



**AMERICAN MICROWAVE
CORPORATION**

TEST DATA

ON

MINIATURE

LOW LOSS

1.0 TO 18.0 GHz

SPST

REFLECTIVE, PIN DIODE SWITCH

AMC MODEL No: SWN-WSP-1DR-118-HPM
(Serial No: 1MS50270)

BY
AMERICAN MICROWAVE
CORPORATION

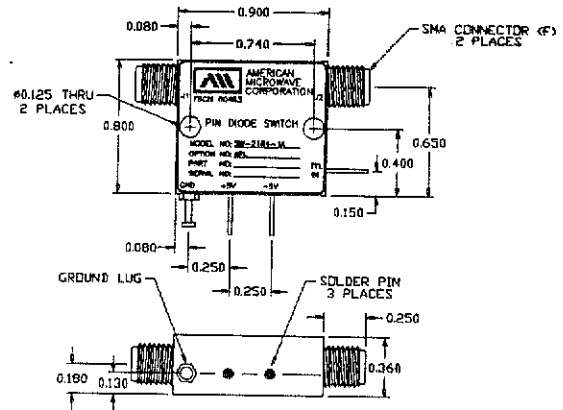
APRIL 11, 1995

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AMERICAN MICROWAVE CORPORATION

MINIATURE LOW LOSS, SPST SWITCH/MODULATOR

- PIN DIODE SWITCH
- LOW INSERTION LOSS
- LOW TRANSIENTS
- HIGH ISOLATION
- HIGH SPEED



AMC Model Number: SWN-WSP-1DR-118-HPM

SPECIFICATIONS:

- FREQUENCY : 1.0 to 18.0 GHz
- INSERTION LOSS : 2.0dB MAX. @ 18.0 GHz (1.75dB Typical)
- ISOLATION : ≥ 60 dB MIN. (70dB Typical)
- VSWR : 2.0:1 MAX. (1.5:1 Typical)
- SWITCHING SPEED : On/Off : 50nS MAX. (40nS Typical) } (Balanced "On/Off"
: Rise/Fall : 10nS MAX. (5nS Typical) } Available)
- DC POWER SUPPLY : ± 5 vdc @ ± 50 mA MAX. (Other Voltages Available)
- RF INPUT POWER : +20 dBm Operating
- SURVIVAL POWER : 1 Watt-CW
- SIZE : 0.9" X 0.8" X 0.36"
- WEIGHT : <2.0 oz.

REFLECTIVE AND MULTI-THROW VERSIONS ALSO AVAILABLE

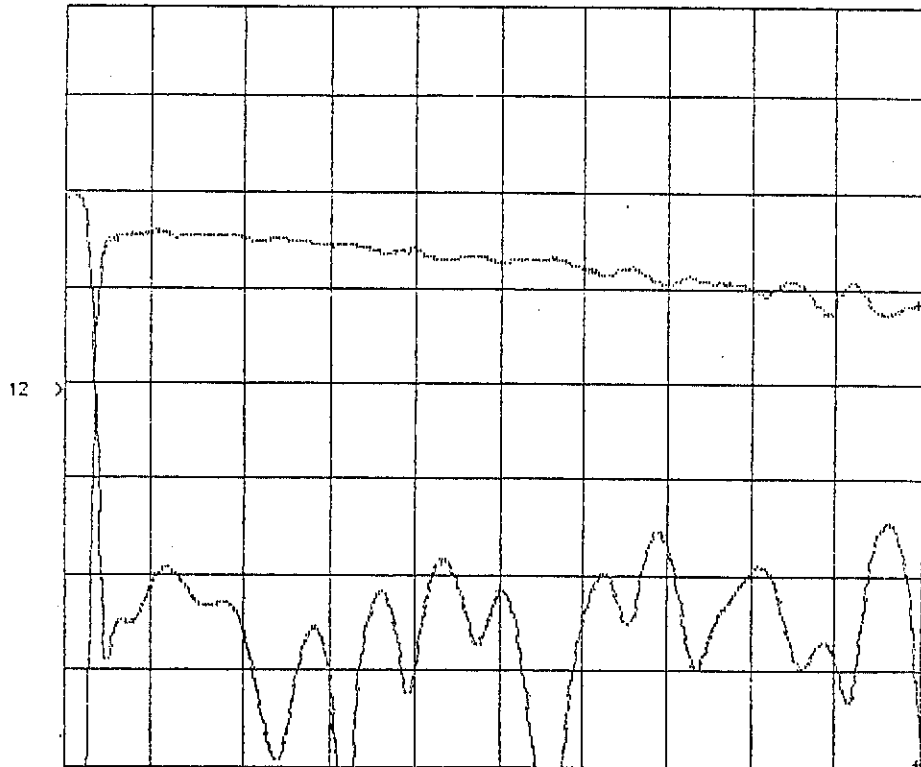
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SERIAL NUMBER : 1MS50270
 TECHNICIAN : HOLLY HAHN
 VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$ ON= +0.6mA, -0.6mA
 OFF= +65mA, -1.2mA

