



**AMERICAN MICROWAVE
CORPORATION**

TEST DATA
ON
LOW VIDEO TRANSIENT
1.0 TO 18.0 GHz
SPST
REFLECTIVE, PIN DIODE SWITCH

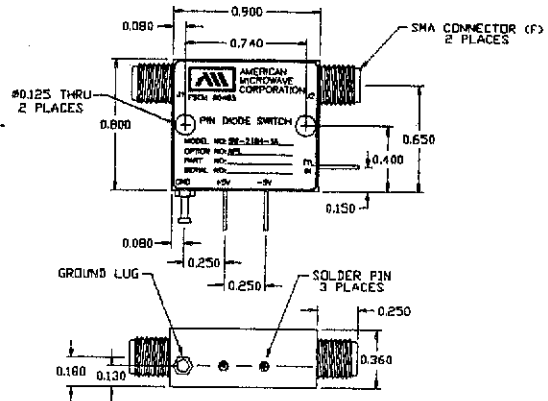
MODEL No: SWN-WSP-1DR-118-HPM- LVT
(Serial No: 1MS50270)

BY
AMERICAN MICROWAVE
CORPORATION

APRIL 11, 1995

**LOW VIDEO TRANSIENT
SPST PIN DIODE
SWITCH/MODULATOR**

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



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

SPECIFICATIONS:

- **FREQUENCY RANGE** : 1.0 to 18.0 GHz
- **INSERTION LOSS** : 1.75dB MAX. @ 18.0 GHz (1.5dB Typical)
0.75dB MAX. @ 2.0 GHz (0.5dB Typical)
- **ISOLATION** : ≥ 65dB MIN. (75dB Typical)
- **VSWR** : 2.0:1 MAX. (1.5:1 Typical)
- **SWITCHING SPEED** : On/Off : 70nS MAX. (55nS Typical) (Balanced "On/Off" and
: Rise/Fall : 10nS MAX. (8nS Typical) Higher Speeds Available)
- **DC POWER SUPPLY** : ±5vdc @ ±50mA MAX. (Other Voltages Available)
- **CONTROL** : TTL ("0"=On, "1"=Off)
- **RF INPUT POWER** : +20 dBm Operating, 1 Watt Survival
- **LOW VIDEO TRANSIENTS** : 50mV P-P in a 100MHz Bandwidth
- **SIZE** : 0.9" X 0.8" X 0.36"
- **WEIGHT** : <2.0 oz.

