



TEST DATA

ON

40 MHz TO 20 GHz

40 MHz TO 4 GHz

AND

250 MHz TO 4 GHz

VERY LOW INSERTION LOSS

SINGLE POLARITY POWER SUPPLY

REFLECTIVE

SOLID STATE SWITCH

(SURFACE MOUNTABLE)

AMC MODEL No:

SWG-218-2DR-4NI (SW-7875-12) OPTION 024

(Serial Number: 2MS903143)

**PREPARED
BY
KATIE BAISEY**

**TESTED
BY
RENE AFABLE**

SEPTEMBER 15, 2000

WEB PAGE: [HTTP://WWW.AMWAVE.COM](http://www.amwave.com)

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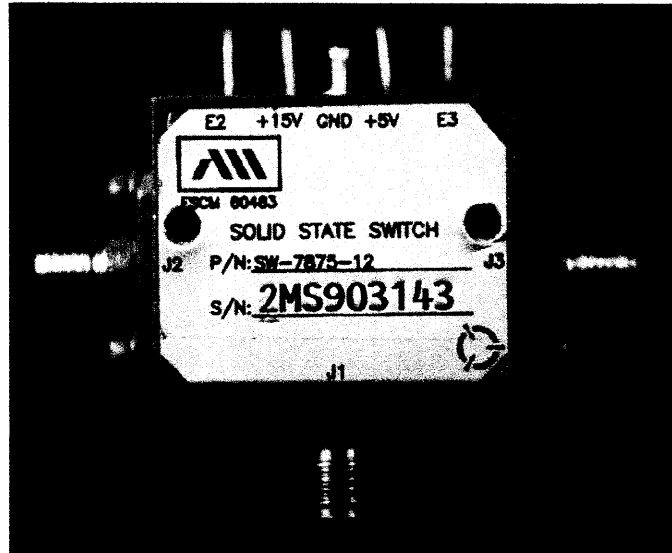
7311 G GROVE ROAD, FREDERICK, MARYLAND 21704 • Tel. (301) 662-4700 • Fax (301) 662-4938

LOW INSERTION LOSS, SINGLE POLARITY POWER SUPPLY, REFLECTIVE SP2T SOLID STATE SWITCH

**AMERICAN MICROWAVE
CORPORATION**

KEY FEATURES

- 200 MHz TO 20 GHz
- LOW INSERTION LOSS
- SINGLE POLARITY POWER SUPPLY
- SURFACE MOUNTABLE
- TTL COMPATIBLE



AMC MODEL No: SWG-218-2DR-4NI (SW-7875-12) OPTION 024

SPECIFICATIONS: (REFLECTIVE)

• FREQUENCY RANGE	:	200 MHz to 20 GHz (10 MHz TO 20 GHz optional)
• INSERTION LOSS	:	2.5 dB MAX.
	:	1.1 dB TYP. @ 200 MHz
	:	1.1 dB TYP. @ 2 GHz
	:	1.6 dB TYP. @ 12 GHz
	:	2.0 dB TYP. @ 18 GHz
	:	2.5 dB TYP. @ 20 GHz
• ISOLATION	:	≥ 40 dB MIN.
	:	≥ 80 dB TYP. @ 200 MHz
	:	≥ 65 dB TYP. @ 2 GHz
	:	≥ 50 dB TYP. @ 12 GHz
	:	≥ 45 dB TYP. @ 18 GHz
	:	≥ 40 dB TYP. @ 20 GHz
• VSWR	:	2.0:1
• SWITCHING SPEED	:	"RISE" 75nS MAX., 50nS TYP.
	:	"FALL" 110nS MAX., 150nS TYP.
	:	"ON" 200nS MAX., 180nS TYP.
	:	"OFF" 200nS MAX., 180nS TYP.
• CONTROL	:	Independent Control TTL compatible
• VIDEO TRANSIENT	:	< 6.8 V peak to peak at 300 MHz bandwidth
	:	< 3.2 V peak to peak at 20 MHz bandwidth
• RF INPUT POWER	:	+20dBm (CW)(other power levels available)
• DC POWER SUPPLY	:	+5vdc @ 50mA MAX.
(Other supply voltages available)	:	+15vdc @ 25mA MAX.
	:	
• SIZE	:	1.1" (L) X 0.85" (W) X 0.38" (H)
• WEIGHT	:	≤ 0.75 oz. TYPICAL

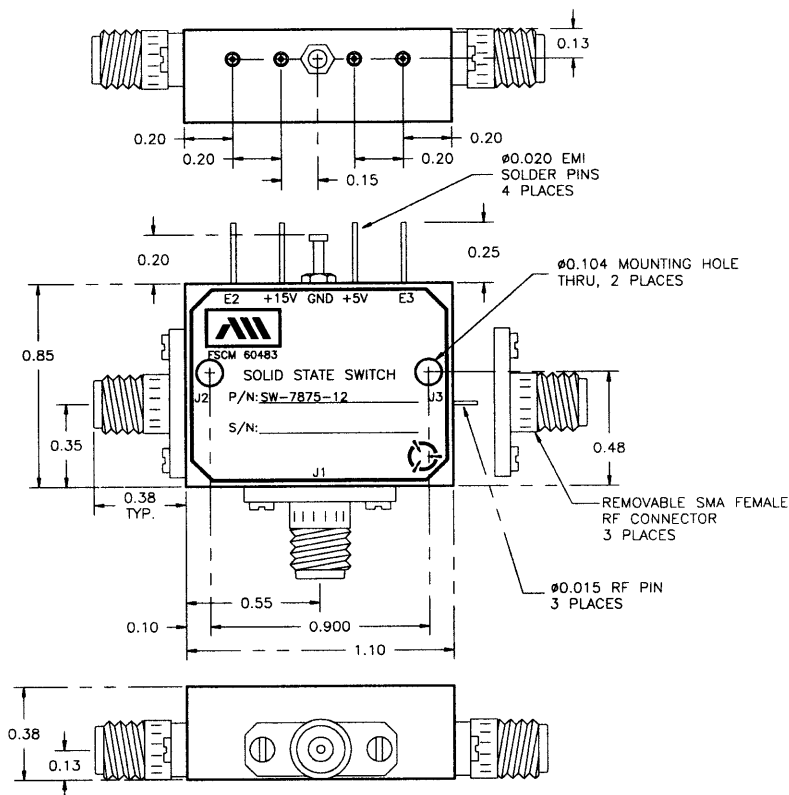
SEPTEMBER 15, 2000

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SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA



ALL DIMENSIONS ARE IN INCHES

TOLERANCES:

X.XX	±0.020
X.XXX	±0.010

ENVIRONMENTAL RATINGS:

- TEMPERATURE:**.....-55°C TO +85°C (OPERATING)
-65°C TO +125°C (STORAGE)
- HUMIDITY:**.....MIL-STD-202F, METHOD 103B COND. B
- SHOCK:**.....MIL-STD-202F, METHOD 213B COND. B
- VIBRATION:**.....MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE:**.....MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE:**.....MIL-STD-202F, METHOD 107D COND. A

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION.

SEPTEMBER 15, 2000

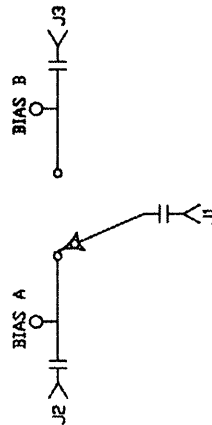
DESCRIPTION

AMC MODEL SWG-218-2DR-4NI OPTION 024 (SW-7875-12) IS A SINGLE SUPPLY, SINGLE POLE TWO THROW, REFLECTIVE SWITCH MODULE WITH VERY LOW INSERTION LOSS, HIGH ISOLATION AND WITH INTEGRAL TTL DRIVER, DESIGNED FOR 250 MHz TO 4.0 GHz OPERATION.

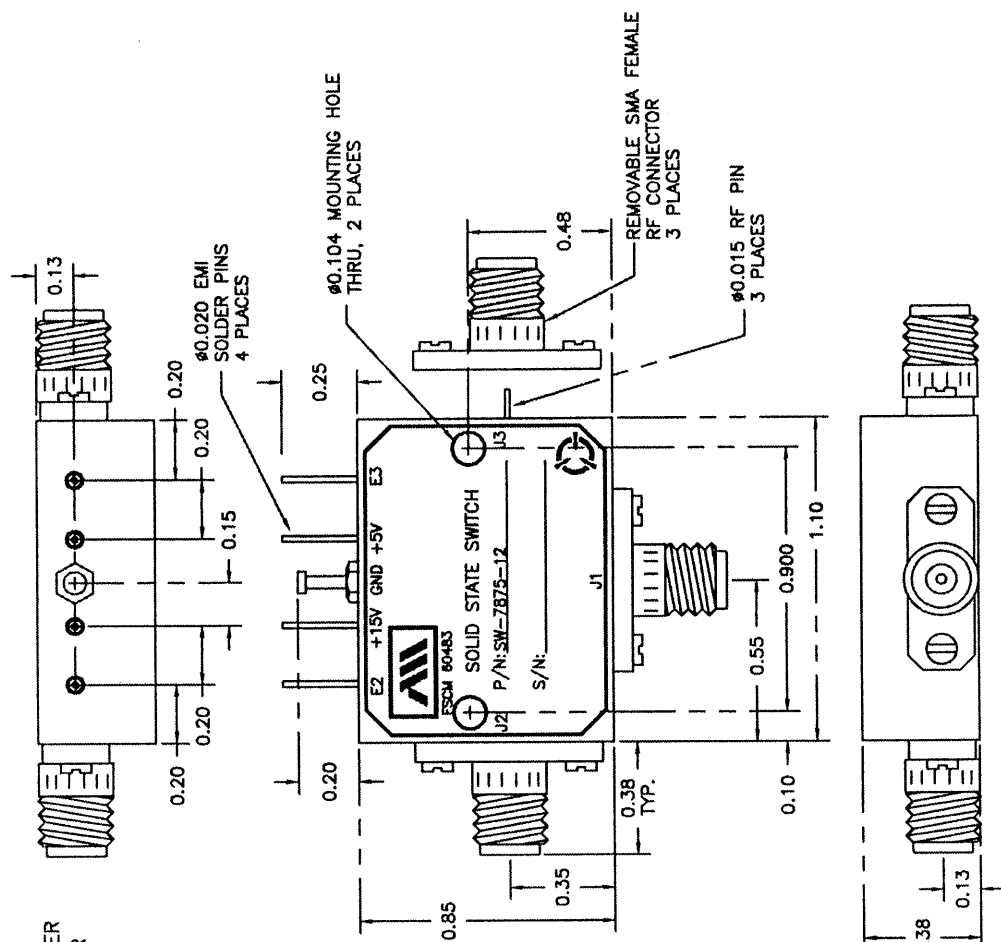
SPECIFICATIONS:

