



**AMERICAN MICROWAVE
CORPORATION**

TEST DATA

ON

0.5 TO 18.0 GHz

HIGH SPEED

VERY HIGH ISOLATION

LOW VIDEO TRANSIENTS (R/C)

REFLECTIVE SPST PIN DIODE SWITCH

**AMC MODEL No:
SWN-AKG-1DR-12X-LVT**

Serial No: 1MS503172

**BY
AMERICAN MICROWAVE
CORPORATION**

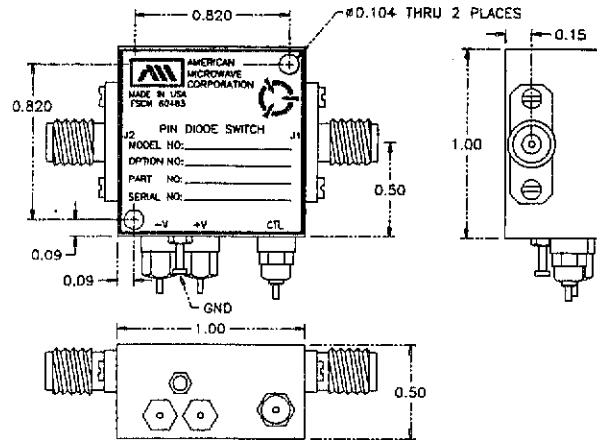
JULY 11, 1995

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AMERICAN MICROWAVE CORPORATION

**HIGH SPEED
HIGH ISOLATION, REFLECTIVE
SPST PIN DIODE SWITCH**

- REFLECTIVE
- HIGH SPEED
- VERY HIGH ISOLATION
- LOW VIDEO TRANSIENTS



AMC MODEL No: SWN-AKG-1DR-12X-LVT

SPECIFICATIONS:

- FREQUENCY RANGE : 0.5 GHz to 18.0 GHz
- INSERTION LOSS : ≤ 3.0 dB MAX.
: ≤ 0.66 dB TYP. @ 0.5 GHz
: ≤ 0.78 dB TYP. @ 2.0 GHz
: ≤ 1.39 dB TYP. @ 8.0 GHz
: ≤ 1.90 dB TYP. @ 12.0 GHz
: ≤ 2.66 dB TYP. @ 18.0 GHz
- ISOLATION : ≥ 80 dB MIN.
: ≥ 100 dB TYP. @ 0.5 GHz
: ≥ 95 dB TYP. @ 2.0 GHz
: ≥ 90 dB TYP. @ 8.0 GHz
: ≥ 86 dB TYP. @ 12.0 GHz
: ≥ 80 dB TYP. @ 18.0 GHz
- VSWR : 2.0:1
- SWITCHING SPEED : "RISE" : 7nS MAX. , 3nS TYP.
: "FALL" : 7nS MAX. , 5nS TYP.
: "ON" : 50nS MAX. , 25nS TYP.
: "OFF" : 50nS MAX. , 35nS TYP.
- CONTROL : TTL COMPATIBLE
- VIDEO TRANSIENTS : 315 mV Peak to Peak in a 300 MHz BW
: 85 mV Peak to Peak in a 20 MHz BW
- RF INPUT POWER : +20 dBm Operating, 1 Watt Survival
- DC POWER SUPPLY : ± 5 vdc @ 80mA MAX., 60mA TYP.
- SIZE : 1.0" X 1.0" X 0.5"
- WEIGHT : ≤ 1.5 oz

MULTI-THROW AND ABSORPTIVE VERSIONS AVAILABLE

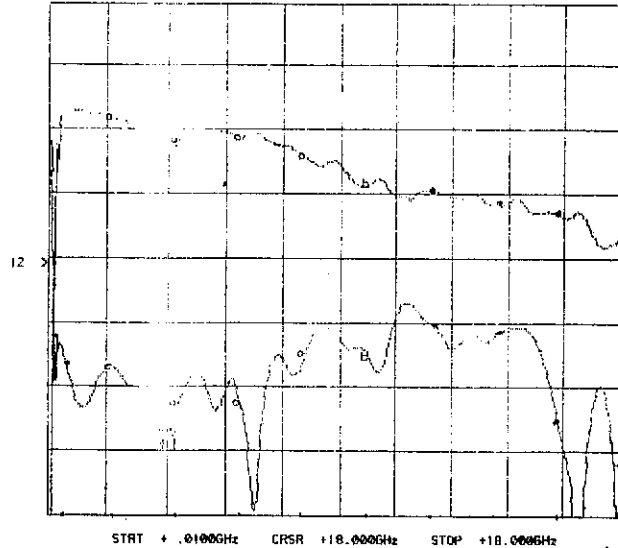


SUMMARY TEST DATA
SWN-AKG-1DR-12X-LVT
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SERIAL NUMBER : IMS503172
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc @ } 60\text{mA}$

