



**AMERICAN MICROWAVE
CORPORATION**

TEST DATA

ON

2.0 TO 18.0 GHz

LOW LOSS

BALANCED ON/OFF

10nS-ULTRA HIGH SPEED

LOW VIDEO TRANSIENT (L/C)

REFLECTIVE SPST PIN DIODE SWITCH

**AMC MODEL No:
SWN-AGRA-1DR-TTL-GAX-LVT**

Serial No: 1MS507246

**BY
AMERICAN MICROWAVE
CORPORATION**

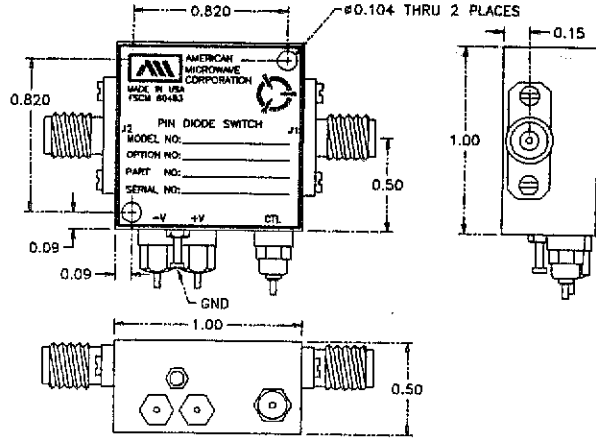
JULY 11, 1995

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

AMERICAN MICROWAVE CORPORATION

**ULTRA HIGH SPEED
LOW LOSS, REFLECTIVE
SPST PIN DIODE SWITCH**

- **ULTRA HIGH SPEED**
- **LOW INSERTION LOSS**
- **LOW VIDEO TRANSIENTS**
- **HIGH ISOLATION**



AMC MODEL No: SWN-AGRA-1DR-TTL-GAX-LVT

SPECIFICATIONS:

- **FREQUENCY RANGE** : 2.0 GHz to 18.0 GHz
- **INSERTION LOSS** : ≤2.0 dB MAX.
: ≤0.84 dB TYP. @ 2.0 GHz
: ≤1.04 dB TYP. @ 8.0 GHz
: ≤1.15 dB TYP. @ 12.0 GHz
: ≤1.34 dB TYP. @ 18.0 GHz
- **ISOLATION** : ≥ 60 dB MIN.
: ≥ 94 dB TYP. @ 2.0 GHz
: ≥ 88 dB TYP. @ 8.0 GHz
: ≥ 80 dB TYP. @ 12.0 GHz
: ≥ 64 dB TYP. @ 18.0 GHz
- **VSWR** : 2.0:1
- **SWITCHING SPEED** : "RISE" : 4nS MAX. , 2nS TYP.
: "FALL" : 4nS MAX. , 2nS TYP.
: "ON" : 15nS MAX. , 10nS TYP.
: "OFF" : 15nS MAX. , 10nS TYP.
- **CONTROL** : TTL COMPATIBLE
- **VIDEO TRANSIENTS** : 275 mV Peak to Peak in a 100 MHz BW
: 20 mV Peak to Peak in a 20 MHz BW
- **RF INPUT POWER** : +20 dBm Operating, 1 Watt Survival
- **DC POWER SUPPLY** : ±5vdc @ 80mA MAX., 60mA TYP.
- **SIZE** : 1.0" X 1.0" X 0.5"
- **WEIGHT** : ≤1.5 oz

