



**AMERICAN MICROWAVE
CORPORATION**

TEST DATA

ON

100dB ISOLATION

0.5 to 18 GHz

SPST

REFLECTIVE, PIN DIODE SWITCH

MODEL No: SWN-AKG-1DR

(Serial No: 1MS41392)

**BY
AMERICAN MICROWAVE
CORPORATION**

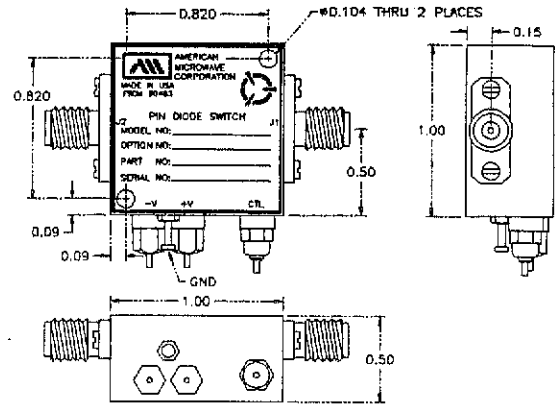
9 NOVEMBER 1994

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

AMERICAN MICROWAVE CORPORATION

REFLECTIVE SPST 100dB ISOLATION SWITCH/MODULATOR

- HIGH ISOLATION
- 500 MHz TO 18 GHz
- LOW INSERTION LOSS
- HIGH SWITCHING SPEED



AMC MODEL No: SWN-AKG-1DR

SPECIFICATIONS:

- FREQUENCY RANGE : 500 MHz to 18 GHz
- ISOLATION : $\geq 85\text{dB}$ @ 500 MHz (Typical)
: $> 102\text{dB}$ @ 2 to 14 GHz "
: $\geq 90\text{dB}$ @ 18 GHz "
- INSERTION LOSS : 3.5dB MAX. @ 18 GHz (2.75dB TYPICAL)
- VSWR : 2.0:1 MAX.
- SWITCHING SPEED : $< 10\text{nS}$ RISE/FALL (10% to 90%RF/90% to 10%RF)
: $< 30\text{nS}$ ON/OFF (50% TTL to 90%RF/10%RF)
- CONTROL : TTL LOGIC
- RF POWER OPERATING : +20dBm MAX.
- DC POWER SUPPLY : $\pm 5\text{vdc}$ @ $< 100\text{mA}$ MAX.
- SIZE : 1.0" X 1.0" X 0.5"

ABSORPTIVE AND MULTI-THROW VERSIONS AVAILABLE

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

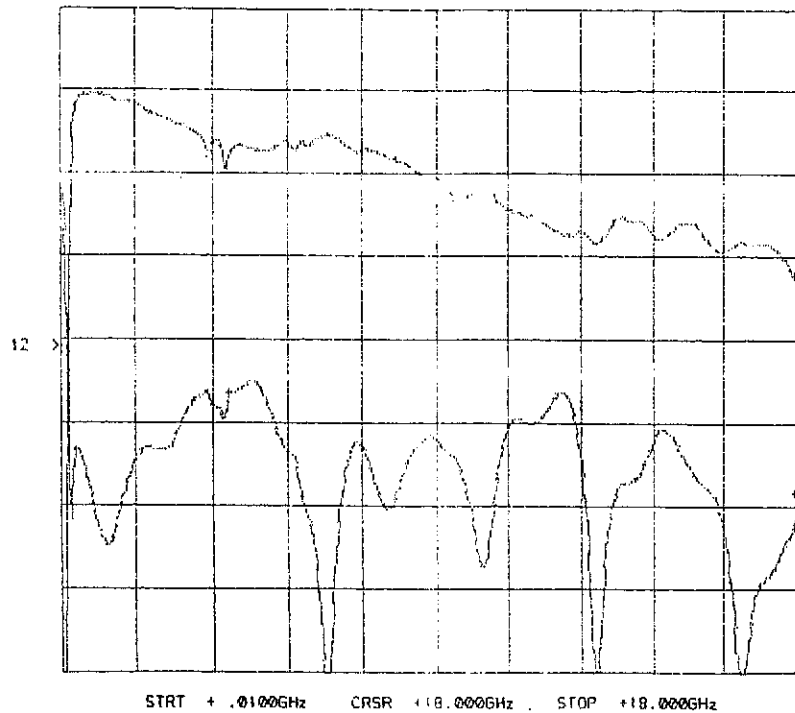
SUMMARY TEST DATA
 SWN-AKG-1DR (REFLECTIVE)
 PAGE 3