- FREQUENCY: 250 MHz TO 4.0 GHz
- INSERTION LOSS: 1.8 dB MAXIMUM
- ISOLATION: 60 dB MINIMUM
- VSWR: 1.5:1 MAXIMUM
- SWITCHING SPEED: 250 nS MAXIMUM (50% TTL TO 90% RF) (50% TTL TO 10% RF)
- POWER SUPPLY: +5V @ 100 mA MAXIMUM +15V @ 30 mA MAXIMUM
- CONTROL: TTL "0" (LOW LOSS) ON TTL "1" (ISOLATION) OFF
- SURVIVAL POWER: 1.0W CW, 75W PEAK, MAXIMUM
- OPERATION POWER: UP TO 0.5W CW
- CONNECTORS: RF INPUT/OUTPUT: REMOVABLE SMA FEMALE BIAS/CONTROL: $\phi 0.020$ EMI SOLDER PINS
- SIZE: 1.10" (L) x 0.85" (W) x 0.38" (H)
- WEIGHT: 0.75 OUNCE TYPICAL

BLOCK DIAGRAM



S/N=SERIAL NUMBER
P/N=PART NUMBER



ENVIRONMENTAL RATINGS:

- TEMPERATURE: -55°C TO +110°C (OPERATING) -65°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 213B COND. B
- VIBRATION: MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND. A
- FINISH: MIL-C-22750 NAVY GRAY [EPOXY PAINT]

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

ZONE	REV.	DESCRIPTION	DATE	APPROVED
		ORIGINAL JOB# 901005-E	10/19/00	

CONFIDENTIAL AND PROPRIETARY

PART NO.		DATE	
APPROVALS		DATE	
DRAWN WSP & RRD		09/19/00	
CHECKED		11/1/00	
ISSUED		9/21/00	
TITLE		PRODUCT FEATURE	
AMERICAN MICROWAVE CORPORATION FREDERICK, MARYLAND		SWG-218-2DR-4NI OPTION 024	
SIZE		REFLECTIVE SOLID STATE SWITCH	
FORM NO.		DWG NO.	
A		100-4716-1	
SCALE		SHEET	
		1 of 3	

DESCRIPTION:
 AMC MODEL SWG-2DR/DT-SIS IS A SINGLE SUPPLY, SINGLE POLE TWO THROW, REFLECTIVE OR ABSORPTIVE/NON-REFLECTIVE SWITCH MODULE WITH VERY LOW INSERTION LOSS AND WITH INTEGRAL TTL DRIVER, DESIGNED FOR BROAD BAND OPERATIONS.

SPECIFICATIONS:

- FREQUENCY: 0.5 GHz TO 18 GHz
- INSERTION LOSS: 0.5-2 GHz 1.2dB
 2-4 GHz 1.4dB
 4-8 GHz 1.8dB
 8-12 GHz 1.9dB
 12-18 GHz 2.0dB
 (ABSORPTIVE ADD 1dB)
- ISOLATION: 0.5-2 GHz 70dB
 2-4 GHz 80dB
 4-8 GHz 85dB
 8-12 GHz 50dB
 12-18 GHz 40dB
- VSWR: 0.5-2 GHz 1.3:1
 2-4 GHz 1.6:1
 4-8 GHz 1.8:1
 8-12 GHz 1.8:1
 12-18 GHz 2.0:1
- SPEED: RISE: 50ns TYPICAL, 75ns MAX.
 FALL: 50ns TYPICAL, 75ns MAX.
 DELAY ON: 200ns MAX.
 DELAY OFF: 200ns MAX.
- POWER INPUT: (CW)+20dBm (STANDARD), +10 dBm (HIGH SPEED)
- SURVIVAL POWER: 1 WATT CW, 10 WATTS PEAK 1 usec
- CONTROL: TTL LOGIC "0" = J1-J2 ON "1" = J1-J3 ON
- POWER SUPPLY: +5V @ 100 mA MAX.
 +15V @ 100 mA MAX.(ABSORPTIVE/NON-REFLECTIVE)
- CONNECTORS: REMOVABLE SMA FEMALE
 CONTROL SOLDER PIN
- SIZE: 1.10" (L) x 0.85" (W) x 0.38" (H)
- WEIGHT: 0.75 OUNCE TYPICAL

OPTIONS:

- SINGLE CONTROL WITH SOLDER PIN STANDARD
- IND-SP INDEPENDENT CONTROL WITH SOLDER PIN (LOGIC "0" = ON "1" = OFF)
- SMC SINGLE CONTROL WITH SMC MALE
- IND-SMC INDEPENDENT CONTROL WITH SMC MALE (LOGIC "0" = ON "1" = OFF)
- 10M18 10 MHz TO 18 GHz (INSERTION LOSS INCREASES BY 1.5db AT 10 MHz AND 0.5db AT 18 GHz)
- 100M18 100 MHz TO 18 GHz (INSERTION LOSS INCREASES BY 1.5db AT 100 MHz AND 0.5db AT 18 GHz)
- 118 1 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
- 218 2 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
- 412 4 GHz TO 12.4 GHz (NO CHANGE IN INSERTION LOSS)
- 618 6 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
- 1218 12 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
- 100M20 100 MHz TO 20 GHz (INSERTION LOSS INCREASES BY 1.5db AT 100 MHz AND 1.0db AT 20 GHz)
- 220 2 GHz TO 20 GHz (INSERTION LOSS INCREASES BY 1.0 dB AT 20 GHz)
- 1020 10 GHz TO 20 GHz (INSERTION LOSS INCREASES BY 1.0 dB AT 20 GHz)
- B01 -12V POWER SUPPLIES (NOT AVAILABLE WITH SINGLE SUPPLY SEE 100-4715-1)
- B02 -15V POWER SUPPLIES (NOT AVAILABLE WITH SINGLE SUPPLY SEE 100-4715-1)
- B03 REVERSE LOGIC "1"=ON "0"=OFF
- B04 DRIVERLESS, CURRENT CONTROLLED (NOT AVAILABLE WITH SINGLE SUPPLY SEE 100-4715-1)
- B05 HIGH SPEED, TURNON/TURNOFF 20 nsec MAXIMUM WHEN APPLICABLE OR OPTION HS (NOT AVAILABLE WITH SMC CONTROL)(NOT AVAILABLE WITH SINGLE SUPPLY SEE 100-4715-1)
- B06 HIGH POWER - SPECIFY CW POWER, PEAK POWER, PULSE WIDTH, DUTY CYCLE, RF FREQUENCY AND BANDWIDTH (NOT AVAILABLE WITH SINGLE SUPPLY SEE 100-4715-1)
- B07 CUSTOM DESIGNED PRODUCT - SPECIFY INITIALS OF CUSTOMER
- B08 LOW VIDEO TRANSIENTS - SPECIFY VIDEO BANDWIDTH
- B09 LOW INSERTION LOSS VERSION
- B10 HIGHER ISOLATION VERSION

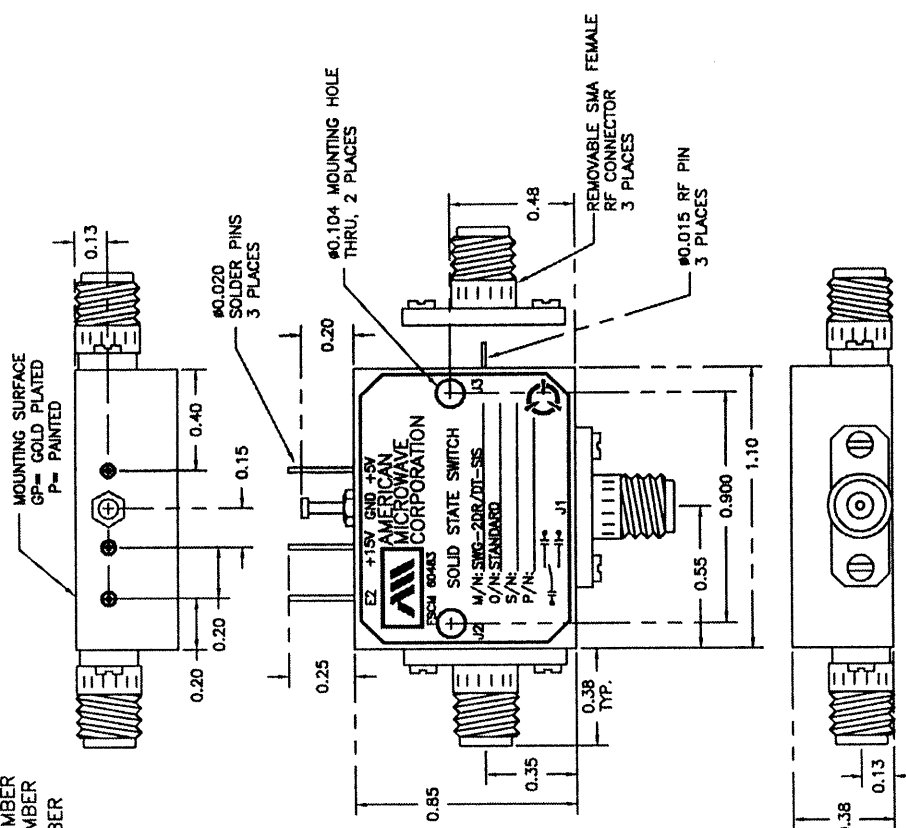
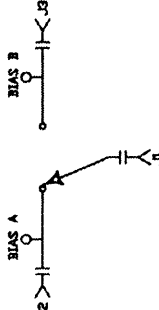
ENVIRONMENTAL RATINGS:

- TEMPERATURE: -55°C TO +85°C (OPERATING)
 -55°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 213B COND. B
- VIBRATION: MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND. A

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

M/N=MODEL NUMBER
 O/N=OPTION NUMBER
 S/N=SERIAL NUMBER
 P/N=PART NUMBER

BLOCK DIAGRAM



NOTE:

- DR=WITH DRIVER, REFLECTIVE
- DT=WITH DRIVER, NON-REFLECTIVE/ABSORPTIVE

CONFIDENTIAL AND PROPRIETARY

PART NO.		DATE	
APPROVALS		DATE	
DRAWN: WSP & RJA		08/19/00	
CHECKED:		9/21/00	
ISSUED:		9/21/00	
SIZE: A	FORM NO. A	REV. NO. 100-4716-2	SCALE
TITLE		PRODUCT FEATURE	
AMERICAN MICROWAVE CORPORATION FREDERICK, MARYLAND		SWG-2DR/DT-SIS-STANDARD REFLECTIVE OR NON-REFLECTIVE/ABSORPTIVE SOLID STATE SWITCH	
REV. NO. 60-483		SHEET 1 of 3	

