



**AMERICAN MICROWAVE
CORPORATION**

TEST DATA

ON

2.0 GHz TO 18.0 GHz

LOW LOSS

LOW VIDEO TRANSIENTS (L/C)

BALANCED ON/OFF

5nS-ULTRA HIGH SPEED

ECL LOGIC

REFLECTIVE, SPST PIN DIODE SWITCH

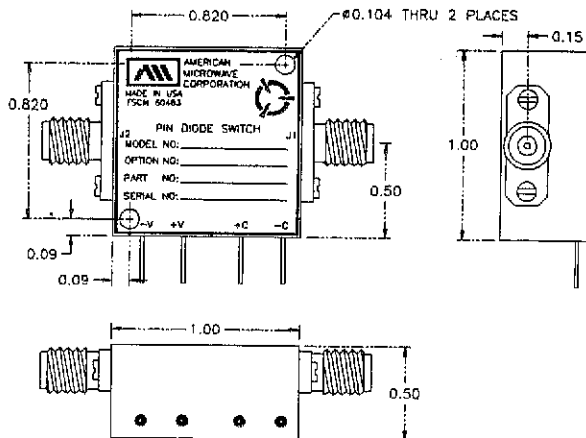
**AMC MODEL No:
SWN-AGRA-1DR-ECL-GAK3-LVT
(Serial Number: 1MS508260)**

**BY
AMERICAN MICROWAVE
CORPORATION**

AUGUST 10, 1995

**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-GAK3-LVT

SPECIFICATIONS:

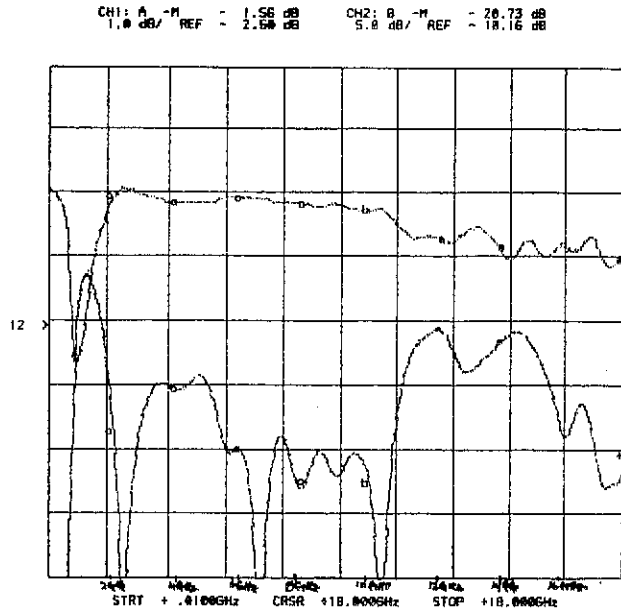
- | | |
|--------------------|---|
| ● FREQUENCY RANGE | : 2.0 GHz to 18.0 GHz |
| ● INSERTION LOSS | : 2.0 dB MAX.
: 0.50 dB TYP. @ 2.0 GHz
: 0.66 dB TYP. @ 8.0 GHz
: 1.56 dB TYP. @ 18.0 GHz |
| ● ISOLATION | : ≥ 70 dB MIN.
: ≥ 86 dB TYP. @ 2.0 GHz
: ≥ 94 dB TYP. @ 8.0 GHz
: ≥ 82 dB TYP. @ 18.0 GHz |
| ● VSWR | : 2.0:1 |
| ● SWITCHING SPEED | : RISE : 2nS MAX., 1nS TYP.
: FALL : 2nS MAX., 1nS TYP.
: ON : 8nS MAX., 5nS TYP.
: OFF : 8nS MAX., 5nS TYP. |
| ● CONTROL | : ECL Compatible |
| ● VIDEO TRANSIENTS | : ≤ 175 mV Peak to Peak, 300 MHz Bandwidth
: ≤ 10 mV Peak to Peak, 20 MHz Bandwidth |
| ● RF INPUT POWER | : + 20 dBm Operating, 1 Watt Survival |
| ● DC POWER SUPPLY | : ± 5 vdc @ ±50mA MAX. |
| ● SIZE | : 1.0" X 1.0" X 0.5" |
| ● WEIGHT | : ≤ 2.0 oz. |

MULTI-THROW VERSIONS AVAILABLE

SUMMARY TEST DATA
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SERIAL NUMBER : 1MS508260
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : ± 5 vdc On : +13mA, -22mA
: Off : +36mA, -20mA