MULTI-THROW VERSIONS ALSO AVAILABLE

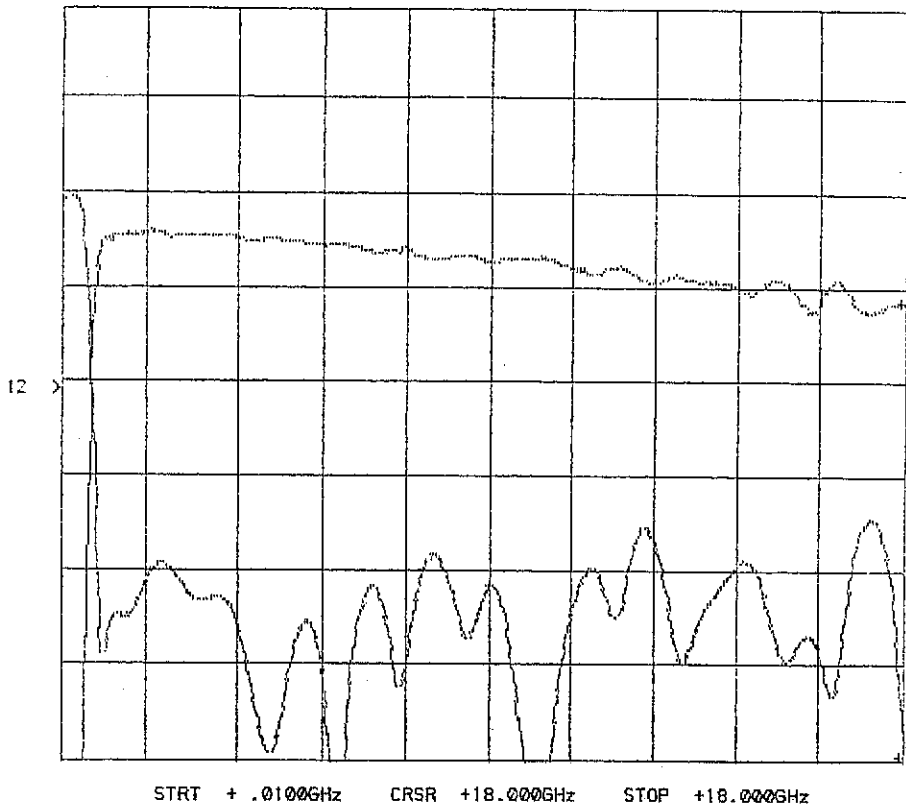


SUMMARY TEST DATA
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SERIAL NUMBER : 1MS50270
TECHNICIAN : HOLLY HAHN
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$ ON= +0.6mA, -0.6mA
OFF= +65mA, -1.2mA

INSERTION LOSS vs. VSWR

CH1: A -M - 1.18 dB CH2: B -M - 31.95 dB
1.0 dB/ REF - 2.03 dB 5.0 dB/ REF - 10.16 dB



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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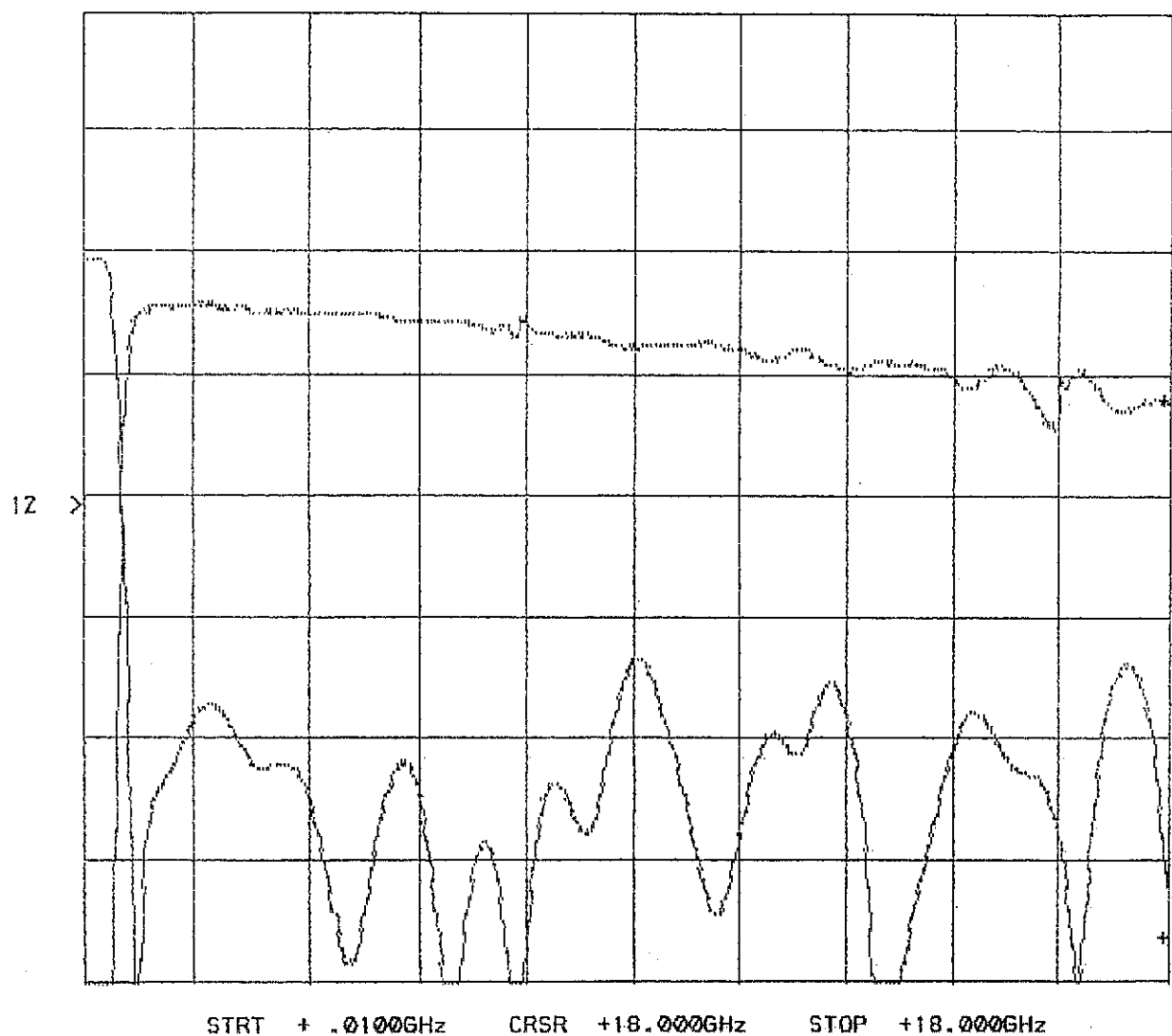