ZONE	REV.	DESCRIPTION	DATE	APPROVED
		ORIGINAL JOB# 901005-E	09/19/00	

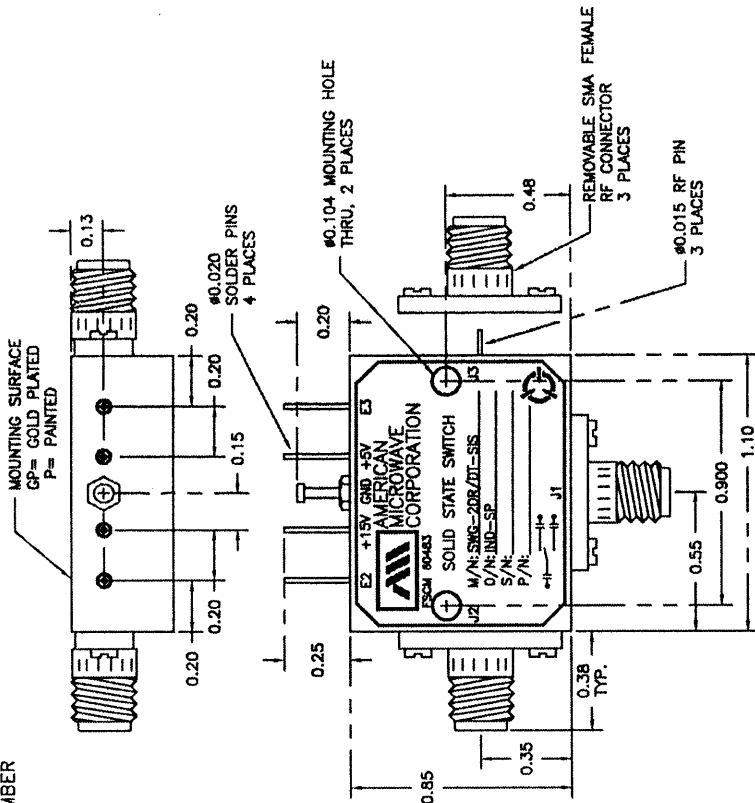
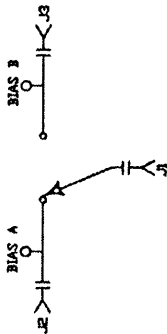
M/N=MODEL NUMBER
O/N=OPTION NUMBER
S/N=SERIAL NUMBER
P/N=PART NUMBER

DESCRIPTION:
AMC MODEL SWG-2DR/DT-SIS IS A SINGLE SUPPLY, SINGLE POLE TWO THROW, REFLECTIVE OR ABSORPTIVE/NON-REFLECTIVE SWITCH MODULE WITH VERY LOW INSERTION LOSS AND WITH INTEGRAL TTL DRIVER, DESIGNED FOR BROAD BAND OPERATIONS.

SPECIFICATIONS:

- FREQUENCY: 0.5 GHz TO 18 GHz
- INSERTION LOSS: 0.5-2 GHz 1.2dB
2-4 GHz 1.4dB
4-8 GHz 1.8dB
8-12 GHz 1.9dB
12-18 GHz 2.0dB
- ISOLATION: 0.5-2 GHz 70dB
2-4 GHz 60dB
4-8 GHz 55dB
8-12 GHz 50dB
12-18 GHz 40dB
- VSWR: 0.5-2 GHz 1.3:1
2-4 GHz 1.3:1
4-8 GHz 1.6:1
8-12 GHz 1.8:1
12-18 GHz 2.0:1
- SPEED: RISE: 50ns TYPICAL 75ns MAX
FALL: 50ns TYPICAL 75ns MAX
DELAY ON: 200ns MAX.
DELAY OFF: 200ns MAX.
- POWER INPUT: (CW)+20dBm (STANDARD), +10 dBm (HIGH SPEED)
- SURVIVAL POWER: 1 WATT CW, 10 WATTS PEAK 1 usec
- CONTROL: TTL LOGIC "0" = J1-J2 ON "1" = J1-J3 ON
- POWER SUPPLY: +5V @ 100 mA MAX.
+15V @ 10 mA MAXIMUM
- CONNECTORS: RF: REMOVABLE SMA FEMALE
CONTROL: SOLDER PIN
- SIZE: 1.10" (L) x 0.85" (W) x 0.38" (H)
- WEIGHT: 0.75 OUNCE TYPICAL

BLOCK DIAGRAM



NOTE:

- DR=WITH DRIVER, REFLECTIVE
- DT=WITH DRIVER, NON-REFLECTIVE/ABSORPTIVE

- OPTIONS:**
- SINGLE CONTROL WITH SOLDER PIN STANDARD
 - IND-SP INDEPENDENT CONTROL WITH SOLDER PIN (LOGIC "0" = ON "1" = OFF)
 - SMC SINGLE CONTROL WITH SMC MALE
 - IND-SMC INDEPENDENT CONTROL WITH SMC MALE (LOGIC "0" = ON "1" = OFF)
 - 10M18 10 MHz TO 18 GHz (INSERTION LOSS INCREASES BY 1.5db AT 10 MHz AND 0.5db AT 18 GHz)
 - 100M18 100 MHz TO 18 GHz (INSERTION LOSS INCREASES BY 1.5db AT 100 MHz AND 0.5db AT 18 GHz)
 - 118 1 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
 - 218 2 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
 - 412 4 GHz TO 12.4 GHz (NO CHANGE IN INSERTION LOSS)
 - 618 6 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
 - 1218 12 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
 - 100M20 100 MHz TO 20 GHz (INSERTION LOSS INCREASES BY 1.5db AT 100 MHz AND 1.0db AT 20 GHz)
 - 220 2 GHz TO 20 GHz (INSERTION LOSS INCREASES BY 1.0 dB AT 20 GHz)
 - 1020 10 GHz TO 20 GHz (INSERTION LOSS INCREASES BY 1.0 dB AT 20 GHz)
 - B01 -12V POWER SUPPLIES (NOT AVAILABLE WITH SINGLE SUPPLY SEE 100-4715-2)
 - B02 -15V POWER SUPPLIES (NOT AVAILABLE WITH SINGLE SUPPLY SEE 100-4715-2)
 - B03 REVERSE LOGIC "1"=ON "0"=OFF
 - B04 DRIVERLESS, CURRENT CONTROLLED (NOT AVAILABLE WITH SINGLE SUPPLY SEE 100-4715-2)
 - B05 HIGH SPEED, TURNON/TURNOFF 20 nsec MAXIMUM WHEN APPLICABLE OR OPTION HS (NOT AVAILABLE WITH SMC CONTROL) (NOT AVAILABLE WITH SINGLE SUPPLY SEE 100-4715-2)
 - B06 HIGH POWER - SPECIFY CW POWER, PULSE WIDTH, DUTY CYCLE. RF FREQUENCY AND BANDWIDTH (NOT AVAILABLE WITH SINGLE SUPPLY SEE 100-4715-2)
 - B07 CUSTOM DESIGNED PRODUCT- SPECIFY INITIALS OF CUSTOMER
 - B08 LOW VIDEO TRANSIENTS - SPECIFY VIDEO BANDWIDTH
 - B09 LOW INSERTION LOSS VERSION
 - B10 HIGHER ISOLATION VERSION

ENVIRONMENTAL RATINGS:

- TEMPERATURE: -55°C TO +85°C (OPERATING)
-65°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 213B COND. B
- VIBRATION: MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND. A

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

CONFIDENTIAL AND PROPRIETARY

PART NO.		DATE		TITLE	
APPROVALS		DATE		TITLE	
DESIGN	WSP & RJA	09/19/00	PRODUCT FEATURE		
CHECKED		9/21/00	SWG-2DR/DT-SIS-IND-SP		
ISSUED		9/21/00	REFLECTIVE OR NON-REFLECTIVE/ABSORPTIVE		
SIZE	F50H NO.	A 60483	DWG NO.	100-4716-3	REV.
SCALE					SHEET 1 of 3

AMERICAN MICROWAVE CORPORATION
FREDERICK, MARYLAND

AMERICAN MICROWAVE CORPORATION
FREDERICK, MARYLAND

DESCRIPTION:
 AMC MODEL SWG-2DR/DT IS A SINGLE POLE TWO THROW, REFLECTIVE OR ABSORPTIVE/NON-REFLECTIVE SWITCH MODULE WITH VERY LOW INSERTION LOSS, HIGH ISOLATION AND WITH INTEGRAL TTL DRIVER, DESIGNED FOR BROAD BAND OPERATIONS.

SPECIFICATIONS:

- FREQUENCY: 0.5 GHz TO 18 GHz
- INSERTION LOSS: REFLECTIVE: 2.5db
 ABSORPTIVE: 3.5db
- ISOLATION: 0.5 GHz TO 2 GHz: 60db
 2 GHz TO 16 GHz: 70db
- VSWR: REFLECTIVE IN/OUT: 2.0:1
 ABSORPTIVE IN/OUT: 2.0:1
 ABSORPTIVE OUT/OFF: 2.0:1
- SPEED: RISE: 10ns TYPICAL, 15ns MAX.
 FALL: 10ns TYPICAL, 15ns MAX.
 DELAY ON: 75ns TYPICAL, 100ns MAX.
 DELAY OFF: 75ns TYPICAL, 100ns MAX.
- POWER INPUT: (CW)+20dBm (STANDARD), +10 dBm (HIGH SPEED)
- SURVIVAL POWER: 1 WATT CW, 10 WATTS PEAK 1 usec
- CONTROL: TTL LOGIC "0" = J1-J2 ON "1" = J1-J3 ON
- POWER SUPPLY: +5V @ 100 mA MAX.
 -5V @ 75mA MAX.(REFLECTIVE)
 -5V @ 100mA MAX.(ABSORPTIVE/NON-REFLECTIVE)
- CONNECTORS: REMOVABLE SMA FEMALE
 SOLDER PIN
- SIZE: 1.10" (L) x 0.85" (W) x 0.38" (H)
- WEIGHT: 0.75 OUNCE TYPICAL

OPTIONS:

- SINGLE CONTROL WITH SOLDER PIN STANDARD
- IND-SP INDEPENDANT CONTROL WITH SOLDER PIN (LOGIC "0" = ON "1" = OFF)
- SMC SINGLE CONTROL WITH SMC MALE
- IND-SMC INDEPENDANT CONTROL WITH SMC MALE (LOGIC "0" = ON "1" = OFF)
- 10M18 10 MHz TO 18 GHz (INSERTION LOSS INCREASES BY 1.5db AT 10 MHz AND 0.5db AT 18 GHz)
- 100M18 100 MHz TO 18 GHz (INSERTION LOSS INCREASES BY 1.5db AT 100 MHz AND 0.5db AT 18 GHz)
- 118 1 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
- 218 2 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
- 412 4 GHz TO 12.4 GHz (NO CHANGE IN INSERTION LOSS)
- 618 6 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
- 1218 12 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
- 100M20 100 MHz TO 20 GHz (INSERTION LOSS INCREASES BY 1.5db AT 100 MHz AND 1.0db AT 20 GHz)
- 220 2 GHz TO 20 GHz (INSERTION LOSS INCREASES BY 1.0db AT 20 GHz)
- 1020 10 GHz TO 20 GHz (INSERTION LOSS INCREASES BY 1.0db AT 20 GHz)
- B01 -12V POWER SUPPLIES
- B02 -15V POWER SUPPLIES
- B03 REVERSE LOGIC "1"=ON "0"=OFF
- B04 DRIVERLESS, CURRENT CONTROLLED
- B05 HIGH SPEED, TURNON/TURNOFF 20 nsec MAXIMUM WHEN APPLICABLE OR OPTION HS (NOT AVAILABLE WITH SMC CONTROL)
- B06 HIGH POWER - SPECIFY CW POWER, PEAK POWER, PULSE WIDTH, DUTY CYCLE, RF FREQUENCY AND BANDWIDTH
- B07 CUSTOM DESIGNED PRODUCT - SPECIFY INITIALS OF CUSTOMER
- B08 LOW VIDEO TRANSIENTS - SPECIFY VIDEO BANDWIDTH
- B09 LOW INSERTION LOSS VERSION
- B10 HIGHER ISOLATION VERSION