INSERTION LOSS & RETURN LOSS

CH1: A -M - 2.66 dB CH2: B -M - 25.66 dB
1.0 dB/ REF - 3.00 dB 5.0 dB/ REF - 3.54 dB



FREQUENCY	INSERTION LOSS	RETURN LOSS
0.5 GHz	0.66 dB	17.66 dB
2.0 GHz	0.78 dB	17.98 dB
4.0 GHz	1.03 dB	20.45 dB
6.0 GHz	1.06 dB	21.20 dB
8.0 GHz	1.39 dB	16.59 dB
10.0 GHz	1.78 dB	17.40 dB
12.0 GHz	1.90 dB	14.54 dB
14.0 GHz	2.11 dB	15.26 dB
16.0 GHz	2.27 dB	23.00 dB
18.0 GHz	2.66 dB	25.66 dB

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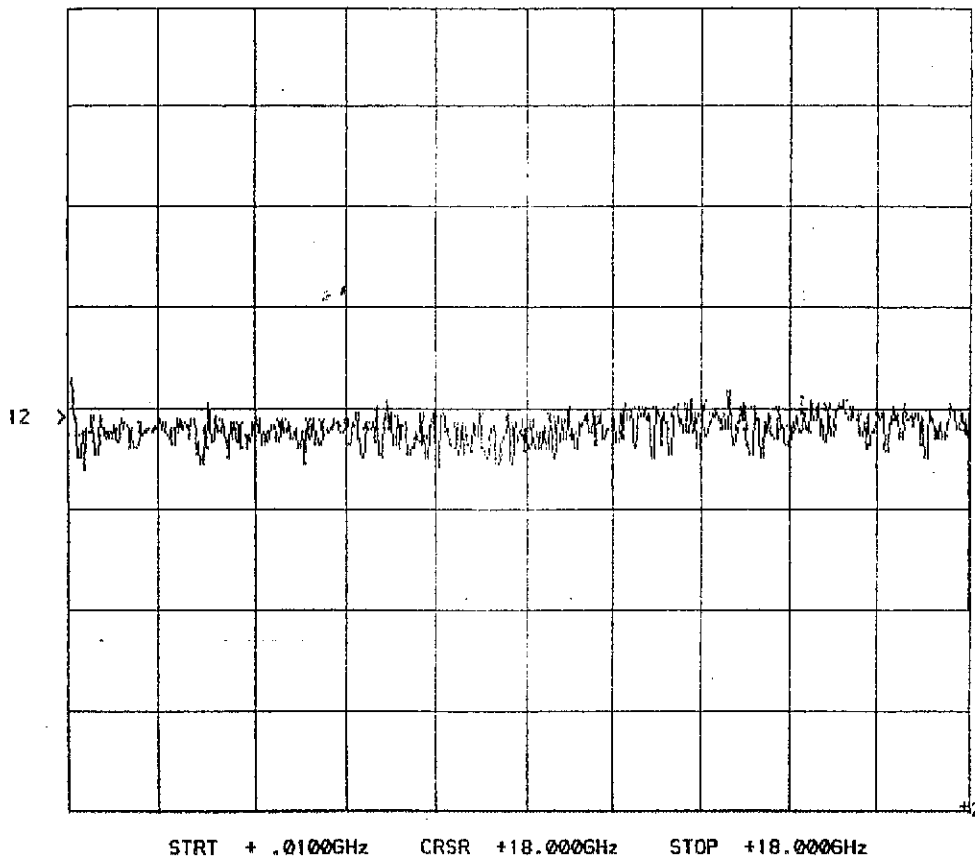
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SERIAL NUMBER : 1MS503172
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc @ } 60\text{mA}$

ISOLATION

AS MEASURED ON A NETWORK ANALYSER

CH1: A -M - 54.30 dB CH2: B -M - 46.74 dB
20.0 dB/ REF - 60.00 dB 5.0 dB/ REF - 9.54 dB



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SERIAL NUMBER : 1MS503172
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc @ } 60\text{mA}$

ISOLATION

AS MEASURED ON A SPECTRUM ANALYSER

FREQUENCY	ISOLATION
100 MHz	> 95 dB
200 MHz	> 100 dB
300 MHz	> 100 dB
500 MHz	> 100 dB
800 MHz	> 100 dB
1.0 GHz	> 100 dB
2.0 GHz	> 95 dB
4.0 GHz	> 90 dB
6.0 GHz	90 dB
8.0 GHz	90 dB
10.0 GHz	90 dB
12.0 GHz	> 86 dB
14.0 GHz	> 84 dB
16.0 GHz	80 dB
18.0 GHz	80 dB

