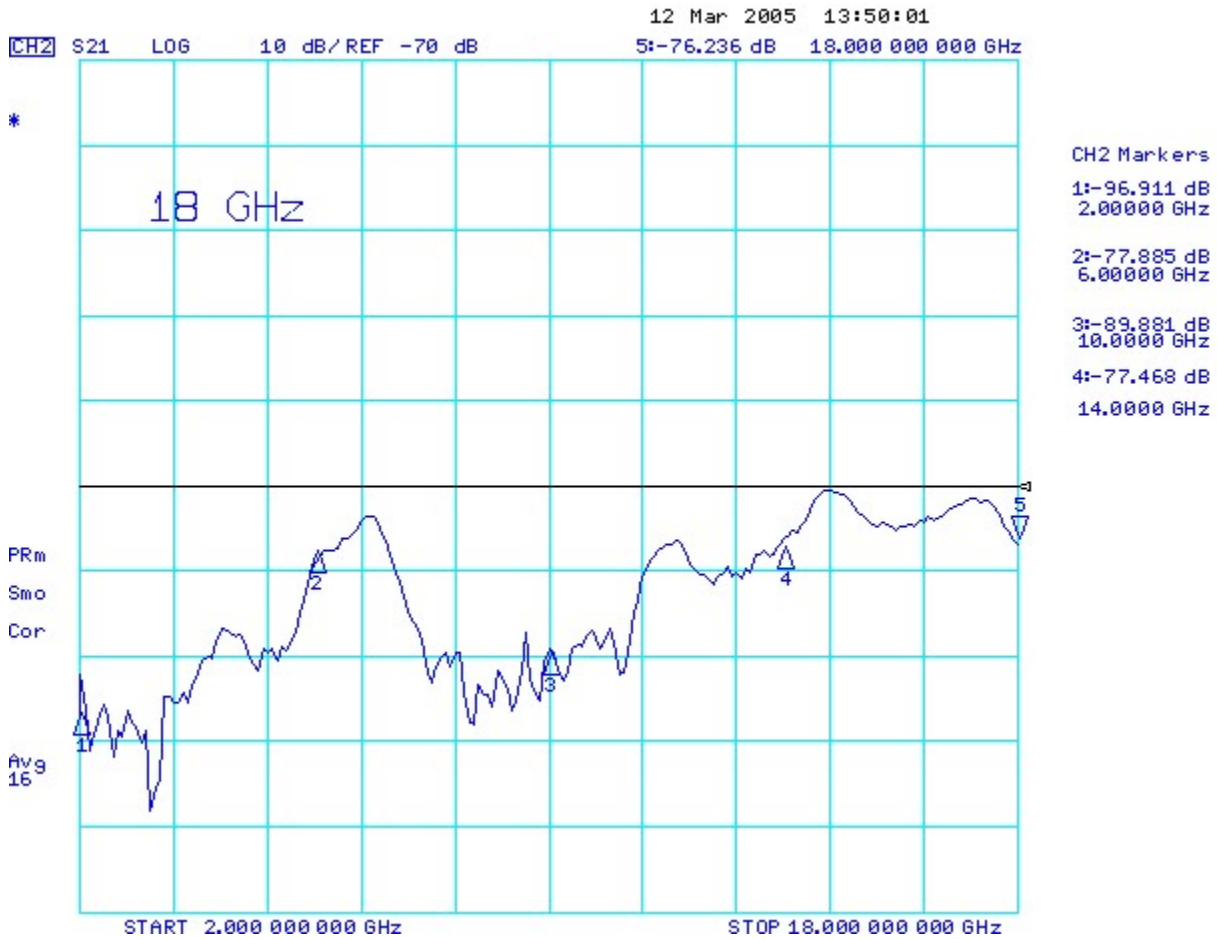
TESTED ON: HP 8720C

QA/QC APPROVAL: _____ DATED: ~~_____~~

INSERTION LOSS PLOT

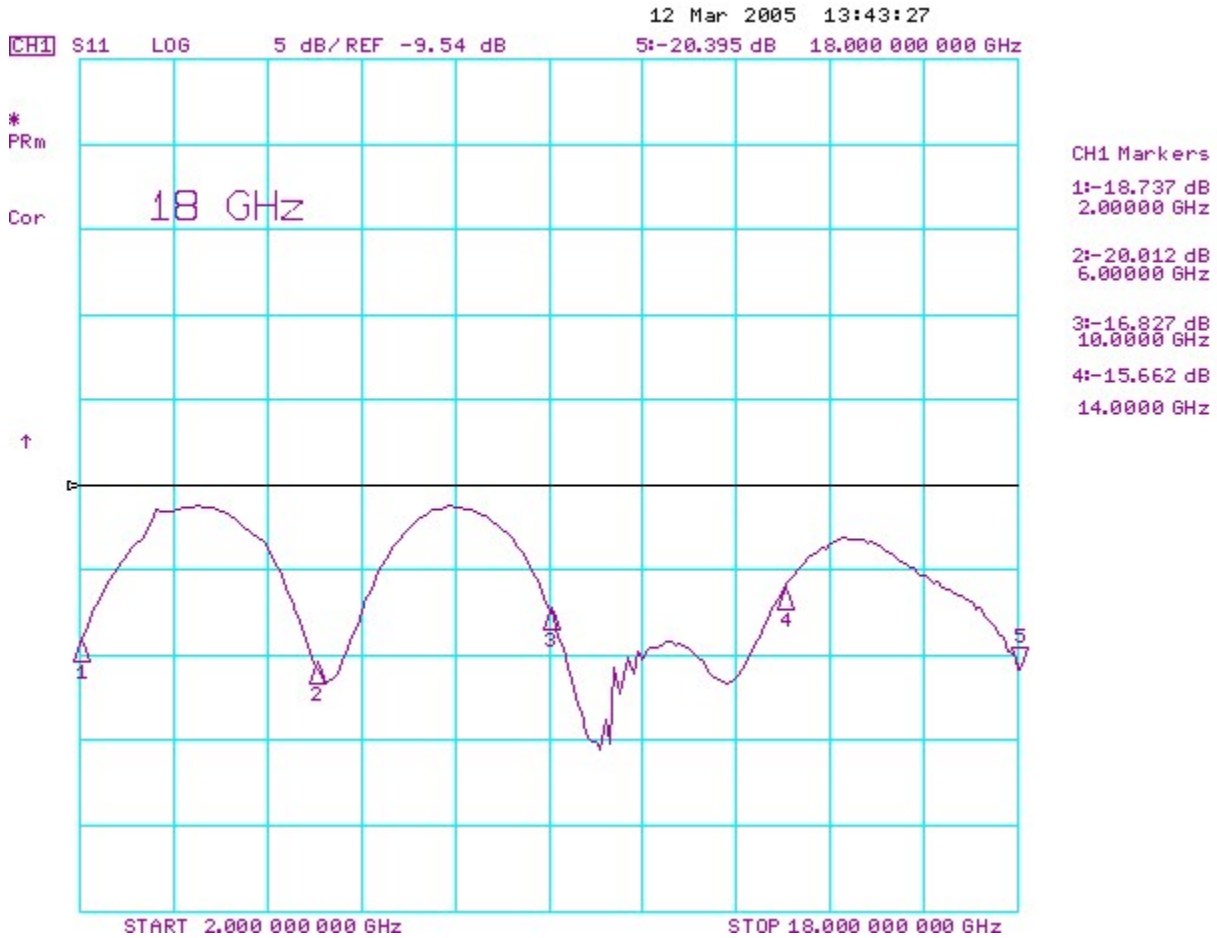