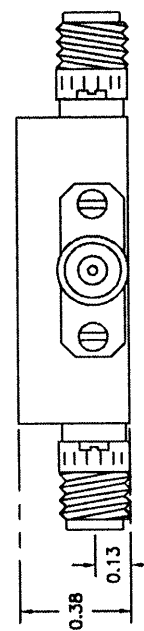
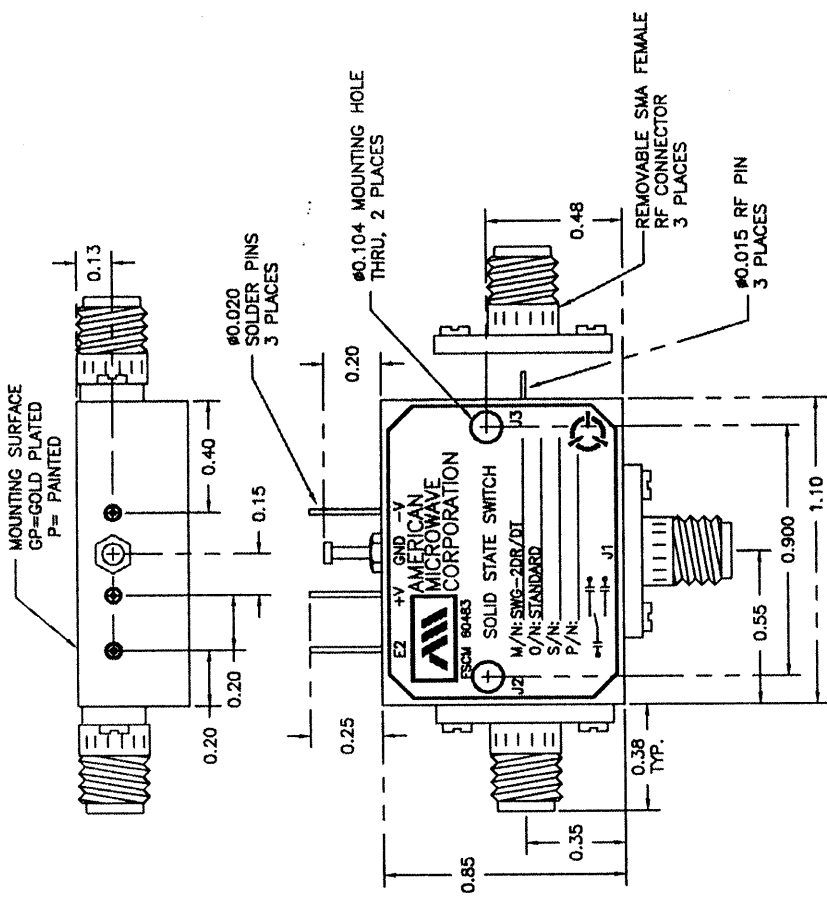
ENVIRONMENTAL RATINGS:

- TEMPERATURE: -55°C TO +85°C (OPERATING)
 -65°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 213B COND. B
- VIBRATION: MIL-STD-202F, METHOD 2040 COND. B
- ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND. A

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

ALL DIMENSIONS ARE IN INCHES

TOLERANCES:
 X.XX ±0.020
 X.XXX ±0.010



NOTE:
 DR=WITH DRIVER, REFLECTIVE
 DT=WITH DRIVER, NON-REFLECTIVE/ABSORPTIVE

CONFIDENTIAL AND PROPRIETARY

PART NO.		DATE		APPROVALS	
AMERICAN MICROWAVE CORPORATION FREDERICK, MARYLAND		09/19/00		W.P.P. & J.R.A.	
TITLE		DATE		APPROVALS	
PRODUCT FEATURE SWG-2DR/DT-STANDARD REFLECTIVE OR NON-REFLECTIVE/ABSORPTIVE SOLID STATE SWITCH		09/19/00		W.P.P. & J.R.A.	
SIZE	FORM NO.	ISSUED	CHECKED	DATE	SCALE
A	60483	W.P.P.	W.P.P.	09/21/00	100-4715-1
DRAWN					SHEET
CHECKED					1 of 3
ISSUED					

DESCRIPTION:

AMC MODEL SWG-2DR/DI IS A SINGLE POLE TWO THROW, REFLECTIVE OR ABSORPTIVE/NON-REFLECTIVE SWITCH MODULE WITH VERY LOW INSERTION LOSS, HIGH ISOLATION AND WITH INTEGRAL TTL DRIVER, DESIGNED FOR BROAD BAND OPERATIONS.

SPECIFICATIONS:

- FREQUENCY: 0.5 GHz TO 18 GHz
- INSERTION LOSS: REFLECTIVE: 2.5db
ABSORPTIVE: 3.5db
- ISOLATION: 0.5 GHz TO 2 GHz: 60db
2 GHz TO 18 GHz: 70db
- VSWR: REFLECTIVE IN/OUT: 2.0:1
ABSORPTIVE IN/OUT: 2.0:1
- SPEED: RISE: 10ns TYPICAL, 15ns MAX.
FALL: 10ns TYPICAL, 15ns MAX.
DELAY ON: 75ns TYPICAL, 100ns MAX.
DELAY OFF: 75ns TYPICAL, 100ns MAX.
- POWER INPUT: (CW)+20dBm (STANDARD), +10 dBm (HIGH SPEED)
- SURVIVAL POWER: 1 WATT CW, 10 WATTS PEAK 1 usec
- CONTROL: TTL LOGIC "0" = J1-J2 ON "1" = J1-J3 ON
- POWER SUPPLY: +5V ● 100 mA MAX.
-5V ● 75mA MAX.(REFLECTIVE)
100mA MAX.(ABSORPTIVE/NON-REFLECTIVE)
- CONNECTORS: REMOVABLE SMA FEMALE
SOLDER PIN CONTROL
- SIZE: 1.10" (L) x 0.85" (W) x 0.38" (H)
- WEIGHT: 0.75 OUNCE TYPICAL

OPTIONS:

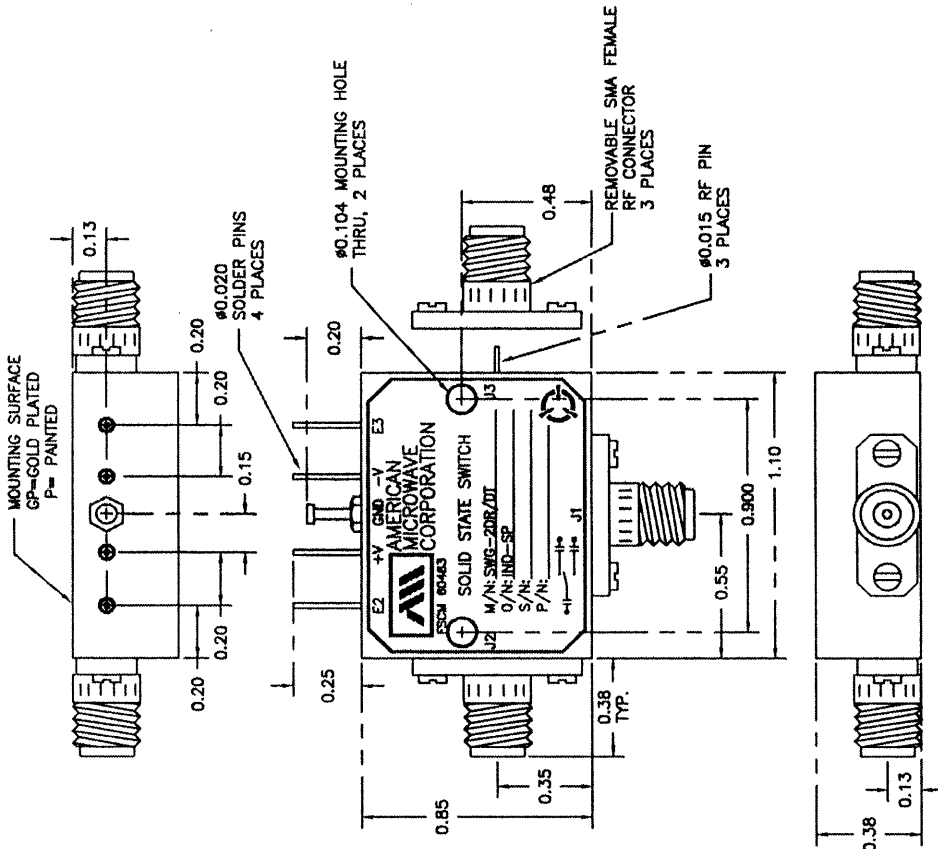
- SINGLE CONTROL WITH SOLDER PIN STANDARD
- IND-SP INDEPENDANT CONTROL WITH SOLDER PIN (LOGIC "0" = ON "1" = OFF)
- SINGLE CONTROL WITH SMC MALE
- IND-SMC INDEPENDANT CONTROL WITH SMC MALE (LOGIC "0" = ON "1" = OFF)
- 10M18 10 MHz TO 18 GHz (INSERTION LOSS INCREASES BY 1.5dB AT 10 MHz AND 0.5dB AT 18 GHz)
- 100M18 100 MHz TO 18 GHz (INSERTION LOSS INCREASES BY 1.5dB AT 100 MHz AND 0.5dB AT 18 GHz)
- 118 1 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
- 218 2 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
- 412 4 GHz TO 12.4 GHz (NO CHANGE IN INSERTION LOSS)
- 618 6 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
- 1218 12 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
- 100M20 100 MHz TO 20 GHz (INSERTION LOSS INCREASES BY 1.5dB AT 100 MHz AND 1.0dB AT 20 GHz)
- 220 2 GHz TO 20 GHz (INSERTION LOSS INCREASES BY 1.0db AT 20 GHz)
- 1020 10 GHz TO 20 GHz (INSERTION LOSS INCREASES BY 1.0db AT 20 GHz)
- B01 -12V POWER SUPPLIES
- B02 -15V POWER SUPPLIES
- B03 REVERSE LOGIC "1" = ON "0" = OFF
- B04 DRIVERLESS, CURRENT CONTROLLED
- B05 HIGH SPEED, TURNON/TURNOFF 20 nsec MAXIMUM WHEN APPLICABLE OR OPTION HS (NOT AVAILABLE WITH SMC CONTROL)
- B06 HIGH POWER - SPECIFY CW POWER, PEAK POWER, PULSE WIDTH, DUTY CYCLE, RF FREQUENCY AND BANDWIDTH
- B07 CUSTOM DESIGNED PRODUCT - SPECIFY INITIALS OF CUSTOMER
- B08 LOW VIDEO TRANSIENTS - SPECIFY VIDEO BANDWIDTH
- B09 LOW INSERTION LOSS VERSION
- B10 HIGHER ISOLATION VERSION

ENVIRONMENTAL RATINGS:

