



**AMERICAN MICROWAVE
CORPORATION**

TEST DATA

ON

1 GHz TO 18 GHz

LOW LOSS

LOW VIDEO TRANSIENTS (L/C)

8nS-ULTRA HIGH SPEED

ECL LOGIC

REFLECTIVE, SPST PIN DIODE SWITCH

MODEL No: SWN-RRA-1DR-ECL-LVT

(Serial Number: 1MS506228)

**BY
AMERICAN MICROWAVE
CORPORATION**

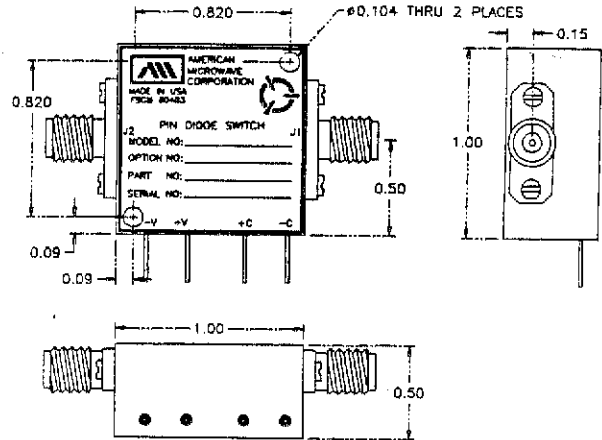
JUNE 13, 1995

7311 G GROVE ROAD, FREDERICK, MARYLAND 21701 • Tel. (301) 662-4700 • Fax (301) 662-4938

AMERICAN MICROWAVE CORPORATION

LOW VIDEO TRANSIENT ULTRA HIGH SPEED, ECL LOGIC REFLECTIVE, SPST SWITCH

- 1 GHz TO 18 GHz
- LOW VIDEO TRANSIENTS
- ULTRA HIGH SPEED
- HIGH ISOLATION
- ECL LOGIC



AMC MODEL No: SWN-RRA-1DR-ECL-LVT

SPECIFICATIONS:

- **FREQUENCY RANGE** : 1 GHz to 18 GHz
- **INSERTION LOSS** : 2.50 dB MAX. @ 18.0 GHz, 2.3dB TYP.
: 1.33 dB TYP. @ 1.0 GHz
: 0.76 dB TYP. @ 2.0 GHz
: 1.43 dB TYP. @ 10.0 GHz
- **ISOLATION** : ≥ 60 dB MIN., 75dB TYP.
: ≥ 60 dB TYP. @ 1.0 GHz
: ≥ 70 dB TYP. @ 2.0 GHz
: ≥ 88 dB TYP. @ 10.0 GHz
: ≥ 80 dB TYP. @ 18.0 GHz
- **VSWR** : 2.0:1
- **SWITCHING SPEED** : "RISE" 3nS MAX., 2nS TYP.
: "FALL" 3nS MAX., 2nS TYP.
: "ON" 10nS MAX., 7nS TYP.
: "OFF" 10nS MAX., 9nS TYP.
- **CONTROL** : ECL Compatible
- **VIDEO TRANSIENTS** : ≤ 400 mV Peak to Peak, 300 MHz Bandwidth
: ± 50 mV Peak to Peak, 20 MHz Bandwidth
- **RF INPUT POWER** : +20dBm Operating, 1 Watt Survival
- **DC POWER SUPPLY** : ± 5 vdc @ +50mA, -80mA
- **SIZE** : 1.0" X 1.0" X 0.5"