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SUMMARY TEST DATA
 SWN-AGG-1DR-12X-LVT
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SERIAL NUMBER : IMS503172
 TECHNICIAN : RENE AFABLE
 VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc @ } 60\text{mA}$

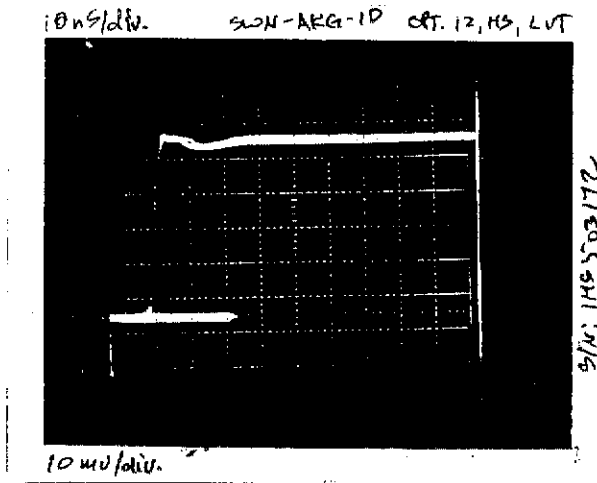
SWITCHING SPEED

"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" 25nS, "RISE" 3nS

HORIZONTAL SCALE:
 10nS/DIVISION

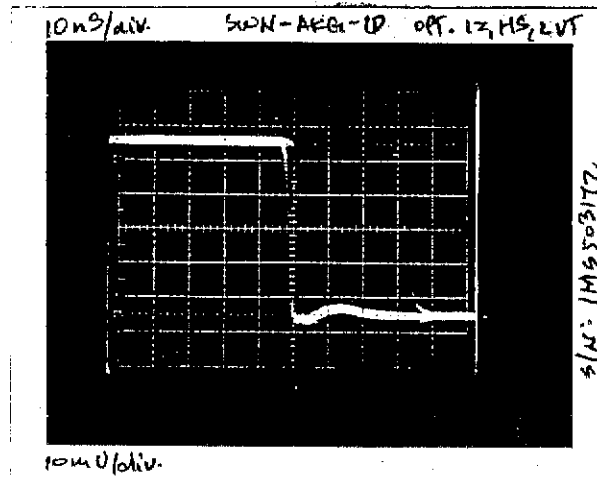
VERTICAL SCALE:
 10mV/DIVISION



"OFF" 35nS, "FALL" 5nS

HORIZONTAL SCALE:
 10nS/DIVISION

VERTICAL SCALE:
 10mV/DIVISION



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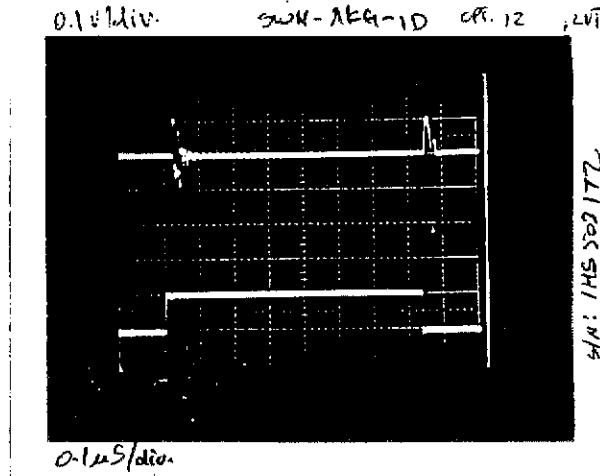
SERIAL NUMBER : 1MS503172
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc @ } 60\text{mA}$

VIDEO TRANSIENTS

AS MEASURED IN A
300MHz BANDWIDTH

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

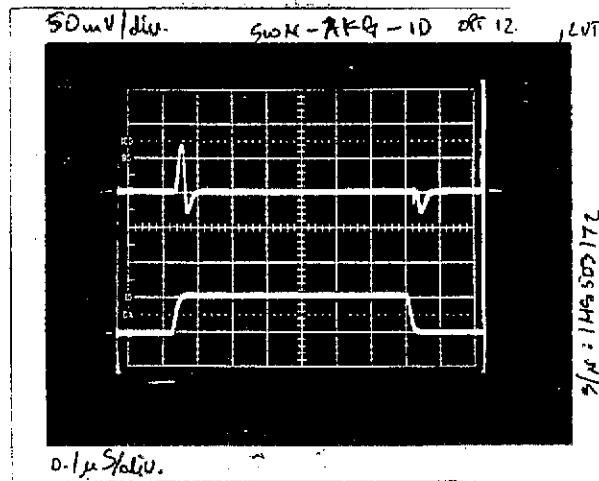
VERTICAL SCALE:
 $0.1\text{V}/\text{DIVISION}$



AS MEASURED IN A
20MHz BANDWIDTH

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

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



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