ISOLATION PLOT



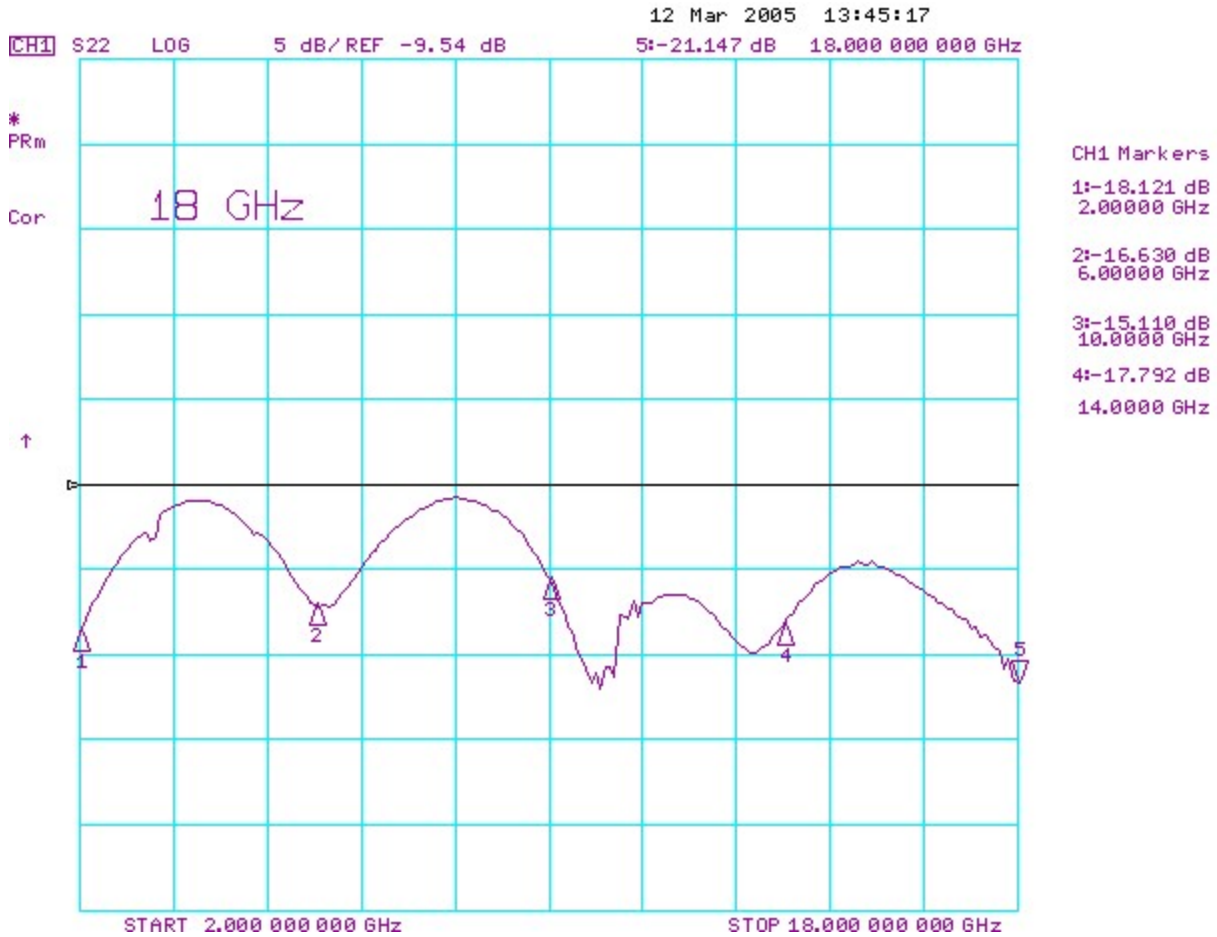
VSWR PLOTS

INPUT



VSWR PLOTS

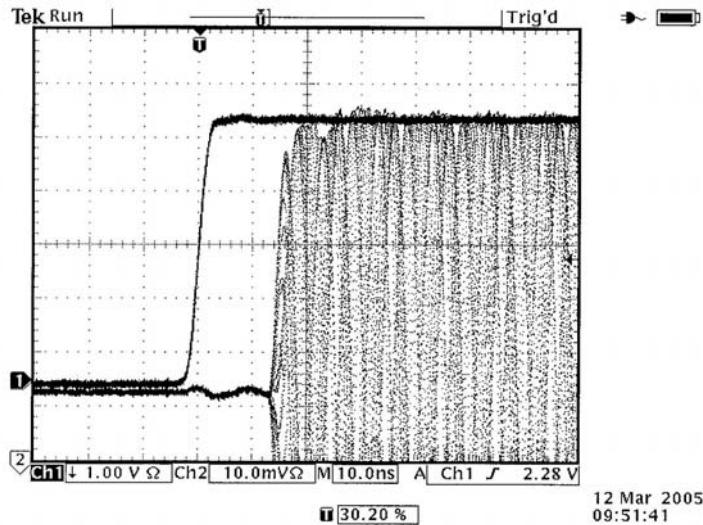
OUTPUT (ON)



SWITCHING SPEED PLOTS

