



**AMERICAN MICROWAVE
CORPORATION**

TEST DATA

ON

2.0 GHz TO 18.0 GHz

LOW LOSS

VERY LOW VIDEO TRANSIENTS (L/C)

10nS-ULTRA HIGH SPEED

SINGLE SUPPLY

TTL LOGIC

REFLECTIVE, SPST PIN DIODE SWITCH

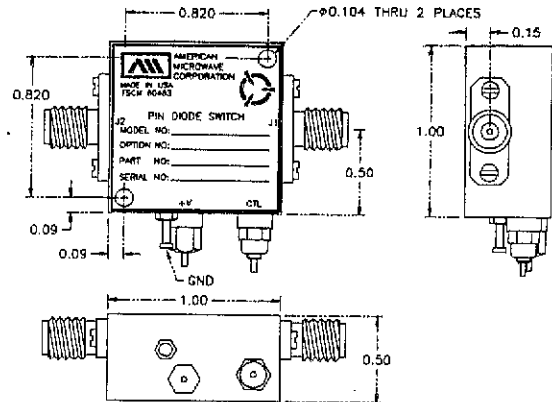
**AMC MODEL No:
SWN-AGRA-1DR-PTTL-GAK2-LVT
(Serial Number: 1MS508263)**

**BY
AMERICAN MICROWAVE
CORPORATION**

AUGUST 15, 1995

**LOW VIDEO TRANSIENT
ULTRA HIGH SPEED, TTL LOGIC
REFLECTIVE, SPST SWITCH**

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



AMC MODEL No: SWN-AGRA-1DR-PTTL-GAK2-LVT

SPECIFICATIONS:

- | | |
|--------------------|--|
| • FREQUENCY RANGE | : 2.0 GHz to 18.0 GHz |
| • INSERTION LOSS | : 2.0 dB MAX.
: 0.54 dB TYP. @ 2.0 GHz
: 0.68 dB TYP. @ 8.0 GHz
: 1.50 dB TYP. @ 18.0 GHz |
| • ISOLATION | : ≥ 70 dB MIN.
: ≥ 86 dB TYP. @ 2.0 GHz
: ≥ 92 dB TYP. @ 8.0 GHz
: ≥ 82 dB TYP. @ 18.0 GHz |
| • VSWR | : 2.0:1 |
| • SWITCHING SPEED | : RISE : 2 nS MAX., 1 nS TYP.
: FALL : 2 nS MAX., 1 nS TYP.
: ON : 15 nS MAX., 10 nS TYP.
: OFF : 10 nS MAX., 5 nS TYP. |
| • CONTROL | : TTL Compatible |
| • VIDEO TRANSIENTS | : ≤ 175 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 @ +50mA MAX. |
| • SIZE | : 1.0" X 1.0" X 0.5" |
| • WEIGHT | : ≤ 2.0 oz. |

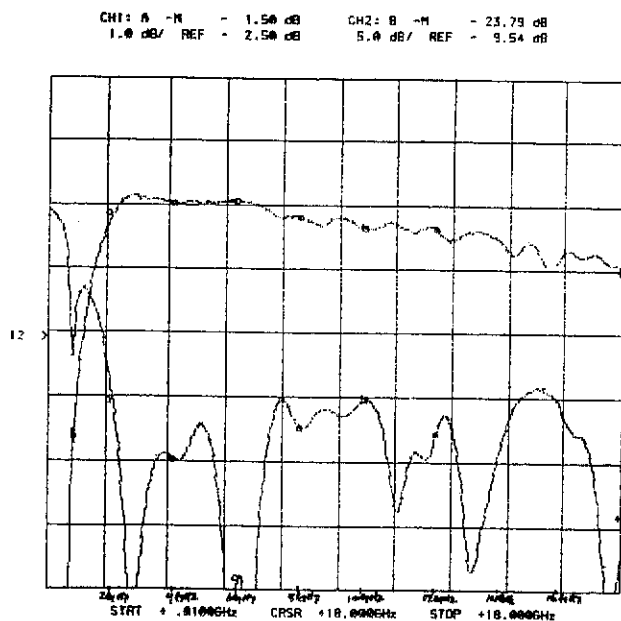
MULTI-THROW VERSIONS AVAILABLE



SUMMARY TEST DATA
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SERIAL NUMBER : 1MS508263
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : +5vdc @ On: +4.8mA, Off: +30mA

