



**AMERICAN MICROWAVE
CORPORATION**

TEST DATA

ON

2.0 GHz TO 18.0 GHz

LOW LOSS

VERY LOW VIDEO TRANSIENTS (L/C)

9nS-ULTRA HIGH SPEED

ECL LOGIC

REFLECTIVE, SPST PIN DIODE SWITCH

**AMC MODEL No:
SWN-AGRA-1DR-ECL-GAK3P-LVT**

(Serial Number: 1MS508262)

**BY
AMERICAN MICROWAVE
CORPORATION**

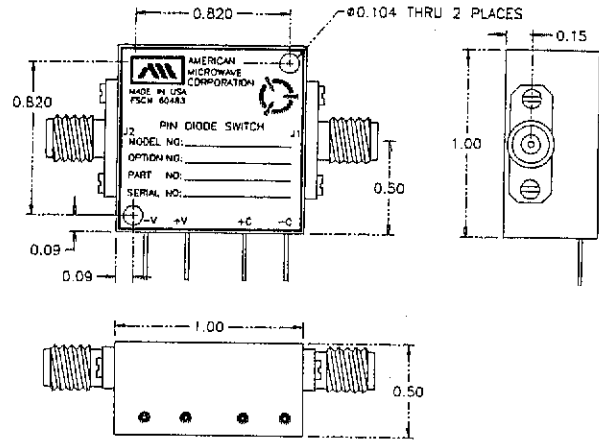
AUGUST 10, 1995

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

- LOW VIDEO TRANSIENTS
- ULTRA HIGH SPEED
- HIGH ISOLATION
- ECL LOGIC



AMC MODEL No: SWN-AGRA-1DR-ECL-GAK3P-LVT

SPECIFICATIONS:

- | | |
|--------------------|---|
| • FREQUENCY RANGE | : 2.0 GHz to 18.0 GHz |
| • INSERTION LOSS | : 2.0 dB MAX.
: 0.53 dB TYP. @ 2.0 GHz
: 0.92 dB TYP. @ 8.0 GHz
: 1.47 dB TYP. @ 18.0 GHz |
| • ISOLATION | : ≥ 70 dB MIN.
: ≥ 88 dB TYP. @ 2.0 GHz
: ≥ 94 dB TYP. @ 8.0 GHz
: ≥ 80 dB TYP. @ 18.0 GHz |
| • VSWR | : 2.0:1 |
| • SWITCHING SPEED | : RISE : 2nS MAX., 1nS TYP.
: FALL : 2nS MAX., 1nS TYP.
: ON : 12nS MAX., 9nS TYP.
: OFF : 12nS MAX., 3nS TYP. |
| • CONTROL | : ECL Compatible |
| • VIDEO TRANSIENTS | : ≤ 130 mV Peak to Peak, 300 MHz Bandwidth
: ≤ 5 mV Peak to Peak, 20 MHz Bandwidth |
| • RF INPUT POWER | : + 20 dBm Operating, 1 Watt Survival |
| • DC POWER SUPPLY | : ± 5 vdc @ ± 60 mA MAX. |
| • SIZE | : 1.0" X 1.0" X 0.5" |
| • WEIGHT | : ≤ 2.0 oz. |

MULTI-THROW VERSIONS AVAILABLE

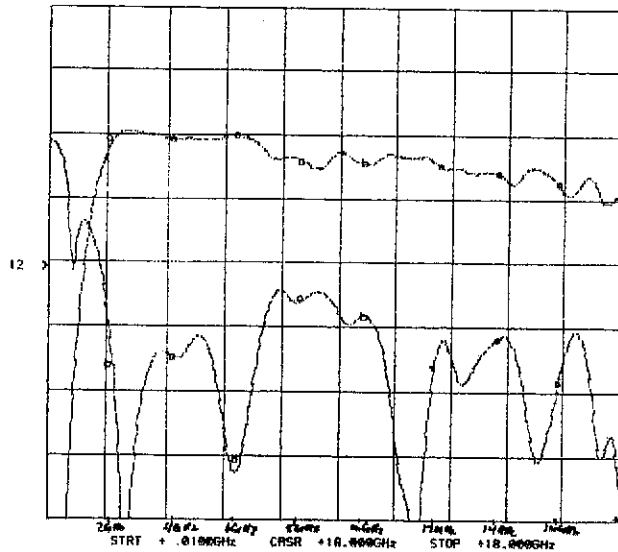
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SUMMARY TEST DATA
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SERIAL NUMBER : 1MS508262
 TECHNICIAN : RENE AFABLE
 VOLTAGE & CURRENT DRAW : ± 5 vdc On : +14mA, -15mA
 : Off : +40mA, -15mA