SERIAL No : 1MS41392
 TECHNICIAN : HOLLY HAHN
 CURRENT DRAW : +V = 20mA, -V = 60mA

INSERTION LOSS
 J1 TO J2

CH1: A -M - 2.73 dB CH2: B -M - 18.82 dB
 1.0 dB/ REF - 3.50 dB 5.0 dB/ REF - 9.54 dB



FREQUENCY	INSERTION LOSS	FREQUENCY	INSERTION LOSS
0.5 GHz	0.70 dB	8.0 GHz	1.20 dB
0.8 GHz	0.60 dB	10.0 GHz	1.50 dB
1.0 GHz	0.55 dB	12.0 GHz	2.00 dB
2.0 GHz	0.70 dB	14.0 GHz	2.25 dB
4.0 GHz	1.20 dB	16.0 GHz	2.30 dB
6.0 GHz	1.10 dB	18.0 GHz	2.73 dB

9 NOVEMBER 1994

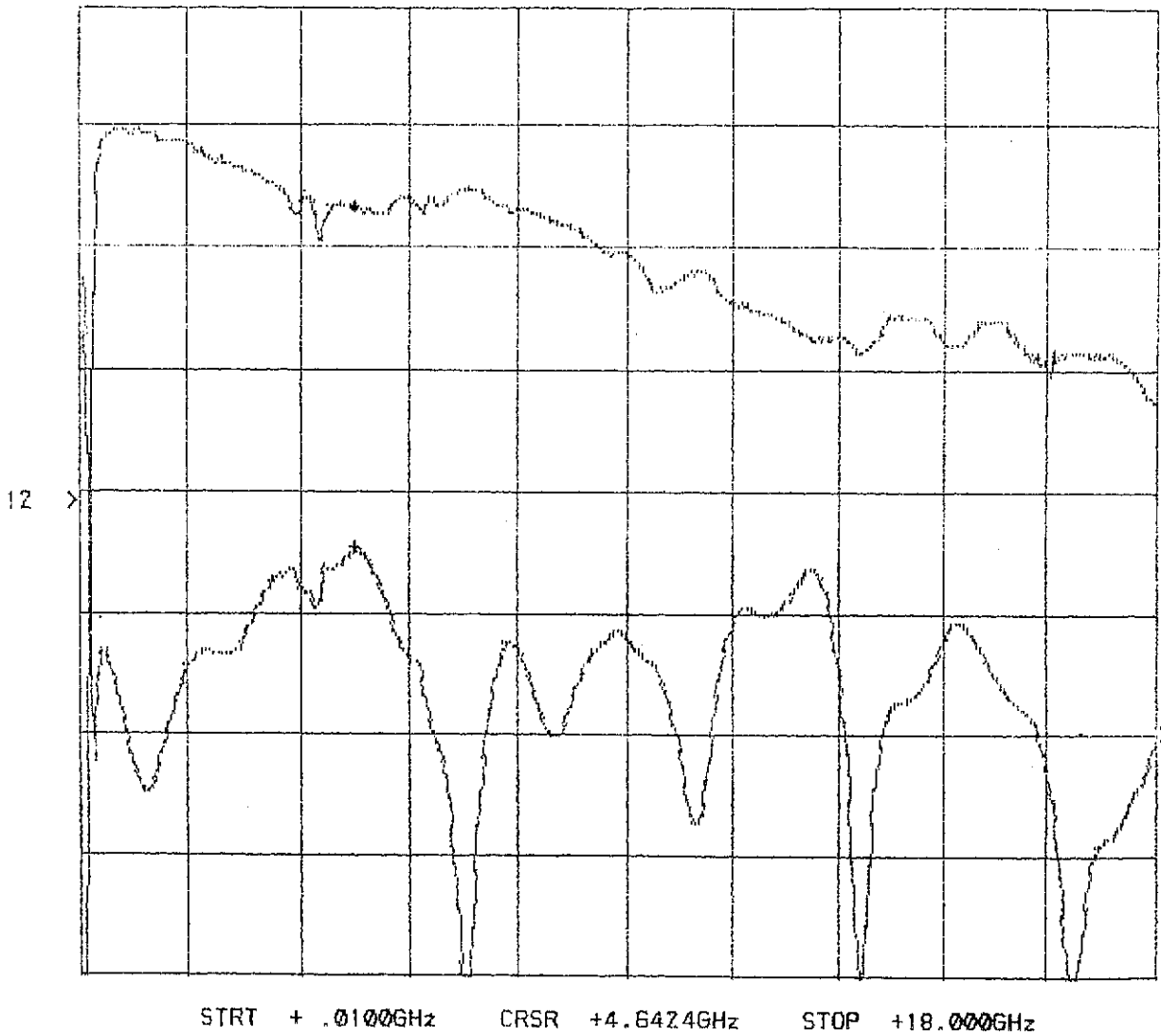
SUMMARY TEST DATA
SWN-AKG-1DR (REFLECTIVE)
PAGE 4