INSERTION LOSS & RETURN LOSS



FREQUENCY	INSERTION LOSS	RETURN LOSS
2.0 GHz	0.54 dB	15.84 dB
4.0 GHz	0.45 dB	19.43 dB
6.0 GHz	0.43 dB	28.69 dB
8.0 GHz	0.68 dB	16.86 dB
10.0 GHz	0.83 dB	14.89 dB
12.0 GHz	0.81 dB	17.81 dB
14.0 GHz	0.97 dB	18.98 dB
16.0 GHz	1.15 dB	14.96 dB
18.0 GHz	1.50 dB	23.79 dB

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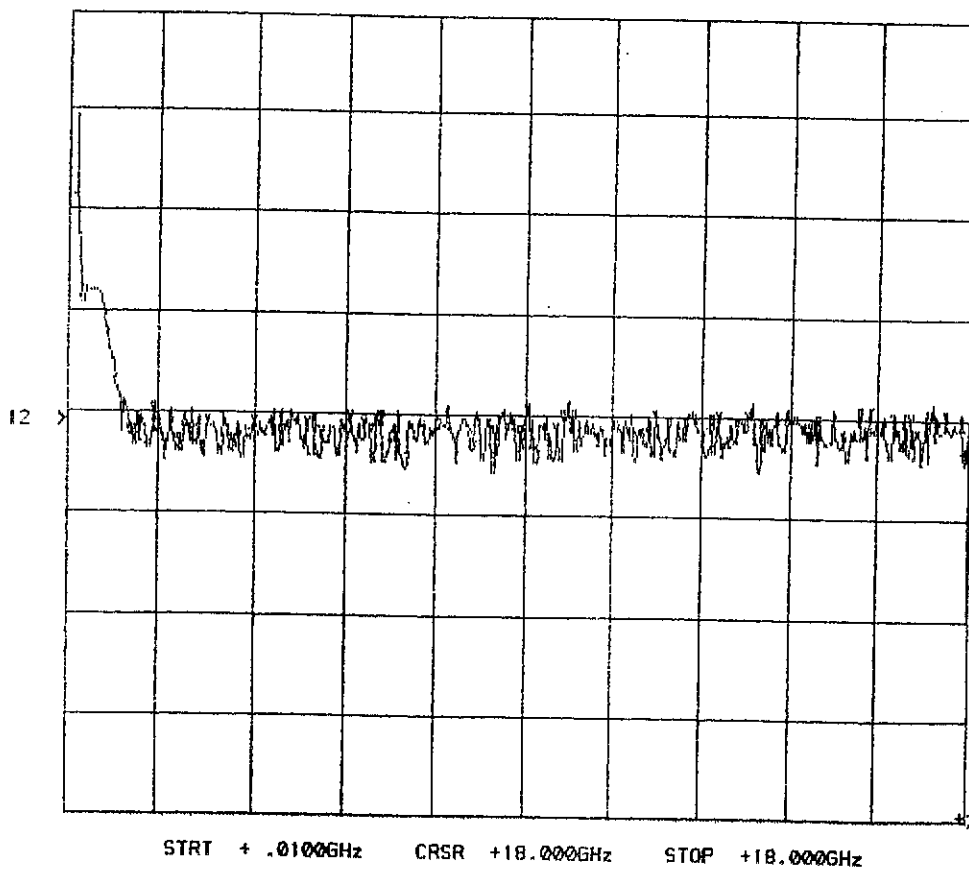


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ISOLATION
(AS MEASURED ON A NETWORK ANALYZER)

CH1: A -M - 67.08 dB CH2: B -M - 50.30 dB
20.0 dB/ REF - 60.00 dB 5.0 dB/ REF - 9.54 dB



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SERIAL NUMBER : 1MS508263
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : +5vdc @ On: +4.8mA, Off: +30mA

ISOLATION

(AS MEASURED ON A SPECTRUM ANALYZER)

FREQUENCY	ISOLATION
500 MHz	50 dB
800 MHz	52 dB
1 GHz	60 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	88 dB
16 GHz	84 dB
18 GHz	82 dB