- TEMPERATURE: -55°C TO +85°C (OPERATING)
-65°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 1038 COND. B
- SHOCK: MIL-STD-202F, METHOD 2138 COND. B
- VIBRATION: MIL-STD-202F, METHOD 2040 COND. B
- ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND. A

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

ZONE	REV.	DESCRIPTION	DATE	APPROVED
		ORIGINAL JOB# 901005-E	09/19/00	



NOTE:
DR=WITH DRIVER, REFLECTIVE
DT=WITH DRIVER, NON-REFLECTIVE/ABSORPTIVE

CONFIDENTIAL AND PROPRIETARY

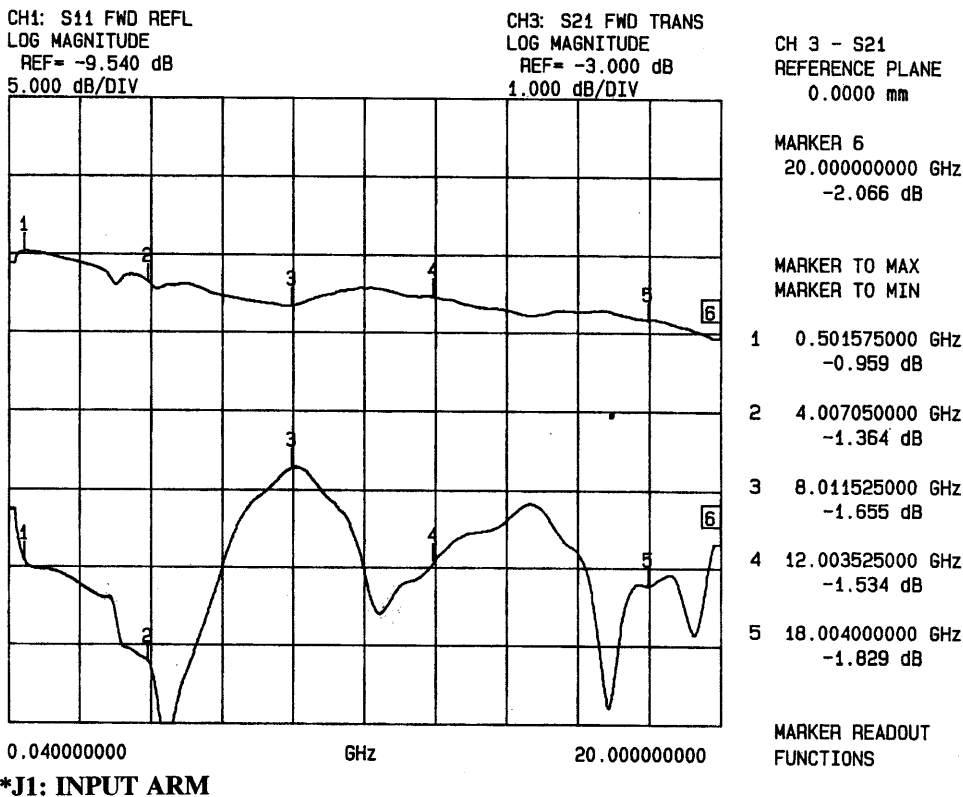
PART NO.		TITLE	
AMERICAN MICROWAVE CORPORATION FREDERICK, MARYLAND		PRODUCT FEATURE SWG-2DR/DI-IND-SP REFLECTIVE OR NON-REFLECTIVE/ABSORPTIVE SOLID STATE SWITCH	
APPROVALS	DATE	SIZE	FSCM NO.
WSP & RRA	09/19/00	A	60483
CHECKED	9/21/00	DWG NO.	100-4715-2
ISSUED	9/21/00	SCALE	SHEET 1 of 3



SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA

INSERTION LOSS & RETURN LOSS* J1-J2



FREQUENCY	INSERTION LOSS	RETURN LOSS
500 MHz	0.95 dB	19.13 dB
4.0 GHz	1.36 dB	25.73 dB
8.0 GHz	1.65 dB	13.09 dB
12.0 GHz	1.53 dB	19.12 dB
18.0 GHz	1.82 dB	20.66 dB
20.0 GHz	2.06 dB	17.97 dB



SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA

INSERTION LOSS & RETURN LOSS*

J2-J1

CH2: S12 REV TRANS
LOG MAGNITUDE
REF= -3.000 dB
1.000 dB/DIV

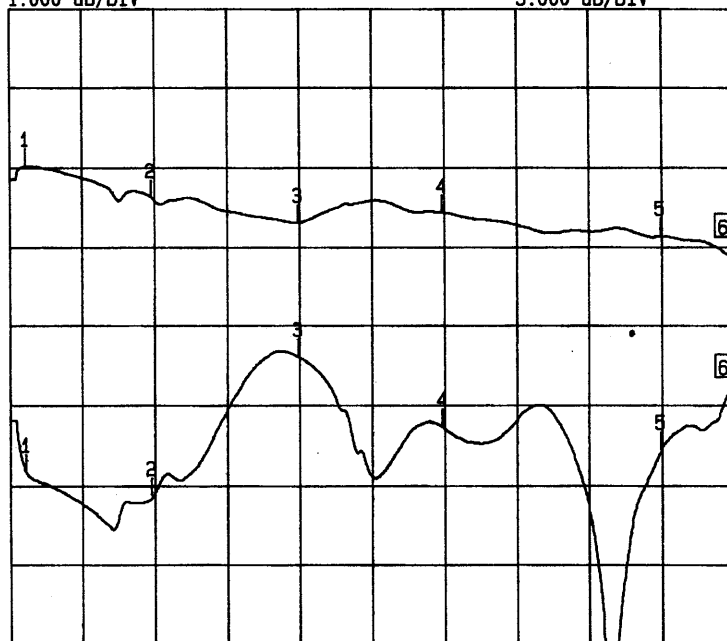
CH4: S22 REV REFL
LOG MAGNITUDE
REF= -9.540 dB
5.000 dB/DIV

CH 2 - S12
REFERENCE PLANE
0.0000 mm

MARKER 6
20.000000000 GHz
-2.087 dB

MARKER TO MAX
MARKER TO MIN

- 1 0.501575000 GHz
-0.971 dB
- 2 4.007050000 GHz
-1.385 dB
- 3 8.011525000 GHz
-1.686 dB
- 4 12.003525000 GHz
-1.558 dB
- 5 18.004000000 GHz
-1.865 dB



0.040000000 GHz 20.000000000

*J2: INPUT ARM

MARKER READOUT
FUNCTIONS

FREQUENCY	INSERTION LOSS	RETURN LOSS
500 MHz	0.97 dB	18.69 dB
4.0 GHz	1.38 dB	20.18 dB
8.0 GHz	1.68 dB	11.48 dB
12.0 GHz	1.55 dB	15.91 dB
18.0 GHz	1.86 dB	17.29 dB
20.0 GHz	2.08 dB	13.93 dB

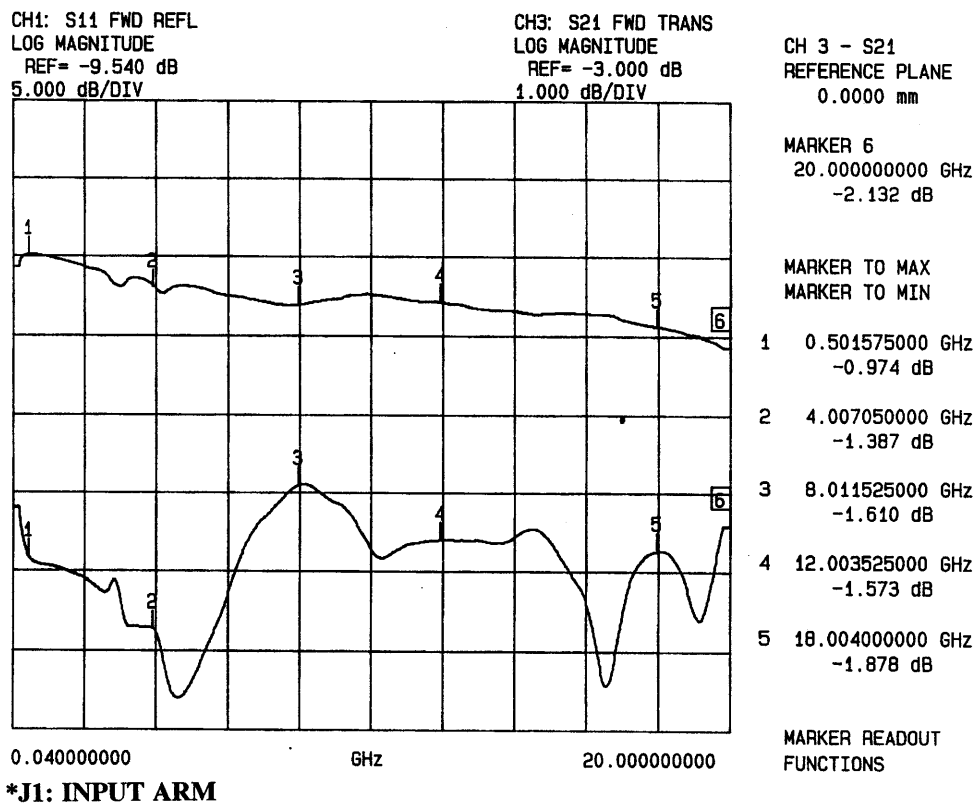


SUMMARY TEST DATA

MODEL NUMBER : SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER : 024
SERIAL NUMBER : 2MS903143
ENGINEER : RENE AFABLE
VOLTAGE & CURRENT DRAW : +5vdc @ 27mA; +15vdc @ 1mA

INSERTION LOSS & RETURN LOSS*

J1-J3



FREQUENCY	INSERTION LOSS	RETURN LOSS
500 MHz	0.97 dB	18.65 dB
4.0 GHz	1.38 dB	23.23 dB
8.0 GHz	1.61 dB	14.00 dB
12.0 GHz	1.57 dB	17.51 dB
18.0 GHz	1.87 dB	18.23 dB
20.0 GHz	2.13 dB	16.62 dB