SERIAL No : IMS41392
TECHNICIAN : HOLLY HAHN
CURRENT DRAW : +V = 20mA, -V = 60mA

VSWR INPUT
J1 TO J2

CH1: A -M - 1.16 dB CH2: B -M - 11.87 dB
1.0 dB/ REF - 3.50 dB 5.0 dB/ REF - 9.54 dB



9 NOVEMBER 1994

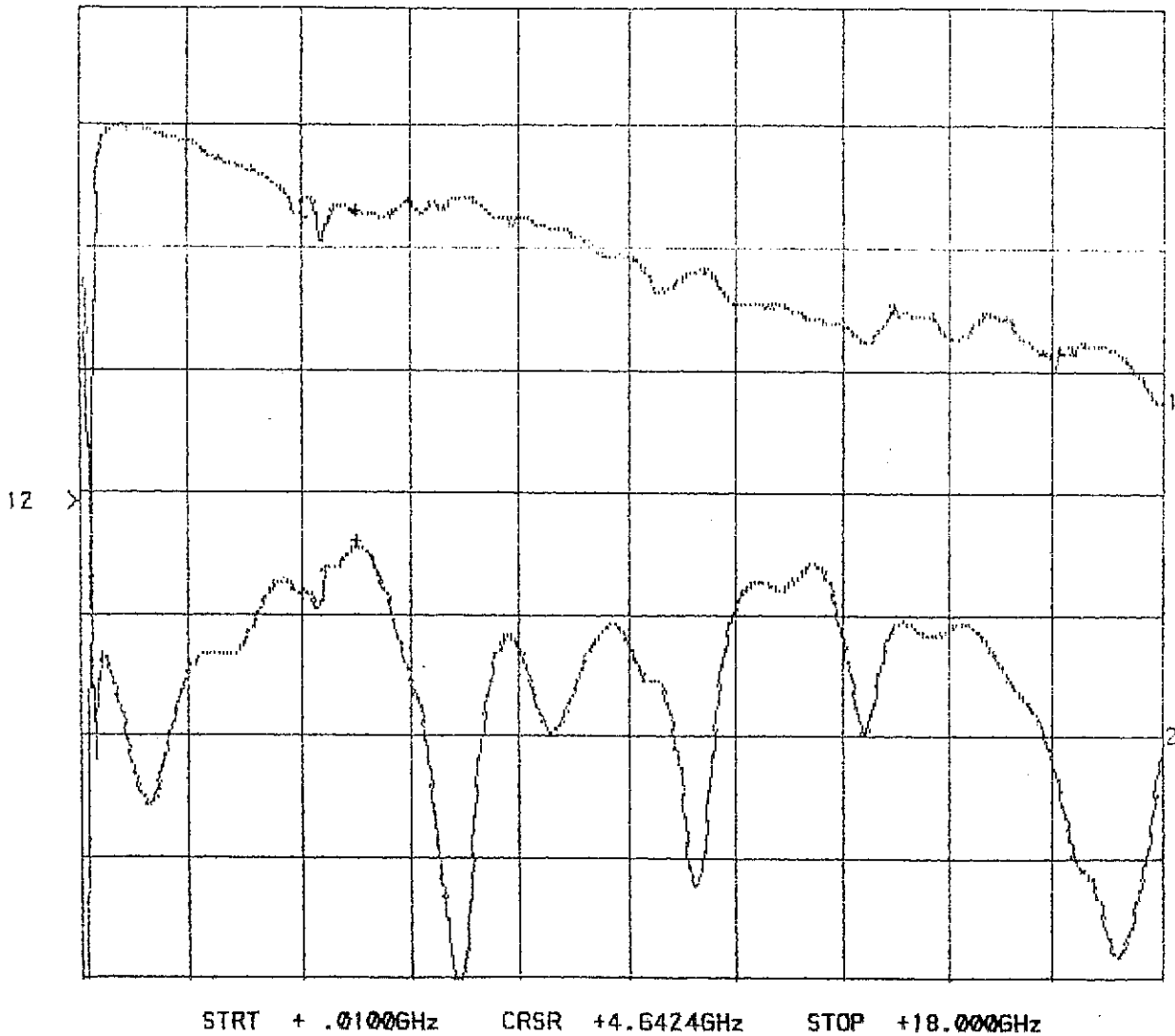
SUMMARY TEST DATA
SWN-AKG-1DR (REFLECTIVE)
PAGE 5