INSERTION LOSS & RETURN LOSS

CH1: A -R : 1.47 dB
 1.0 dB/ REF : 2.50 dB
 CH2: B -R : 29.52 dB
 5.0 dB/ REF : 9.54 dB



FREQUENCY	INSERTION LOSS	RETURN LOSS
2.0 GHz	0.53 dB	18.75 dB
4.0 GHz	0.54 dB	16.89 dB
6.0 GHz	0.52 dB	24.44 dB
8.0 GHz	0.92 dB	12.32 dB
10.0 GHz	0.93 dB	13.84 dB
12.0 GHz	0.90 dB	17.38 dB
14.0 GHz	1.08 dB	15.56 dB
16.0 GHz	1.38 dB	14.60 dB
18.0 GHz	1.47 dB	29.52 dB

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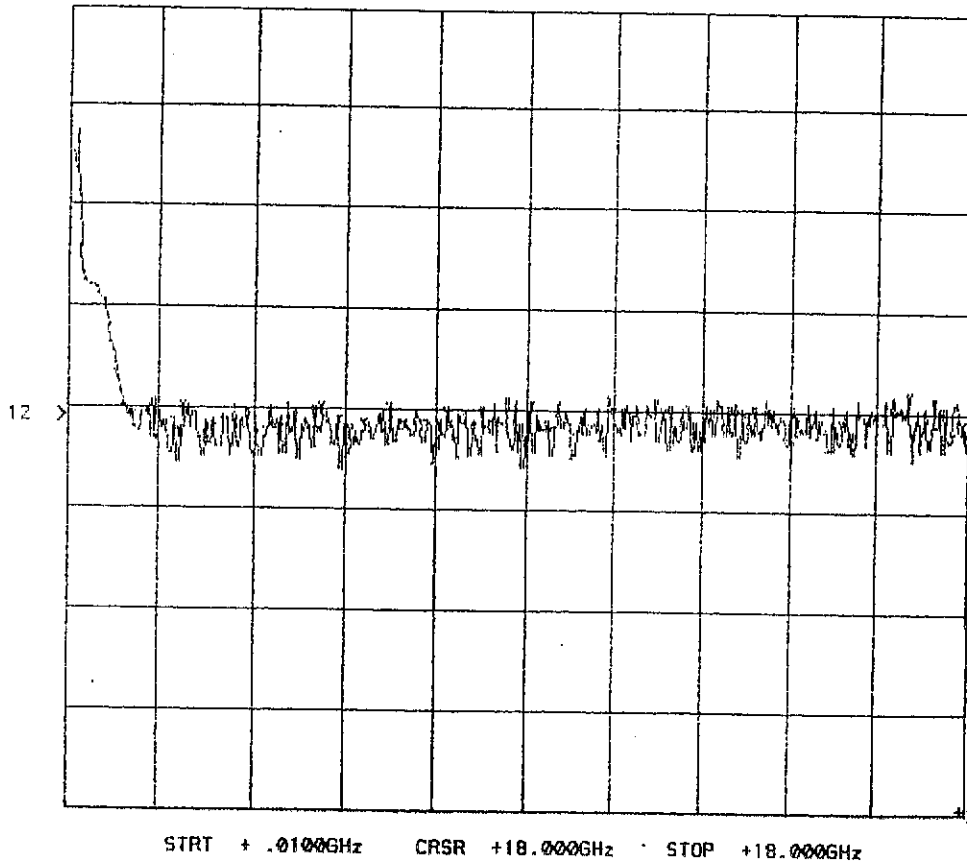
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PAGE 4

SERIAL NUMBER : 1MS508262
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : ± 5 vdc On : +14mA, -15mA
: Off : +40mA, -15mA

ISOLATION

(AS MEASURED ON A NETWORK ANALYZER)

CH1: A -M - 54.20 dB CH2: B -M - 44.94 dB
20.0 dB/ REF - 50.00 dB 5.0 dB/ REF - 9.54 dB



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SERIAL NUMBER : 1MS508262
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : ± 5 vdc On : +14mA, -15mA
: Off : +40mA, -15mA

ISOLATION

(AS MEASURED ON A SPECTRUM ANALYZER)

FREQUENCY	ISOLATION
500 MHz	50 dB
800 MHz	52 dB
1 GHz	62 dB
2 GHz	88 dB
4 GHz	94 dB
6 GHz	94 dB
8 GHz	94 dB
10 GHz	92 dB
12 GHz	88 dB
14 GHz	86 dB
16 GHz	82 dB
18 GHz	80 dB