ABSORPTIVE AND MULTITHROW VERSIONS AVAILABLE
ULTRA-HIGH SPEED 6nS (ON/OFF) REFLECTIVE VERSION AVAILABLE

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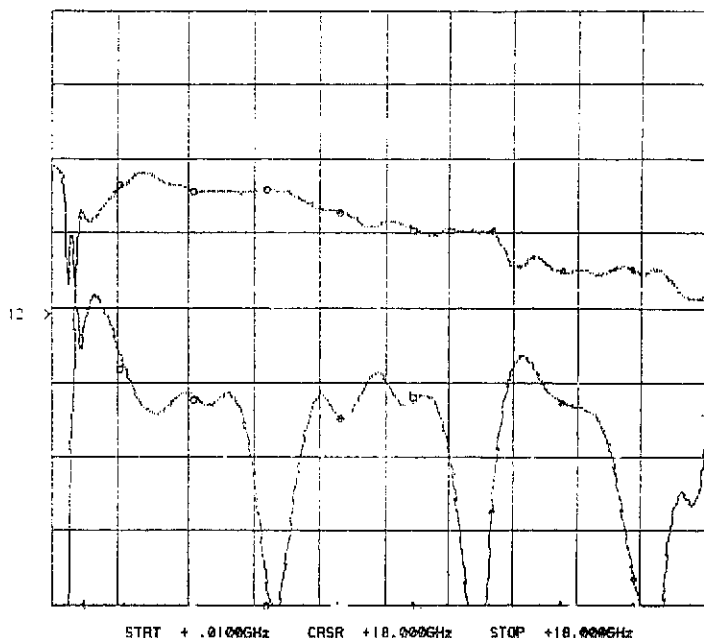


SUMMARY TEST DATA
SWN-RRA-1DR-ECL-LVT
PAGE 3

SERIAL NUMBER : IMS506228
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$ @ $+42\text{mA}$, -80mA

INSERTION LOSS & RETURN LOSS

CH1: A M 2.33 dB CH2: B M -16.71 dB
1.0 dB/ REF - 2.50 dB 5.0 dB/ REF - 9.54 dB



FREQUENCY	INSERTION LOSS	RETURN LOSS
1.0 GHz	1.33dB	8.87dB
2.0 GHz	0.76dB	13.86dB
4.0 GHz	0.89dB	15.79dB
6.0 GHz	0.89dB	30.24dB
8.0 GHz	1.19dB	16.90dB
10.0 GHz	1.43dB	15.40dB
12.0 GHz	1.44dB	22.76dB
14.0 GHz	1.98dB	15.86dB
16.0 GHz	2.11dB	27.62dB
18.0 GHz	2.33dB	16.71dB