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OFF=+65mA, -1.2mA

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



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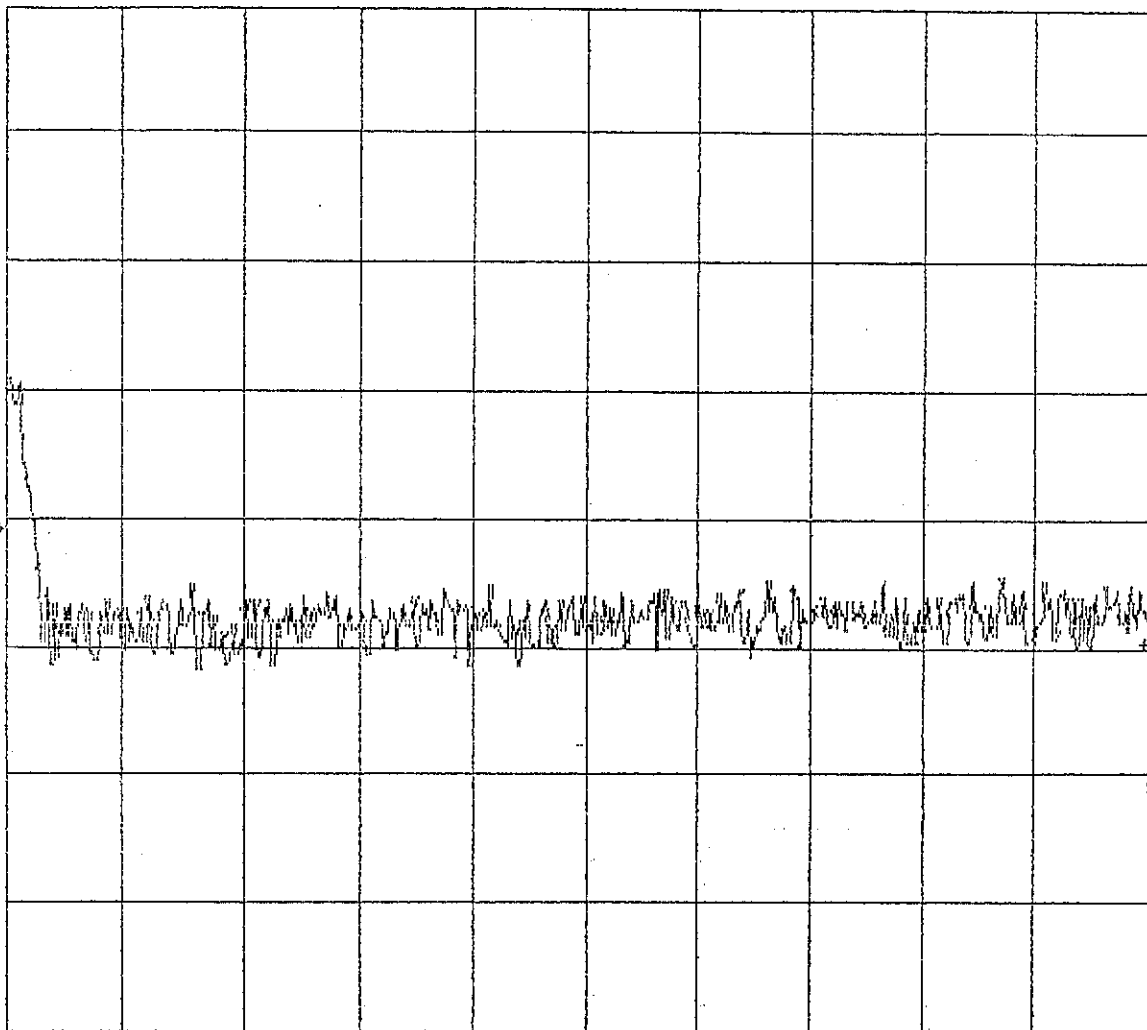