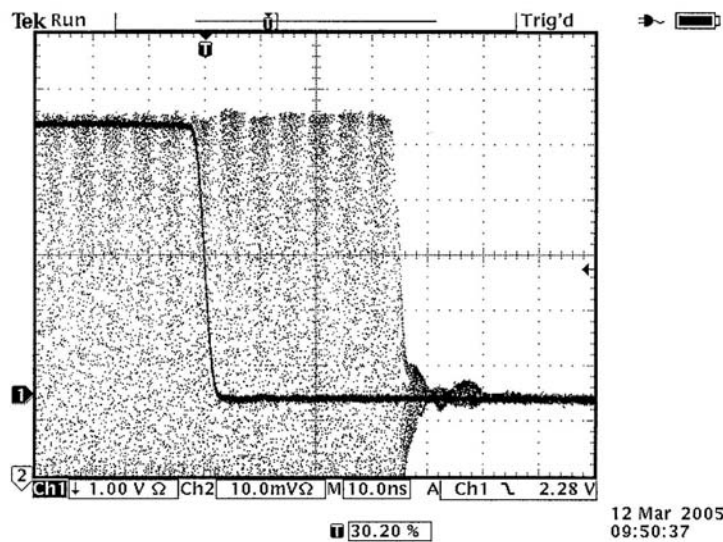
DELAY ON

TDS 3014B 12 Mar 2005 09:51:42



DELAY OFF

TDS 3014B 12 Mar 2005 09:50:37



VIDEO TRANSIENT PLOT

TDS 3014B 12 Mar 2005 09:56:45