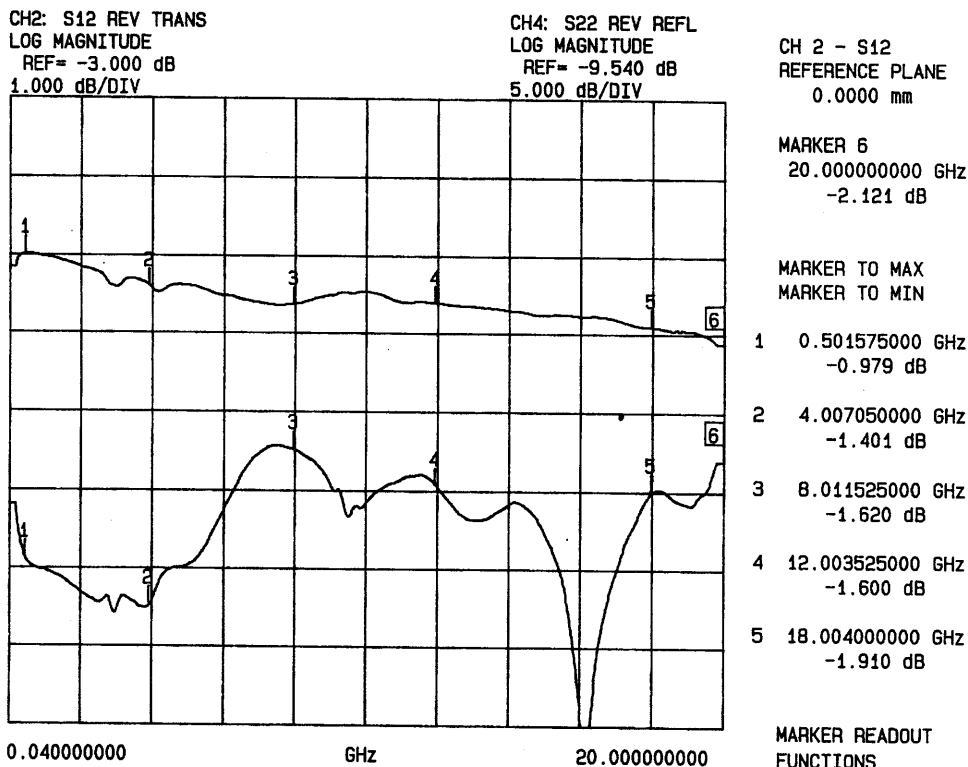


SUMMARY TEST DATA

MODEL NUMBER : SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER : 024
SERIAL NUMBER : 2MS903143
ENGINEER : RENE AFABLE
VOLTAGE & CURRENT DRAW : +5vdc @ 27mA; +15vdc @ 1mA

INSERTION LOSS & RETURN LOSS*

J3-J1



*J3: INPUT ARM

FREQUENCY	INSERTION LOSS	RETURN LOSS
500 MHz	0.97 dB	18.88 dB
4.0 GHz	1.40 dB	21.81 dB
8.0 GHz	1.62 dB	11.92 dB
12.0 GHz	1.60 dB	14.16 dB
18.0 GHz	1.91 dB	14.56 dB
20.0 GHz	2.12 dB	12.57 dB



SUMMARY TEST DATA

MODEL NUMBER : SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER : 024
SERIAL NUMBER : 2MS903143
ENGINEER : RENE AFABLE
VOLTAGE & CURRENT DRAW : +5vdc @ 27mA; +15vdc @ 1mA

ISOLATION*

(AS MEASURED ON A SPECTRUM ANALYZER)

FREQUENCY	J2	J3
100 MHz	90 dB	90 dB
200 MHz	80 dB	80 dB
500 MHz	76 dB	78 dB
1 GHz	70 dB	72 dB
2 GHz	67 dB	68 dB
4 GHz	64 dB	64 dB
6 GHz	60 dB	60 dB
8 GHz	58 dB	58 dB
10 GHz	53 dB	53 dB
12 GHz	52 dB	53 dB
14 GHz	50 dB	51 dB
16 GHz	49 dB	50 dB
18 GHz	46 dB	45 dB
20 GHz	43 dB	45 dB

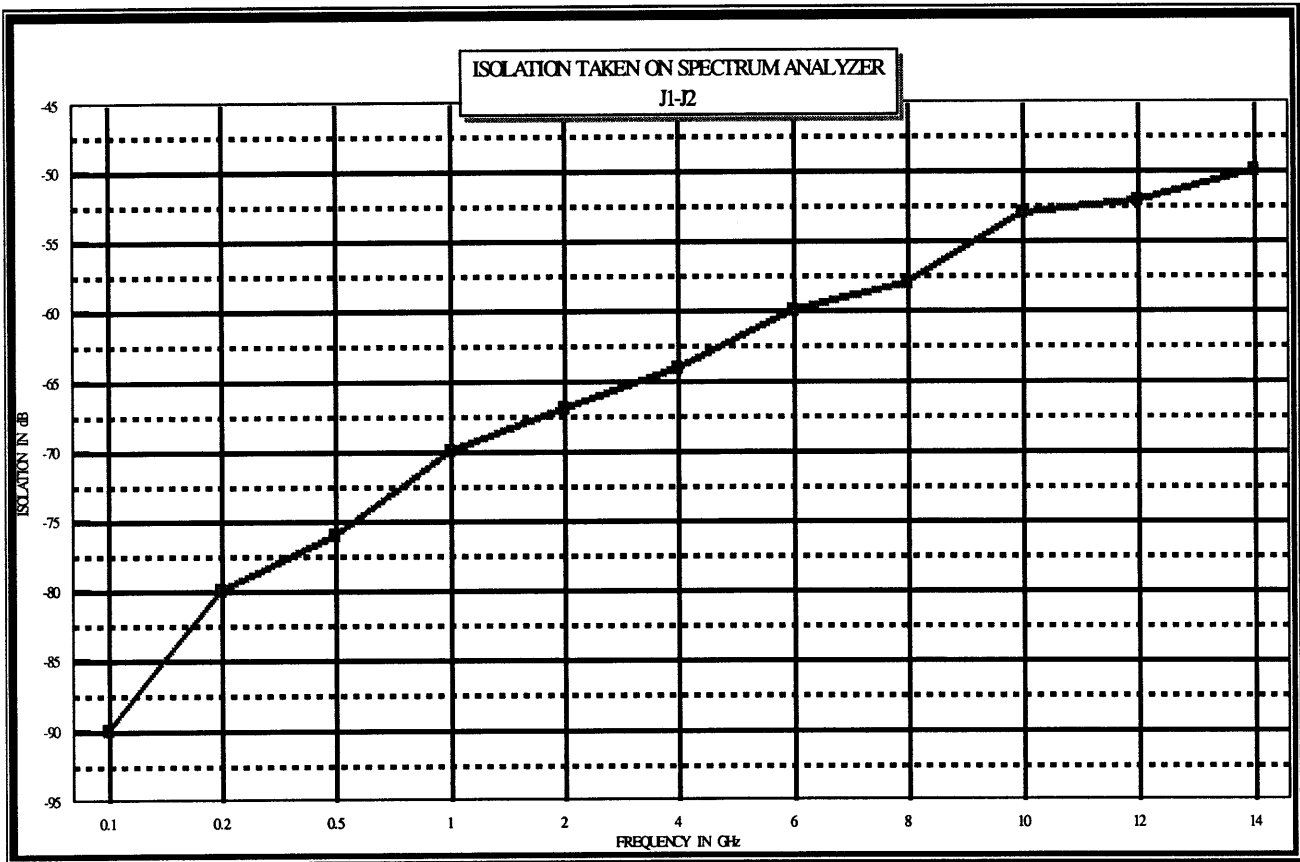
*J1: INPUT ARM



MODEL NUMBER
 OPTION NUMBER
 SERIAL NUMBER
 ENGINEER
 VOLTAGE & CURRENT DRAW

: SWG-218-2DR-4NI (SW-7875-12)
 : 024
 : 1MS903143
 : RENE AFABLE
 : +5vdc @ 27mA; +15vdc @ 1mA

ISOLATION*
 (AS MEASURED ON A SPECTRUM ANALYZER)
 J1-J2



*J1: INPUT ARM

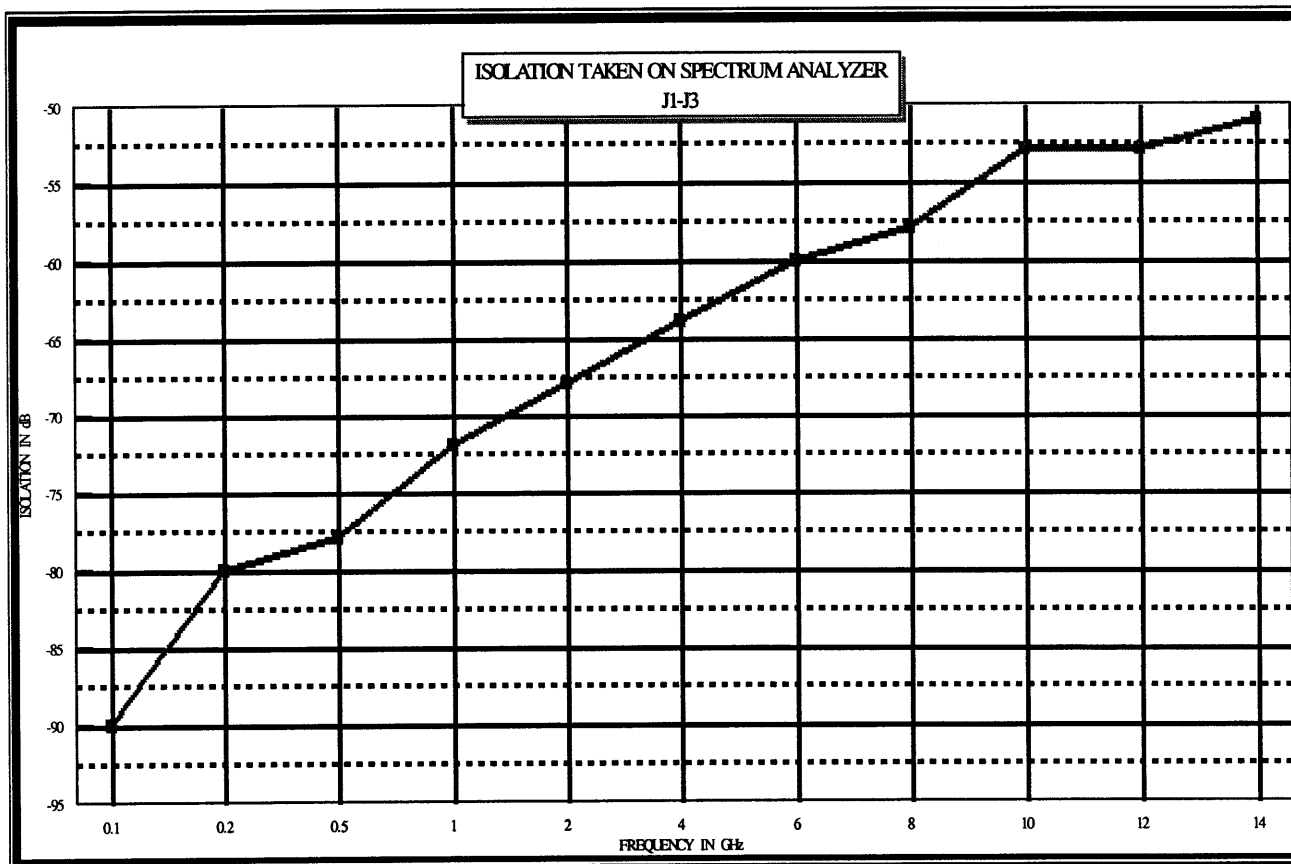
SEPTEMBER 15, 2000



MODEL NUMBER
OPTION NUMBER
SERIAL NUMBER
ENGINEER
VOLTAGE & CURRENT DRAW

: SWG-218-2DR-4NI (SW-7875-12)
: 024
: 1MS903143
: RENE AFABLE
: +5vdc @ 27mA; +15vdc @ 1mA