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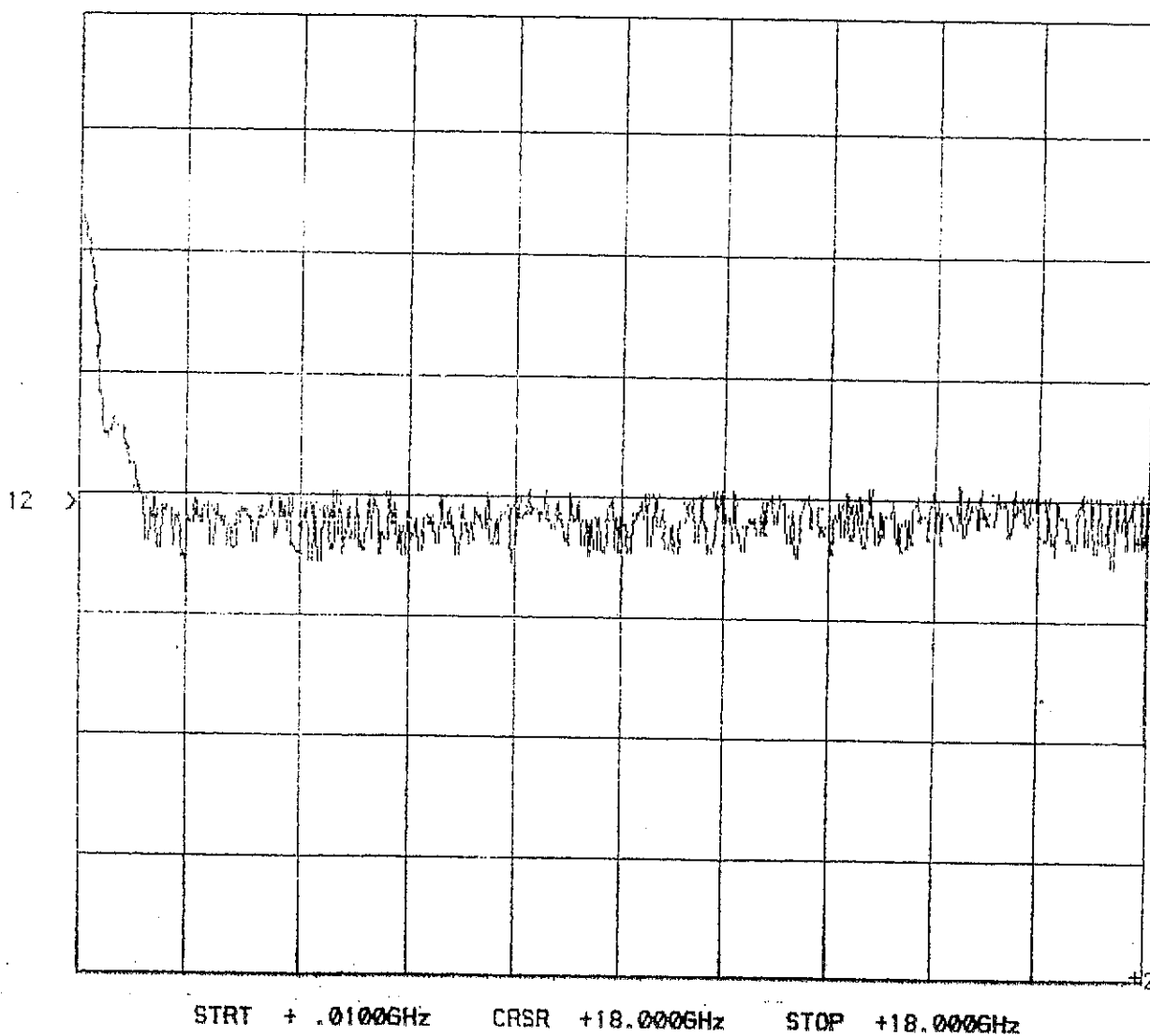
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SERIAL NUMBER : 1MS506226
TECHNICIAN : RENE AFABLE
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ISOLATION

(AS MEASURED ON A NETWORK ANALYZER)

CH1: A -M - 67.27 dB CH2: B -M - 46.74 dB
20.0 dB/ REF - 80.00 dB 5.0 dB/ REF - 9.54 dB



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SUMMARY TEST DATA
SWN-RRA-2DR-ECL-LVT
PAGE 5

SERIAL NUMBER : 1MS506228
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$ @ +42mA, -80mA

ISOLATION
(AS MEASURED ON A SPECTRUM ANALYZER)

FREQUENCY	ISOLATION
1 GHz	60dB
2 GHz	70dB
4 GHz	72dB
6 GHz	74dB
8 GHz	82dB
10 GHz	88dB
12 GHz	84dB
14 GHz	80db
16 GHz	80dB
18 GHz	80dB

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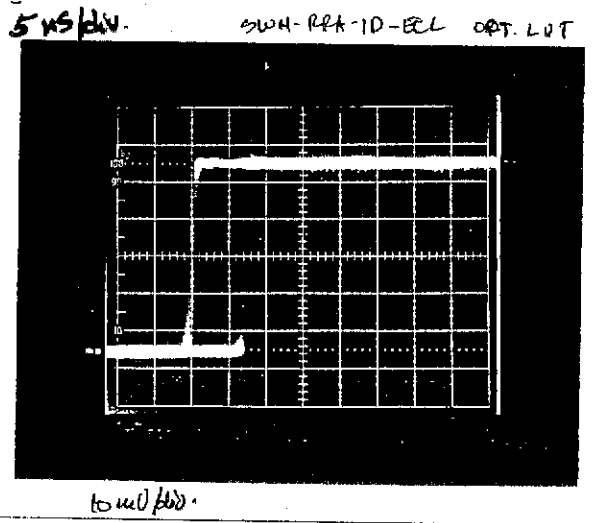
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VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$ @ +42mA, -80mA