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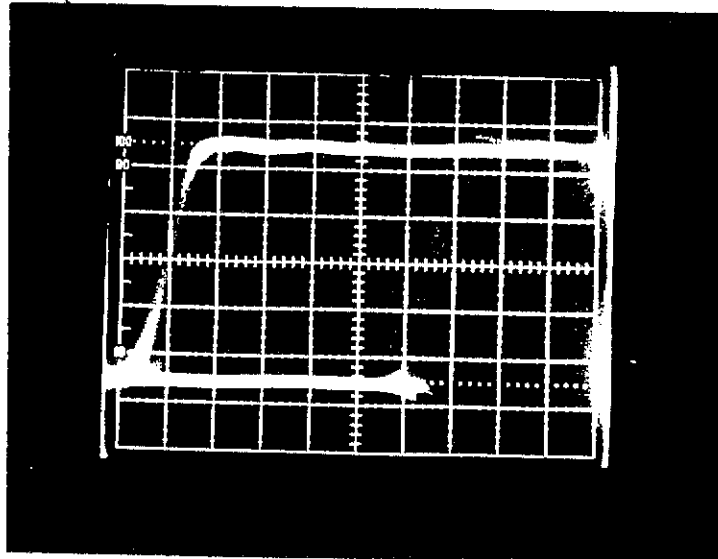
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SERIAL NUMBER : 1MS508263
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$ @ On: +4.8mA, Off: +30mA

SWITCHING SPEED

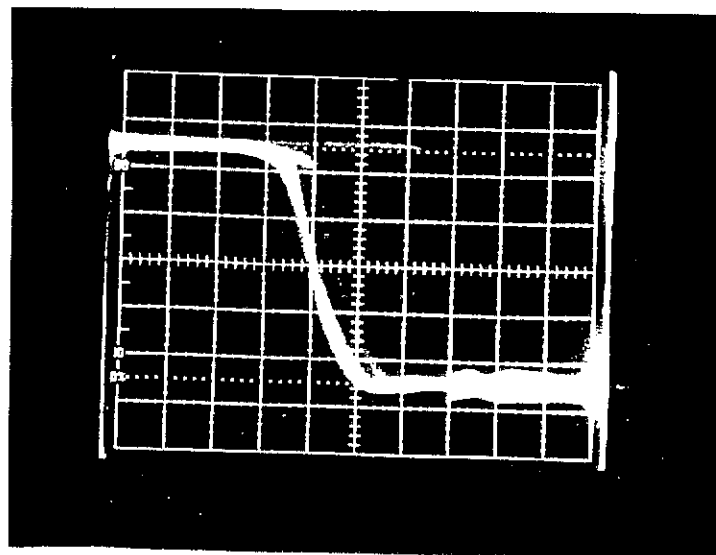
"Rise/Fall" Time: 10% RF to 90% RF & 90% RF to 10% RF
"On/Off" Time: 50% TTL to 90% RF or 10% RF

VERTICAL SCALE:
10mV/DIVISION



RISE TIME: $\leq 1\text{nS}$
ON TIME: $\leq 10\text{nS}$

HORIZONTAL SCALE:
2nS/DIVISION



FALL TIME: $\leq 1\text{nS}$
OFF TIME: $\leq 5\text{nS}$

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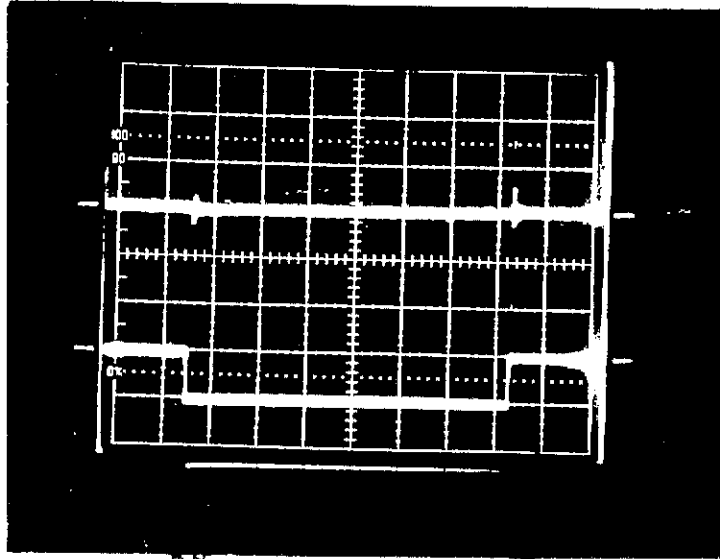
SERIAL NUMBER : 1MS508263
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : +5vdc @ On: +4.8mA, Off: +30mA.

VIDEO TRANSIENTS

HORIZONTAL SCALE:
0.1 μ S/DIVISION

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

50mV/div. SWN-AGRA-1DR-PTTL-GAK2-LVT



S/U: 1MS508263

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

0.1 μ S/div. 0.4 0.4

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