ISOLATION*
(AS MEASURED ON A SPECTRUM ANALYZER)
J1-J3



*J1: INPUT ARM



TEST DATA

FROM

40 MHz TO 4 GHz

VERY LOW INSERTION LOSS

SINGLE POLARITY POWER SUPPLY

REFLECTIVE

SOLID STATE SWITCH

(SURFACE MOUNTABLE)

AMC MODEL No:

SWG-218-2DR-4NI (SW-7875-12) OPTION 024

(Serial Number: 2MS903143)

**PREPARED
BY
KATIE BAISEY**

**TESTED
BY
RENE AFABLE**

SEPTEMBER 15, 2000

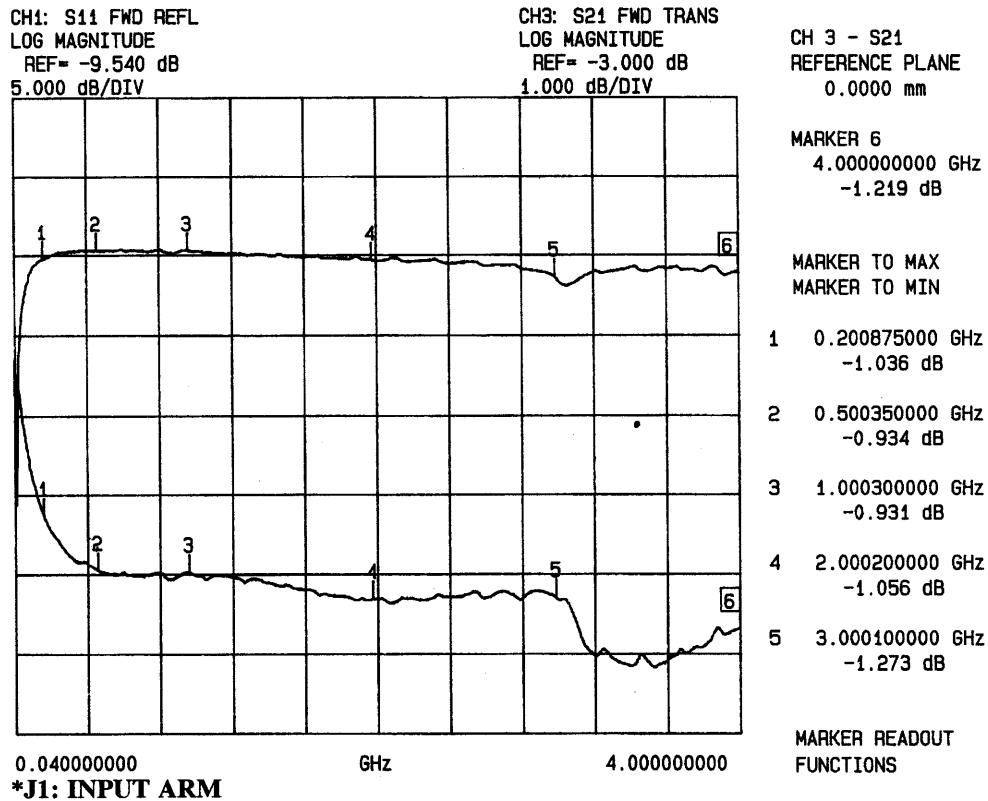
7311 G GROVE ROAD, FREDERICK, MARYLAND 21704 • Tel. (301) 662-4700 • Fax (301) 662-4938



SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA

INSERTION LOSS & RETURN LOSS* J1-J2



FREQUENCY	INSERTION LOSS	RETURN LOSS
200 MHz	1.03 dB	15.87 dB
500 MHz	0.93 dB	19.29 dB
1.0 GHz	0.93 dB	19.45 dB
2.0 GHz	1.05 dB	21.09 dB
3.0 GHz	1.27 dB	21.04 dB
4.0 GHz	1.21 dB	22.96 dB

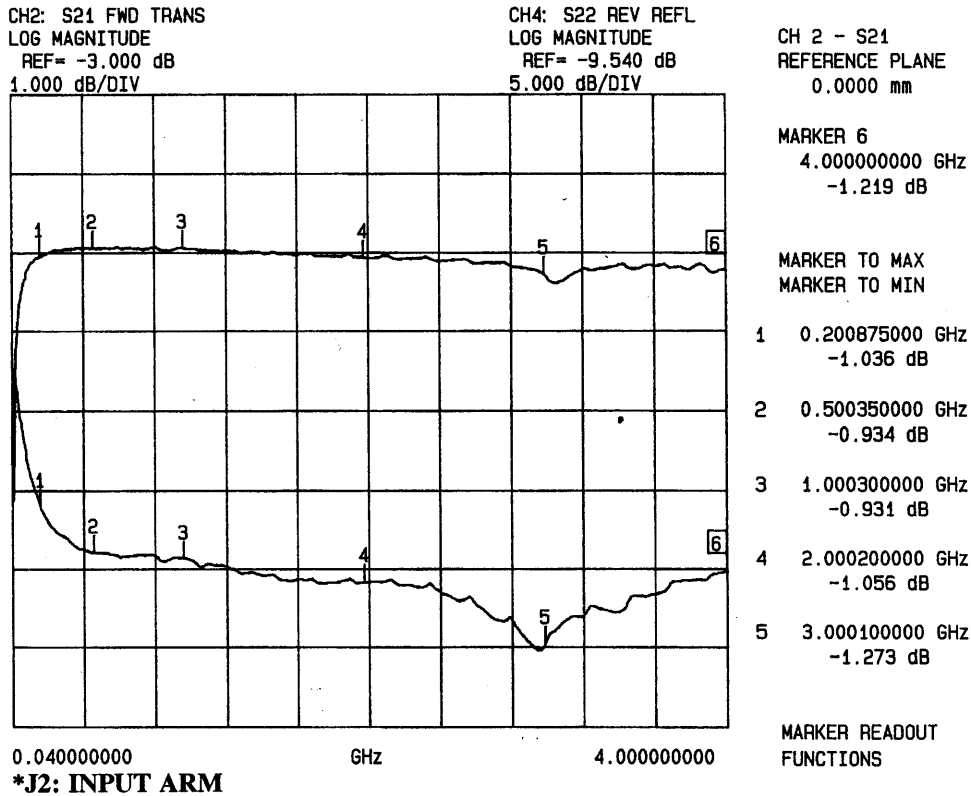


SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA

INSERTION LOSS & RETURN LOSS*

J2-J1



FREQUENCY	INSERTION LOSS	RETURN LOSS
200 MHz	1.03 dB	15.57 dB
500 MHz	0.93 dB	18.49 dB
1.0 GHz	0.93 dB	18.88 dB
2.0 GHz	1.05 dB	20.42 dB
3.0 GHz	1.27 dB	24.30 dB
4.0 GHz	1.21 dB	19.69 dB

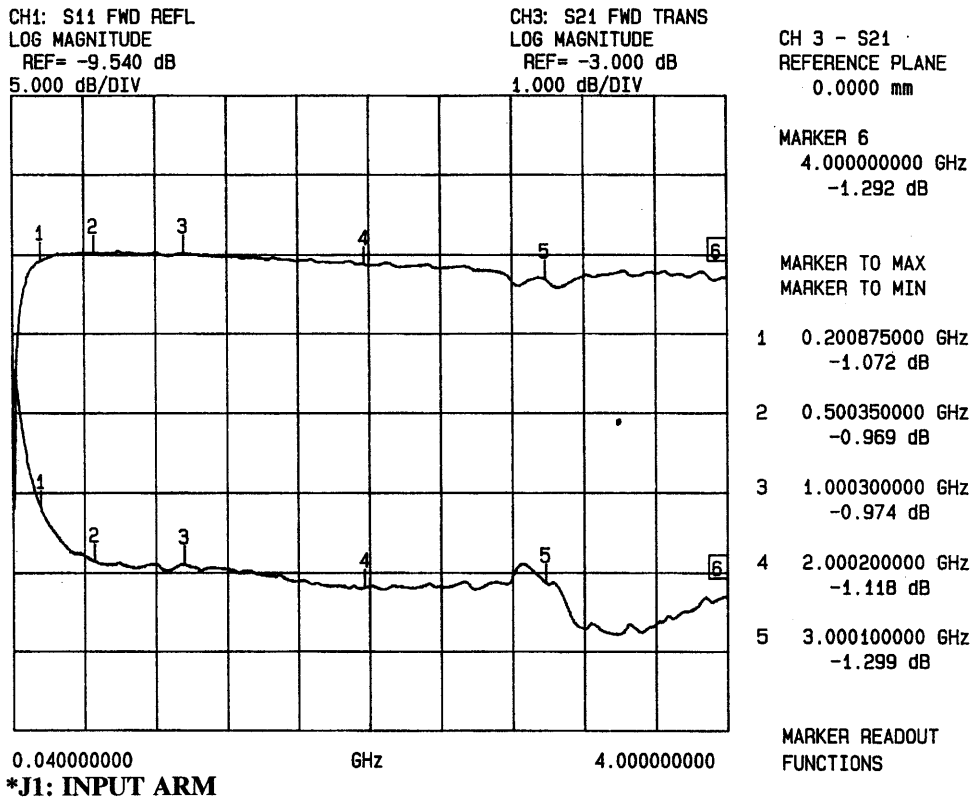


SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA

INSERTION LOSS & RETURN LOSS*

J1-J3



FREQUENCY	INSERTION LOSS	RETURN LOSS
200 MHz	1.07 dB	15.57 dB
500 MHz	0.96 dB	18.87 dB
1.0 GHz	0.97 dB	19.03 dB
2.0 GHz	1.11 dB	20.46 dB
3.0 GHz	1.29 dB	20.19 dB
4.0 GHz	1.29 dB	21.03 dB

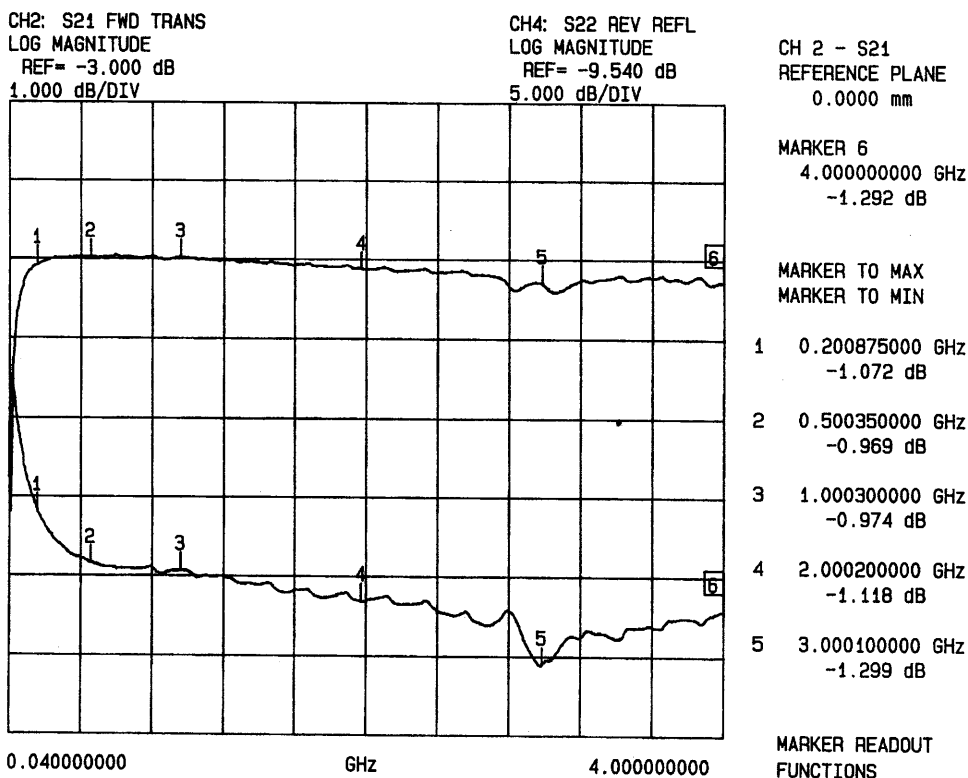


SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA

INSERTION LOSS & RETURN LOSS*

J3-J1



***J3: INPUT ARM**

FREQUENCY	INSERTION LOSS	RETURN LOSS
200 MHz	1.07 dB	15.46 dB
500 MHz	0.96 dB	18.76 dB
1.0 GHz	0.97 dB	19.23 dB
2.0 GHz	1.11 dB	21.11 dB
3.0 GHz	1.29 dB	25.04 dB
4.0 GHz	1.29 dB	21.65 dB