MULTI-THROW AND ABSORPTIVE VERSIONS AVAILABLE

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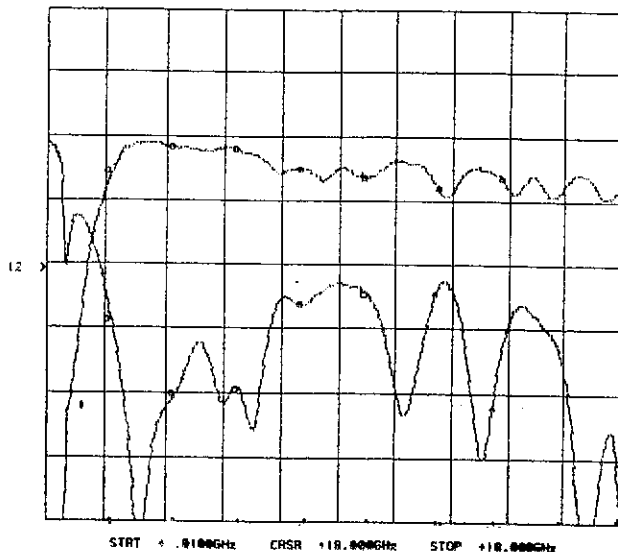


SUMMARY TEST DATA
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SERIAL NUMBER : 1MS507246
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc @ } 60\text{mA}$

INSERTION LOSS & RETURN LOSS

CH1: A -M : 1.36 dB CH2: B -M : 36.86 dB
1.0 dB/ REF : 2.50 dB 5.0 dB/ REF : 9.54 dB



FREQUENCY	INSERTION LOSS	RETURN LOSS
2.0 GHz	0.84 dB	14.53 dB
4.0 GHz	0.60 dB	19.06 dB
6.0 GHz	0.66 dB	19.48 dB
8.0 GHz	1.04 dB	12.59 dB
10.0 GHz	1.09 dB	11.98 dB
12.0 GHz	1.15 dB	11.80 dB
14.0 GHz	1.04 dB	16.65 dB
16.0 GHz	1.26 dB	16.54 dB
18.0 GHz	1.36 dB	36.86 dB

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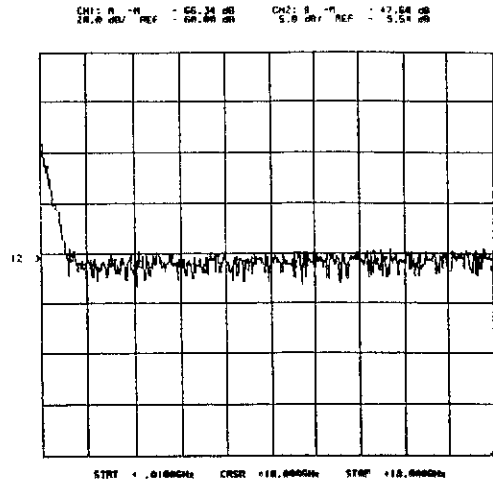


SUMMARY TEST DATA
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SERIAL NUMBER : 1MS507246
 TECHNICIAN : RENE AFABLE
 VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc @ } 60\text{mA}$

ISOLATION

AS MEASURED ON A NETWORK ANALYSER



AS MEASURED ON A SPECTRUM ANALYSER

FREQUENCY	ISOLATION
1.0 GHz	64 dB
2.0 GHz	94 dB
4.0 GHz	90 dB
6.0 GHz	90 dB
8.0 GHz	88 dB
10.0 GHz	78 dB
12.0 GHz	80 dB
14.0 GHz	78 dB
16.0 GHz	72 dB
18.0 GHz	64 dB

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SUMMARY TEST DATA
 SWN-AGRA-1DR-TTL-GAX-LVT
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SERIAL NUMBER : IMS507246
 TECHNICIAN : RENE AFABLE
 VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc @ } 60\text{mA}$

SWITCHING SPEED

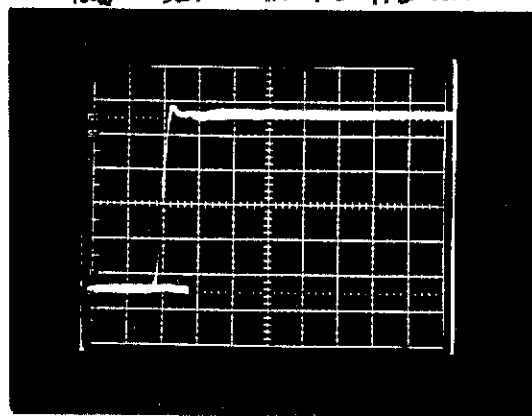
"RISE/FALL" TIME: 10%RF TO 90%RF & 90%RF TO 10%RF
 "ON/OFF" TIME: 50%TTL TO 90%RF OR 10%RF