INSERTION LOSS vs. VSWR

CH1: A -M - 1.18 dB CH2: B -M - 21.95 dB
 1.0 dB/ REF - 2.03 dB 5.0 dB/ REF - 10.16 dB



STRT + .0100GHz CRSR +18.000GHz STOP +18.000GHz

INSERTION LOSS	FREQUENCY	VSWR
0.49dB	1.0GHz	22.9dB
0.41dB	2.0GHz	19.7dB
0.69dB	8.0GHz	19.5dB
0.89db	12.4GHz	17.75dB
1.18dB	18.0GHz	31.95dB

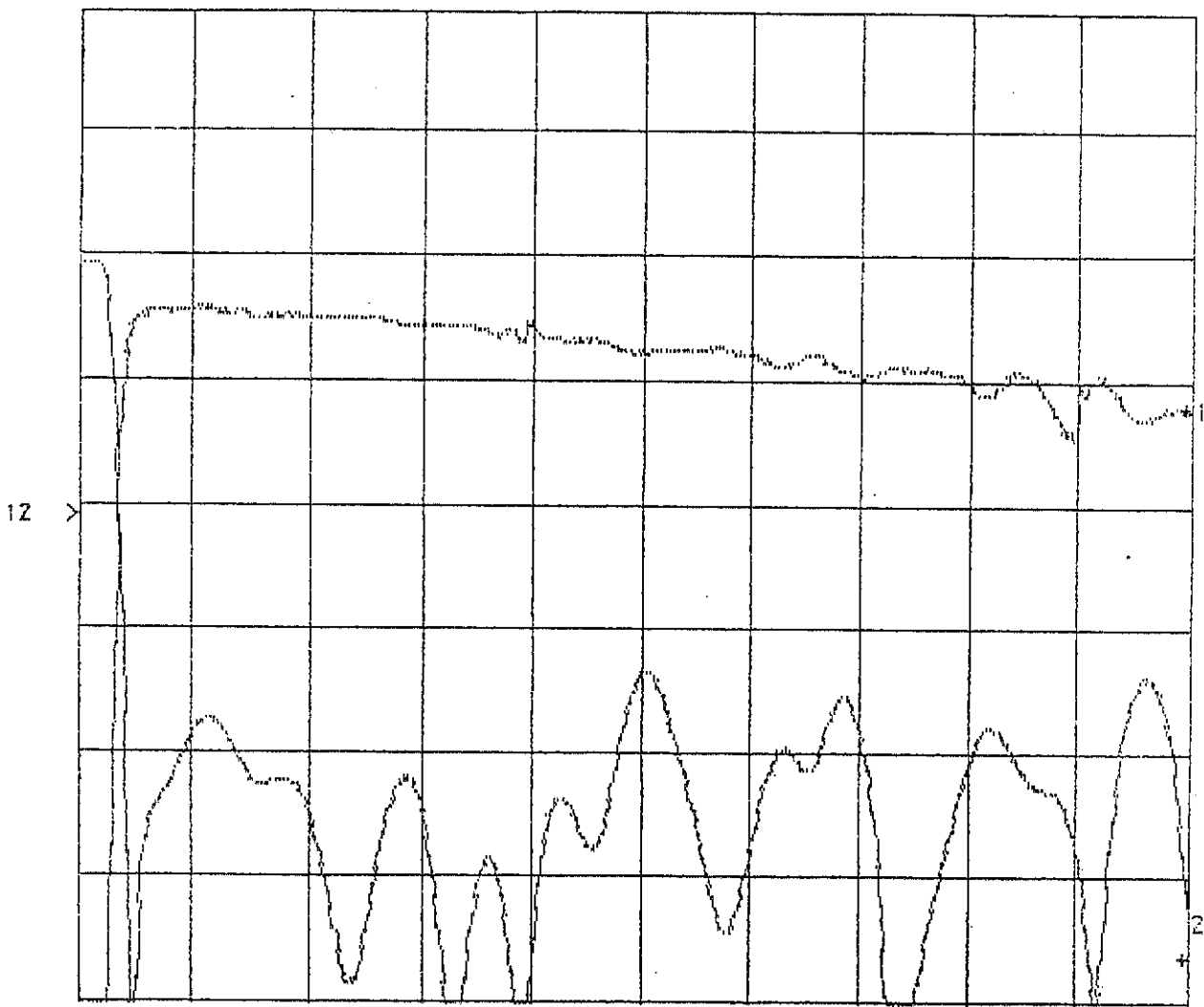
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VSWR OUTPUT ON J2-J1 PORT