SWITCHING SPEED

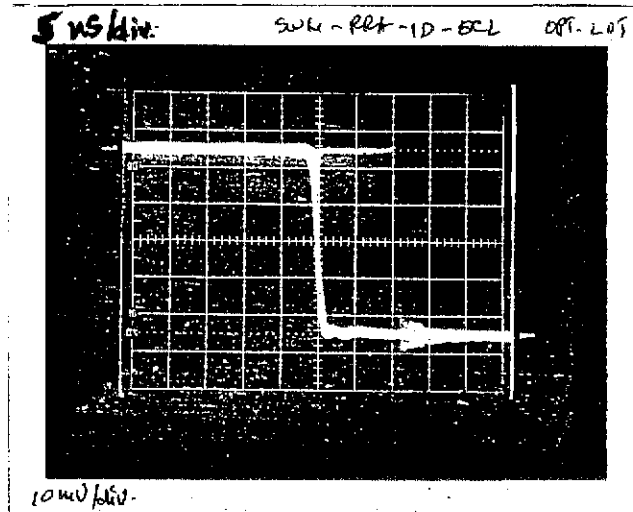
"Rise/Fall" Time: 10% RF to 90% RF & 90% RF to 10% RF
"On/Off" Time: 50% TTL to 90% RF or 10% RF

VERTICAL SCALE:
10mV/DIVISION



RISE TIME: $\leq 2\text{nS}$
ON TIME: $\leq 7\text{nS}$

HORIZONTAL SCALE:
5nS/DIVISION



FALL TIME: $\leq 2\text{nS}$
OFF TIME: $\leq 9\text{nS}$

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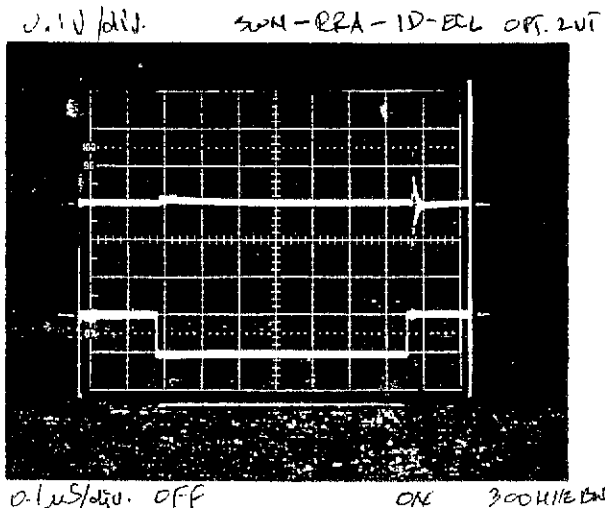
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TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$ @ +42mA, -80mA

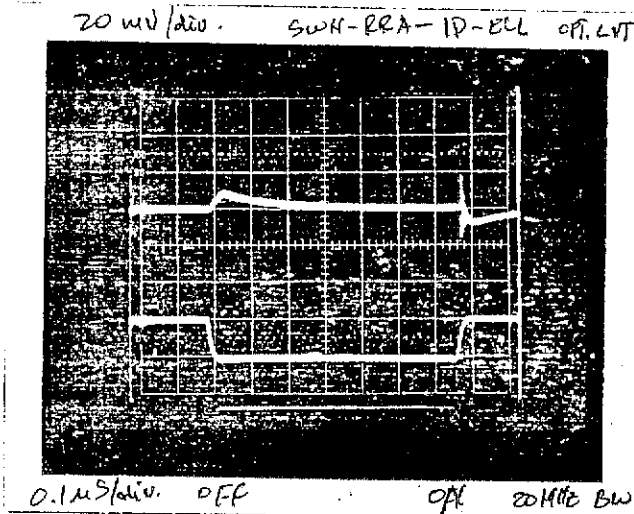
VIDEO TRANSIENTS

HORIZONTAL SCALE: $0.1\mu\text{S}/\text{DIVISION}$
VERTICAL SCALE: 0.1 VOLTS/DIVISION

MEASURED IN A
300 MHz BANDWIDTH



MEASURED IN A
20 MHz BANDWIDTH



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