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ISOLATION AS MEASURED ON A NETWORK ANALYZER

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



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

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TECHNICIAN : HOLLY HAHN
VOLTAGE & CURRENT DRAW : ± 5 vdc ON=+0.6mA, -0.6mA
OFF=+65mA, -1.2mA

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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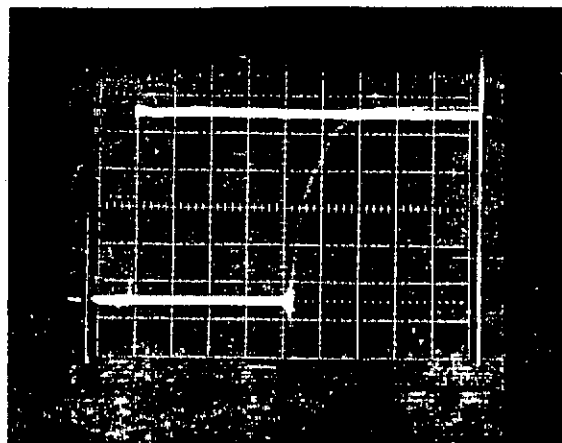
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TECHNICIAN : HOLLY HAHN
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SWITCHING SPEED: RISE/FALL, ON/OFF

Rise/Fall = 10% to 90% RF

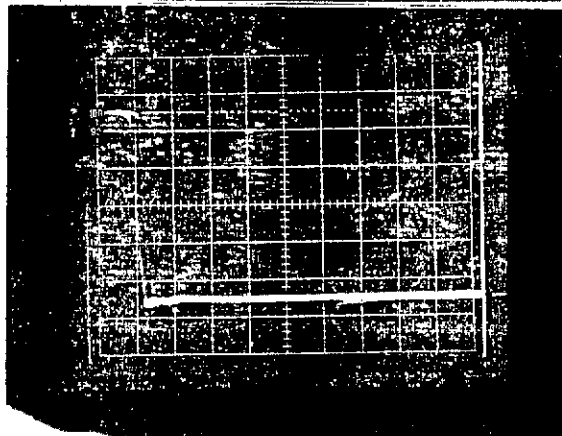
On/Off = 50% TTL to 90% RF/10% RF

VERTICAL:
5mV/Division



Rise Time: 8nS
Delay On: 60nS

Fall Time: 8nS
Delay Off: 55nS



HORIZONTAL:
10nS/Division

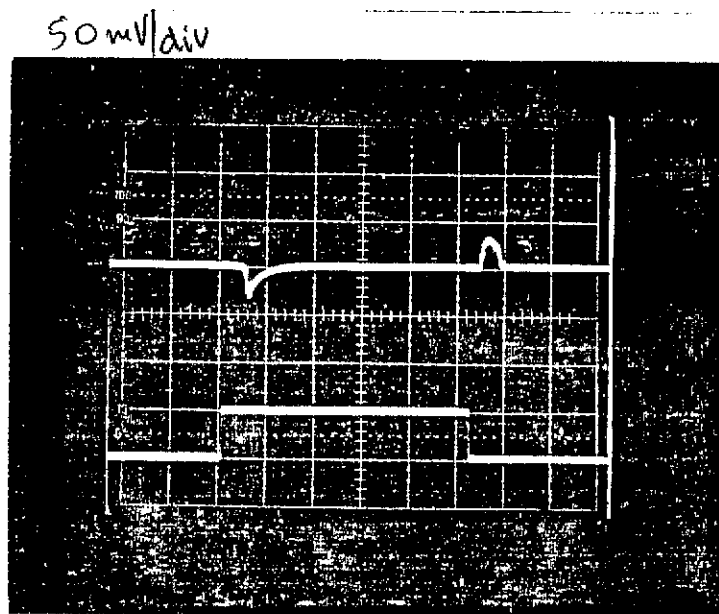
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VIDEO TRANSIENTS
(50mV Peak to Peak in a 100MHz Bandwidth)



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