CH1: A -M - 1.21 dB CH2: B -M - 28.52 dB
1.0 dB/ REF - 2.00 dB 5.0 dB/ REF - 10.16 dB



STRT + .0100GHz CRSR +18.000GHz STOP +18.000GHz

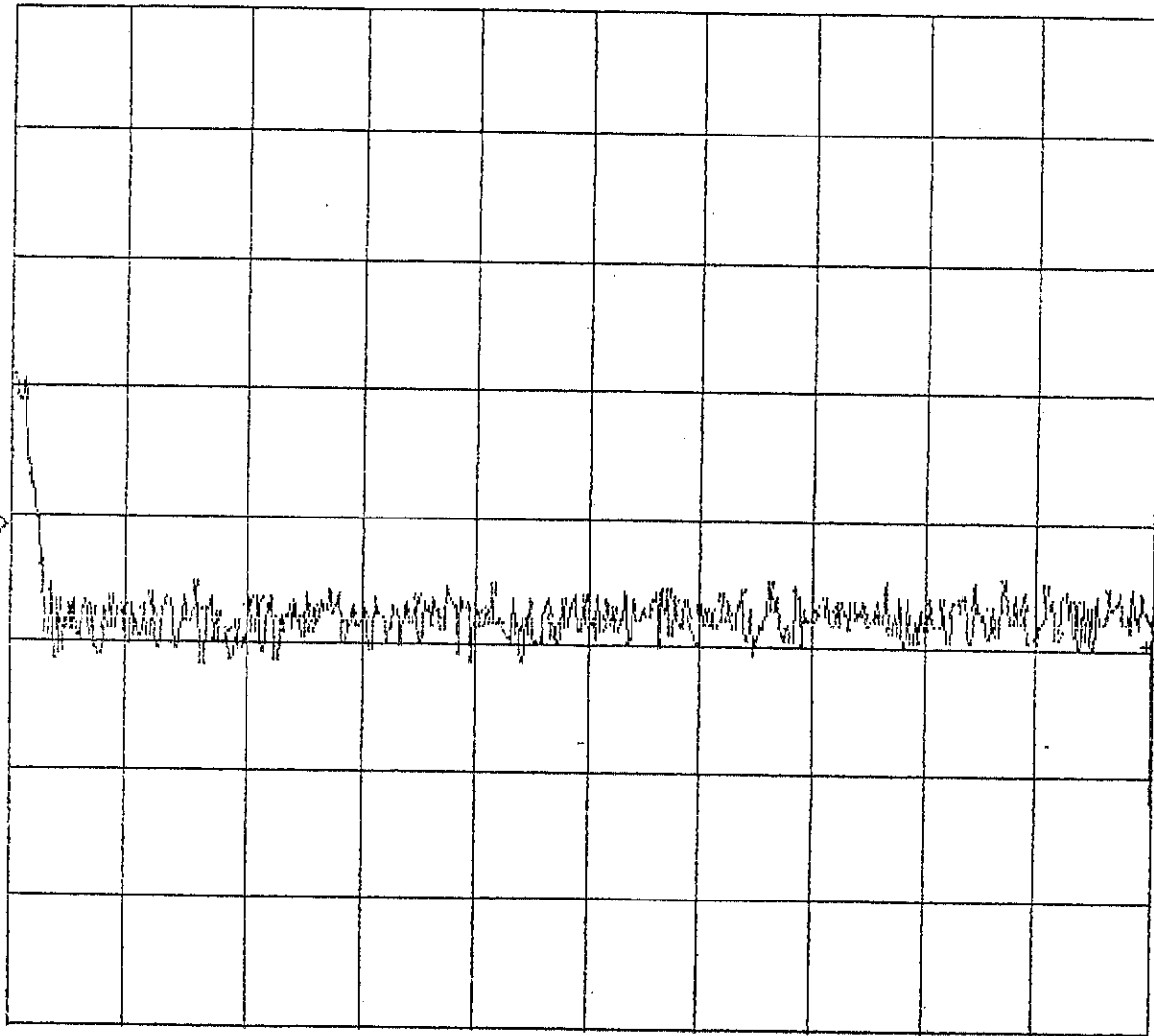
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ISOLATION AS MEASURED ON A NETWORK ANALYZER

CH1: A -M - 74.45 dB
20.0 dB/ REF - 55.00 dB



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ISOLATION AS MEASURED ON A SPECTRUM ANALYZER

FREQUENCY	ISOLATION
0.5GHz	66dB
1.0GHz	74dB
8.0GHz	84dB
12.4GHz	81dB
18.0GHz	74dB