"ON" 10nS, "RISE" 2nS

HORIZONTAL SCALE:
 10nS/DIVISION

VERTICAL SCALE:
 10mV/DIVISION

10ns/div SWN-AGRA-1DR-TTL-MS



S/N: IMS507246

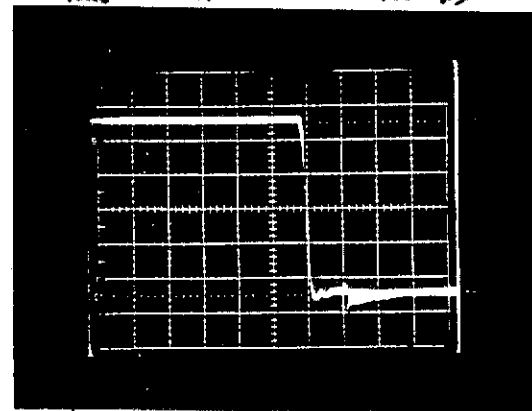
10mV/div

"OFF" 10nS, "FALL" 2nS

HORIZONTAL SCALE:
 10nS/DIVISION

VERTICAL SCALE:
 10mV/DIVISION

10ns/div SWN-AGRA-1DR-TTL-MS



S/N: IMS507246

10mV/div

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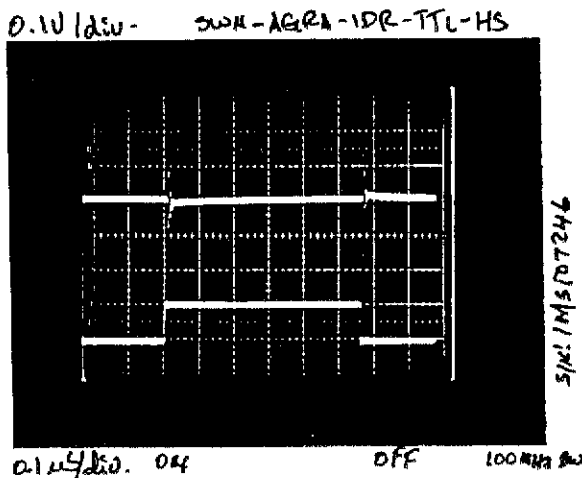
SERIAL NUMBER : 1MS507246
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$ @ 60mA

VIDEO TRANSIENTS

AS MEASURED IN A
100MHz BANDWIDTH

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

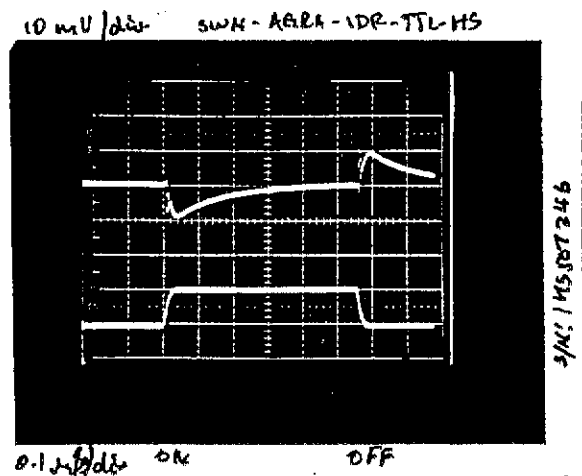
VERTICAL SCALE:
 $50\text{mV}/\text{DIVISION}$



AS MEASURED IN A
20MHz BANDWIDTH

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

VERTICAL SCALE:
 $5\text{mV}/\text{DIVISION}$



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