INSERTION LOSS & RETURN LOSS



FREQUENCY	INSERTION LOSS	RETURN LOSS
2.0 GHz	0.50 dB	20.41 dB
4.0 GHz	0.64 dB	15.46 dB
6.0 GHz	0.55 dB	20.47 dB
8.0 GHz	0.66 dB	22.37 dB
10.0 GHz	0.76 dB	23.57 dB
12.0 GHz	1.17 dB	10.77 dB
14.0 GHz	1.33 dB	11.78 dB
16.0 GHz	1.26 dB	18.60 dB
18.0 GHz	1.56 dB	20.73 dB

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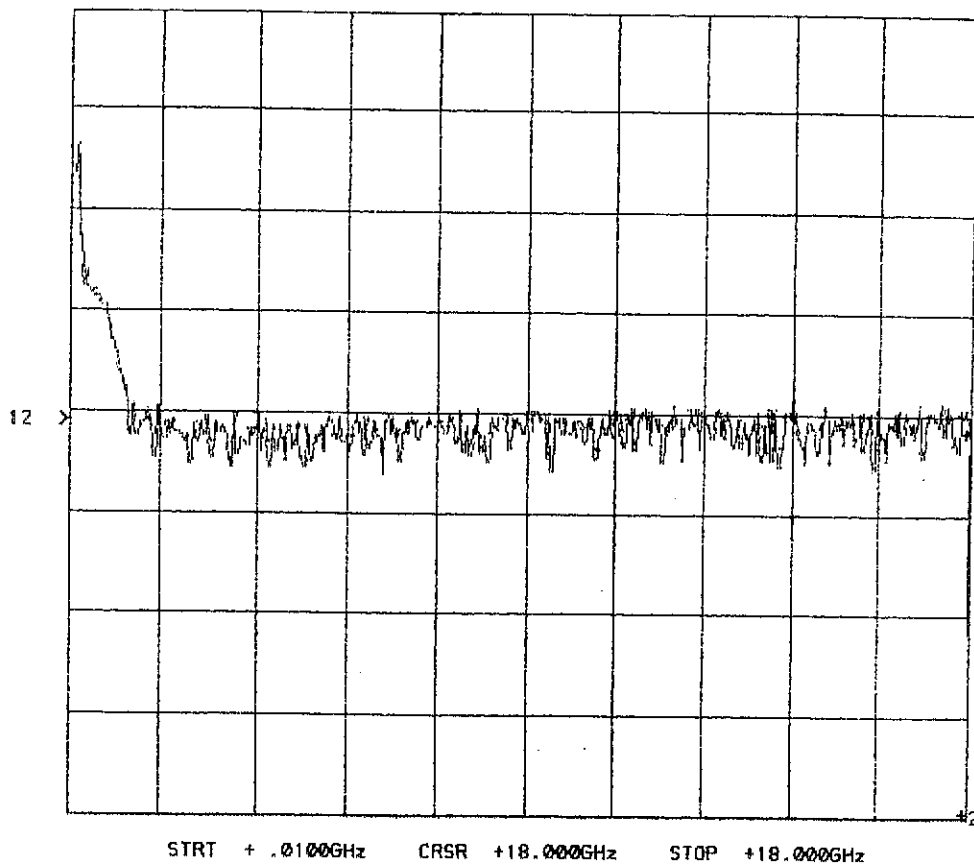
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ISOLATION

(AS MEASURED ON A NETWORK ANALYZER)

CH1: A -M - 63.52 dB
20.0 dB/ REF - 60.00 dB
CH2: B -M - 50.06 dB
5.0 dB/ REF - 10.16 dB



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ISOLATION

(AS MEASURED ON A SPECTRUM ANALYZER)

FREQUENCY	ISOLATION
500 MHz	50 dB
800 MHz	51 dB
1 GHz	58 dB
2 GHz	86 dB
4 GHz	94 dB
6 GHz	94 dB
8 GHz	92 dB
10 GHz	90 dB
12 GHz	90 dB
14 GHz	86 dB
16 GHz	80 dB
18 GHz	82 dB

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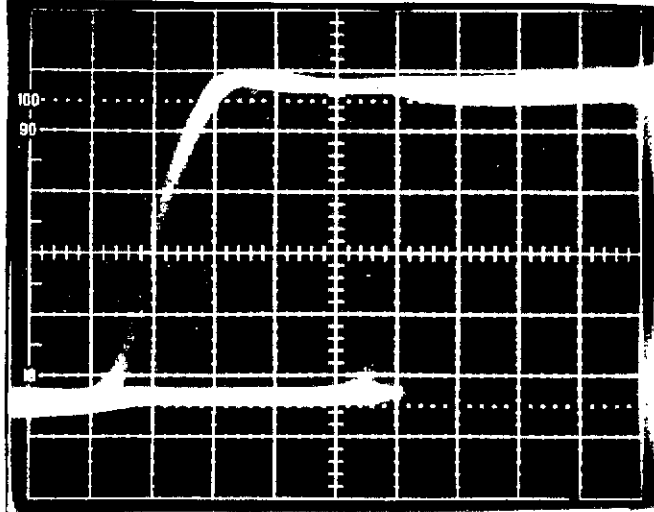
SWITCHING SPEED