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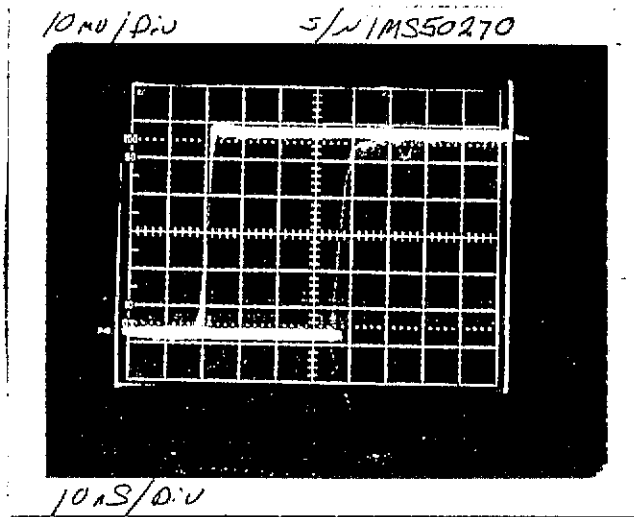


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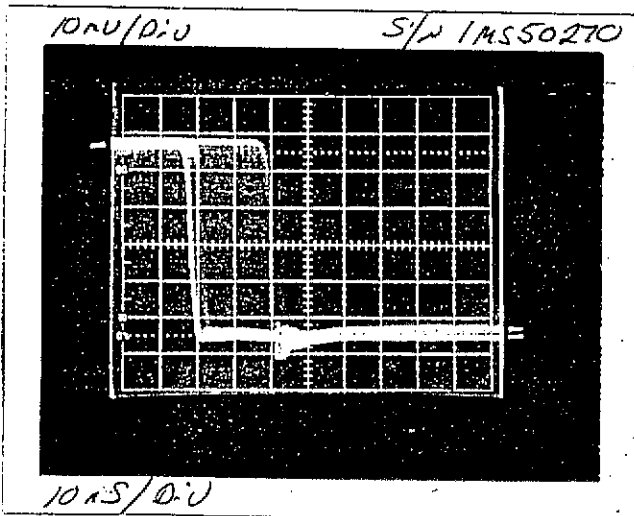
SWITCHING SPEED: RISE/FALL, ON/OFF

Rise/Fall = 10% to 90% RF
On/Off = 50% TTL to 90% RF

VERTICAL:
10mV/Division



HORIZONTAL:
10ns/Division



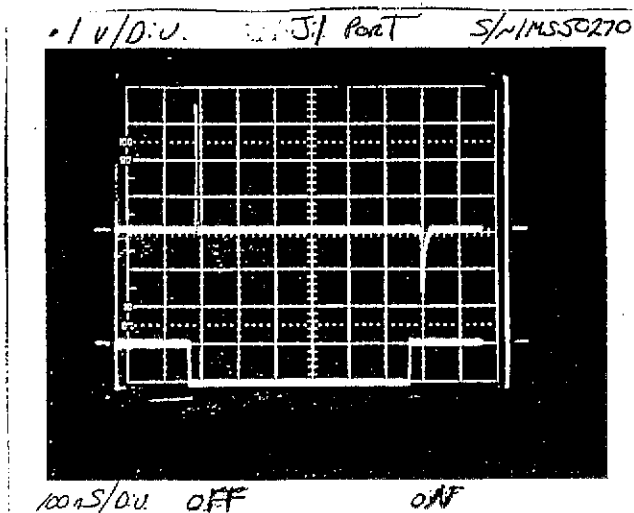
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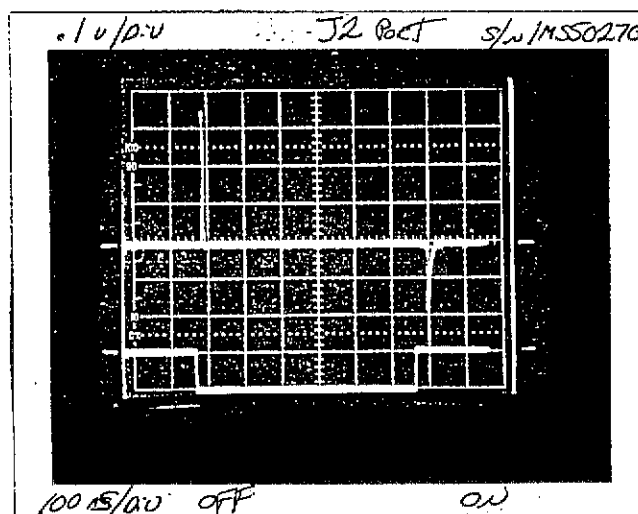
VIDEO TRANSIENTS

J1 PORT



$\leq 0.6\text{v P-P}$

J2 PORT



$\leq 0.6\text{v P-P}$

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