SERIAL No : 1MS41392
TECHNICIAN : HOLLY HAHN
CURRENT DRAW : +V = 20mA, -V = 60mA

VSWR OUTPUT
J2 TO J1

CH1: A -M - 1.20 dB CH2: B -M - 11.61 dB
1.0 dB/ REF - 3.50 dB 5.0 dB/ REF - 9.54 dB



9 NOVEMBER 1994



SERIAL No : 1MS41392
TECHNICIAN : HOLLY HAHN
CURRENT DRAW : +V = 20mA, -V = 60mA

ISOLATION
(MEASURED ON A SPECTRUM ANALYZER AND RECORDED)

FREQUENCY	MEASURED ISOLATION
0.1 GHz	65dB
0.5 GHz	85dB
2.0 GHz	> 104dB
4.0 GHz	> 104dB
8.0 GHz	> 104dB
10.0 GHz	> 102dB
14.0 GHz	> 102dB
18.0 GHz	> 90dB

9 NOVEMBER 1994



SUMMARY TEST DATA
SWN-AKG-1DR (REFLECTIVE)
PAGE 7

SERIAL No : IMS41392
TECHNICIAN : HOLLY HAHN
CURRENT DRAW : +V = 20mA, -V = 60mA

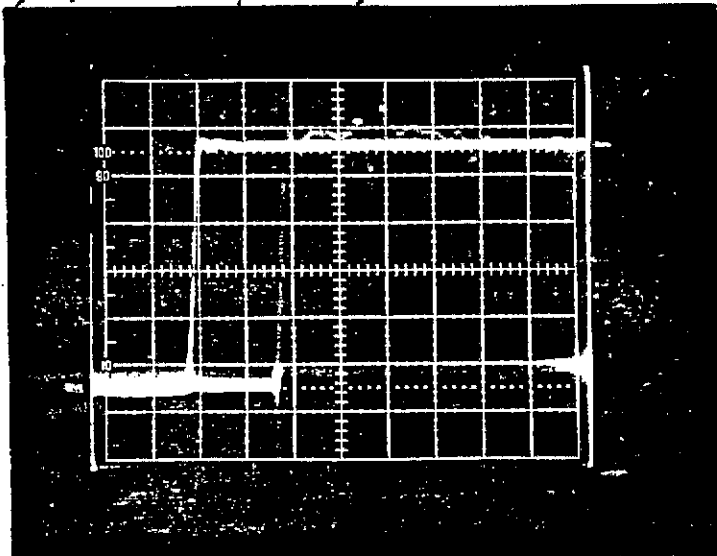
SWITCHING SPEED

Measured Speed:
3nS Rise, 20nS On

DELAY ON:

Horizontal Scale: 10nS Per Division

11/8/94 2:30 PM S/N 1MS410392 HH



DELAY ON/RISE TIME 10 NS PER DIVISION

9 NOVEMBER 1994



SUMMARY TEST DATA
SWN-AKG-1DR (REFLECTIVE)
PAGE 8

SERIAL No : IMS41392
TECHNICIAN : HOLLY HAHN
CURRENT DRAW : +V = 20mA, -V = 60mA

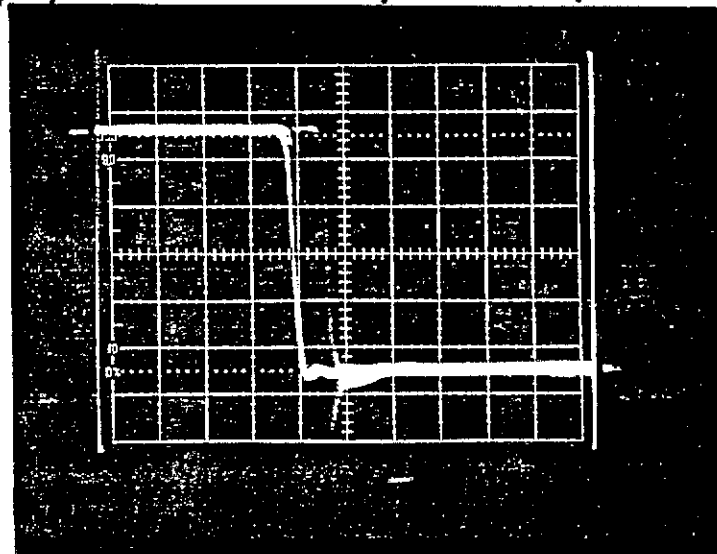
SWITCHING SPEED

Measured Speed:
3nS Fall, 10nS Off

DELAY OFF:

Horizontal Scale: 10nS Per Division

11/8/94 2:30 PM S/N IMS410892 Htt.



DELAY OFF/FALL TIME 10NS PER DIVISION

9 NOVEMBER 1994