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

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

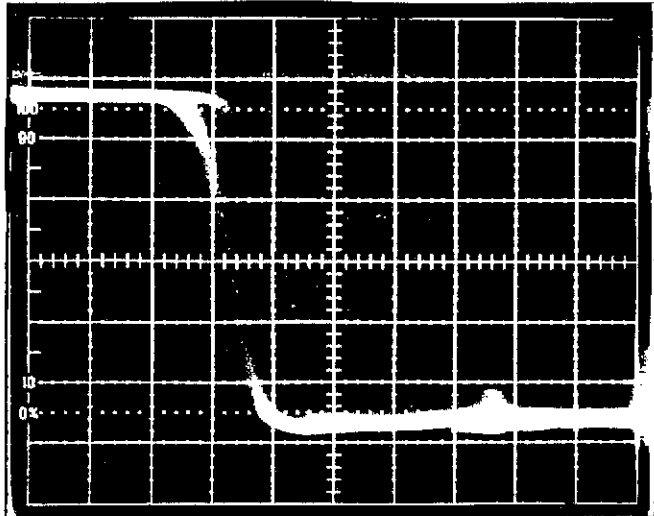
SUBTRACT THREE (3)nS FROM ALL SWITCHING SPEED PHOTOS FOR TTL to ECL CONVERTER DELAY.

VERTICAL SCALE:
5mV/DIVISION



RISE TIME: 1nS
ON TIME: ≤ 5 nS

HORIZONTAL SCALE:
2nS/DIVISION



FALL TIME: 1nS
OFF TIME: ≤ 5 nS

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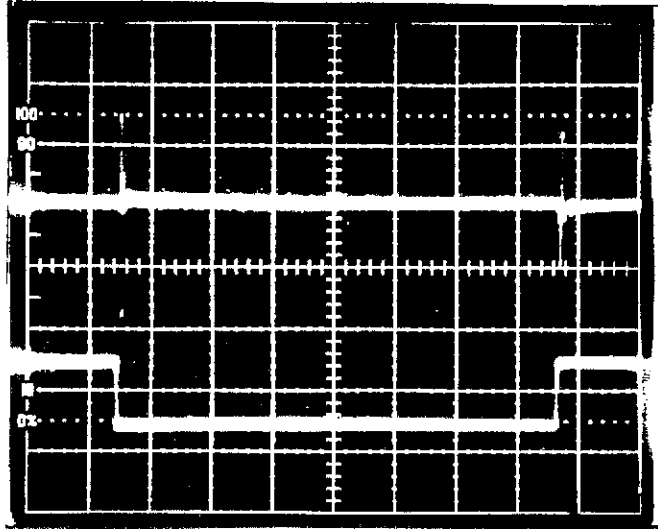
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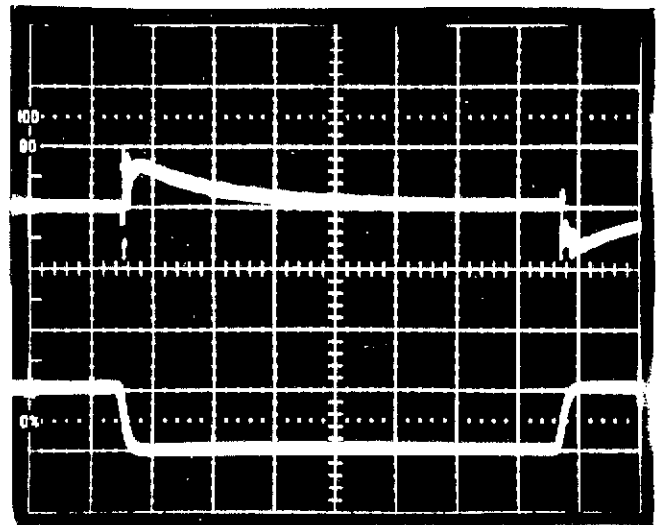
VIDEO TRANSIENTS

HORIZONTAL SCALE:
0.1 μ S/DIVISION

≤ 175 mV P-P
MEASURED IN A
300 MHz BANDWIDTH
VERTICAL SCALE:
50mV/DIVISION



≤ 10 mV P-P
MEASURED IN A
20 MHz BANDWIDTH
VERTICAL SCALE:
5mV/DIVISION



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