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: Off : +40mA, -15mA

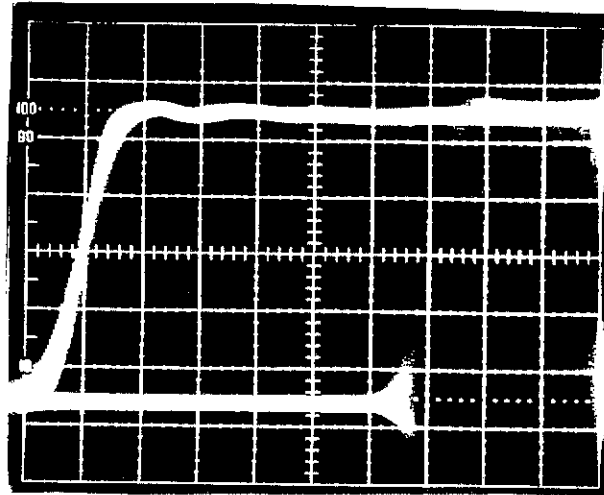
SWITCHING SPEED

"Rise/Fall" Time: 10% RF to 90% RF & 90% RF to 10% RF

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

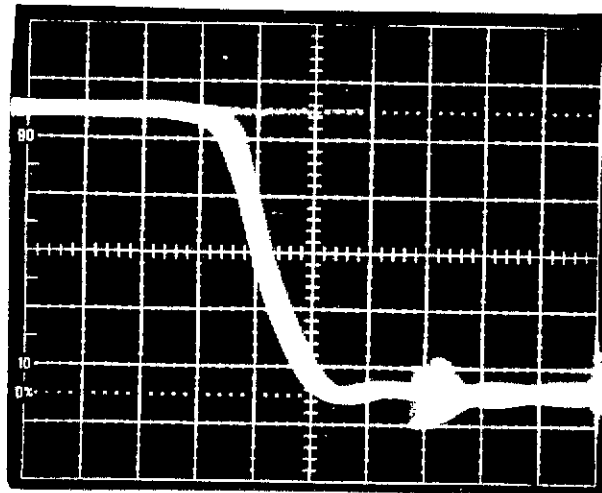
SUBTRACT THREE (3)nS FROM ALL SWITCHING SPEED PHOTOS FOR TTL to ECL CONVERTER DELAY.

VERTICAL SCALE:
10mV/DIVISION



RISE TIME: 1nS
ON TIME: ≤ 9 nS

HORIZONTAL SCALE:
2nS/DIVISION



FALL TIME: 1nS
OFF TIME: ≤ 3 nS

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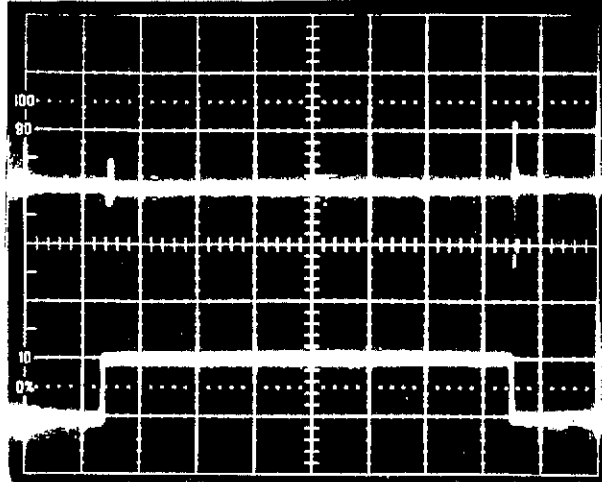
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SERIAL NUMBER	: 1MS508262
TECHNICIAN	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: ± 5 vdc On : +14mA, -15mA
	: Off : +40mA, -15mA

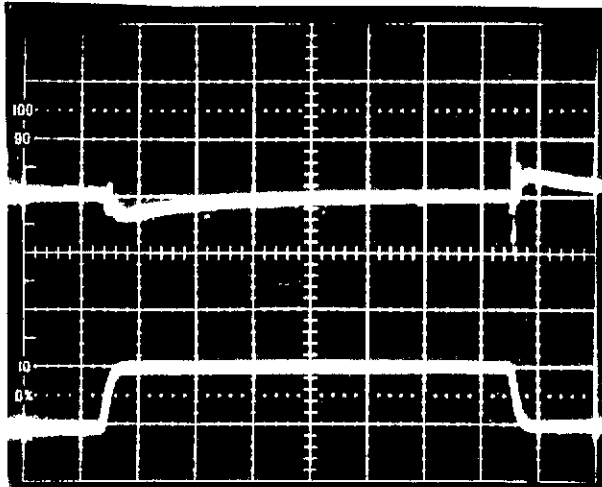
VIDEO TRANSIENTS

HORIZONTAL SCALE:
0.1 μ S/DIVISION

≤ 130 mV P-P
MEASURED IN A
300 MHz BANDWIDTH
VERTICAL SCALE:
50mV/DIVISION



≤ 5 mV P-P
MEASURED IN A
20 MHz BANDWIDTH
VERTICAL SCALE:
5mV/DIVISION



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