TEST DATA
FROM
250 MHz TO 4 GHz
VERY LOW INSERTION LOSS
SINGLE POLARITY POWER SUPPLY
REFLECTIVE
SOLID STATE SWITCH
(SURFACE MOUNTABLE)
AMC MODEL No:
SWG-218-2DR-4NI (SW-7875-12) OPTION 024
(Serial Number: 2MS903143)

**PREPARED
BY
KATIE BAISEY**

**TESTED
BY
RENE AFABLE**

SEPTEMBER 15, 2000

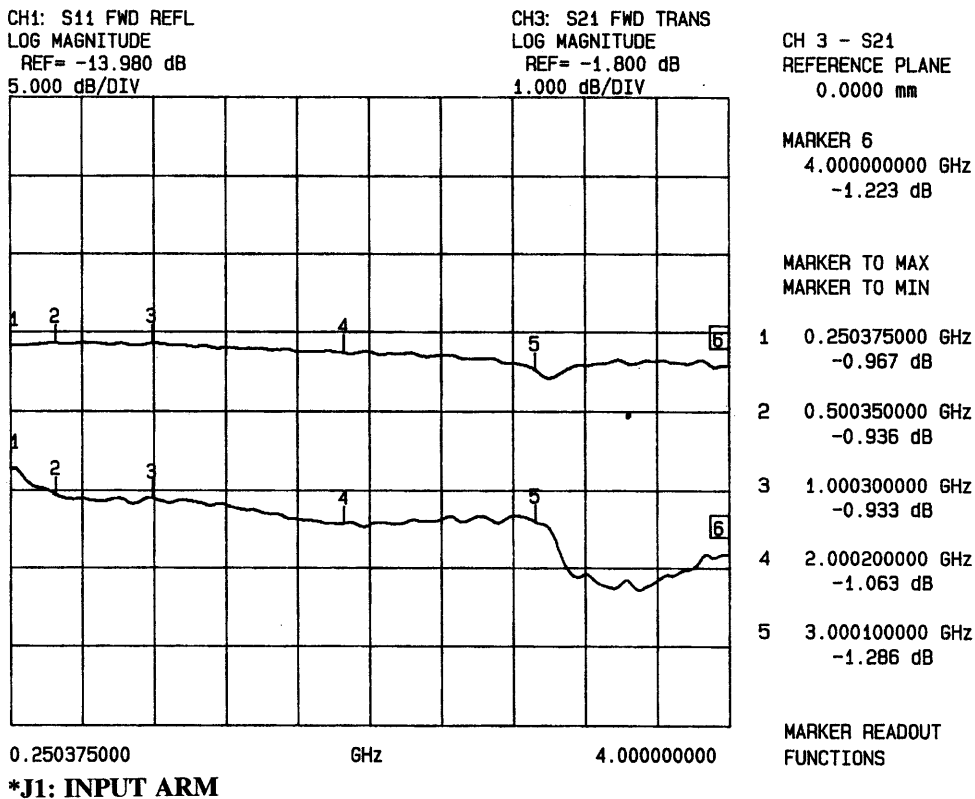


SUMMARY TEST DATA

MODEL NUMBER
OPTION NUMBER
SERIAL NUMBER
ENGINEER
VOLTAGE & CURRENT DRAW

: SWG-218-2DR-4NI (SW-7875-12)
 : 024
 : 2MS903143
 : RENE AFABLE
 : +5vdc @ 27mA; +15vdc @ 1mA

INSERTION LOSS & RETURN LOSS* J1-J2



FREQUENCY	INSERTION LOSS	RETURN LOSS
250 MHz	0.96 dB	17.56 dB
500 MHz	0.93 dB	19.31 dB
1.0 GHz	0.93 dB	19.46 dB
2.0 GHz	1.06 dB	21.11 dB
3.0 GHz	1.28 dB	21.05 dB
4.0 GHz	1.22 dB	23.11 dB



SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA

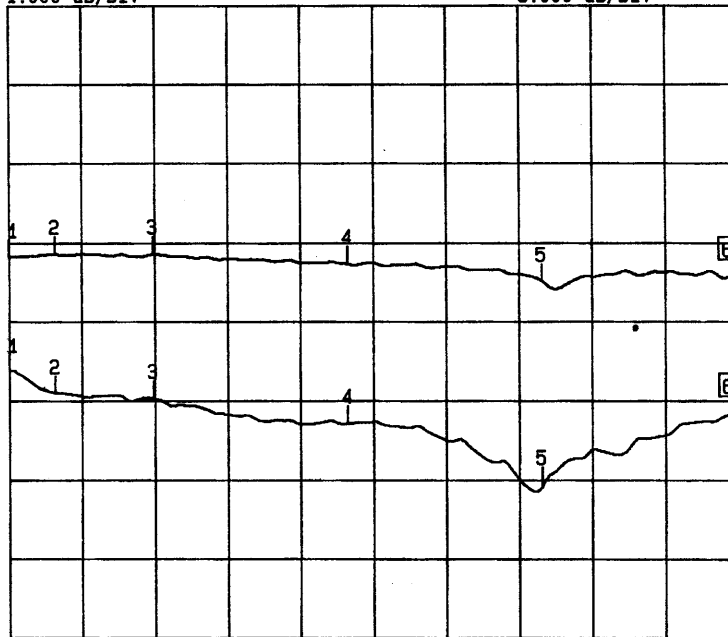
INSERTION LOSS & RETURN LOSS*

J2-J1

CH2: S21 FWD TRANS
LOG MAGNITUDE
REF= -1.800 dB
1.000 dB/DIV

CH4: S22 REV REFL
LOG MAGNITUDE
REF= -13.980 dB
5.000 dB/DIV

CH 2 - S21
REFERENCE PLANE
0.0000 mm



MARKER 6
4.000000000 GHz
-1.223 dB

MARKER TO MAX
MARKER TO MIN

- 1 0.250375000 GHz
-0.967 dB
- 2 0.500350000 GHz
-0.936 dB
- 3 1.000300000 GHz
-0.933 dB
- 4 2.000200000 GHz
-1.063 dB
- 5 3.000100000 GHz
-1.286 dB

0.250375000 GHz 4.000000000

MARKER READOUT
FUNCTIONS

*J2: INPUT ARM

FREQUENCY	INSERTION LOSS	RETURN LOSS
250 MHz	0.96 dB	17.12 dB
500 MHz	0.93 dB	18.49 dB
1.0 GHz	0.93 dB	18.85 dB
2.0 GHz	1.06 dB	20.42 dB
3.0 GHz	1.28 dB	24.28 dB
4.0 GHz	1.22 dB	19.83 dB

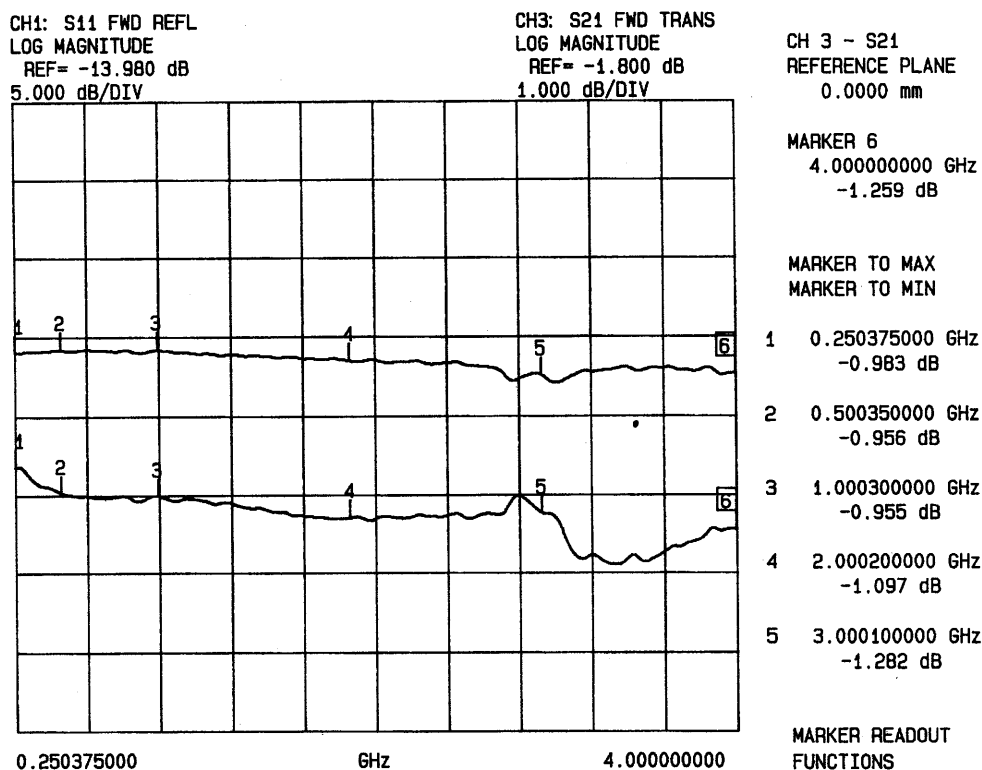


SUMMARY TEST DATA

MODEL NUMBER : SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER : 024
SERIAL NUMBER : 2MS903143
ENGINEER : RENE AFABLE
VOLTAGE & CURRENT DRAW : +5vdc @ 27mA; +15vdc @ 1mA

INSERTION LOSS & RETURN LOSS*

J1-J3



0.250375000 GHZ 4.000000000

*J1: INPUT ARM

FREQUENCY	INSERTION LOSS	RETURN LOSS
250 MHz	0.98 dB	17.16 dB
500 MHz	0.95 dB	18.84 dB
1.0 GHz	0.95 dB	19.01 dB
2.0 GHz	1.09 dB	20.43 dB
3.0 GHz	1.28 dB	20.17 dB
4.0 GHz	1.25 dB	21.13 dB

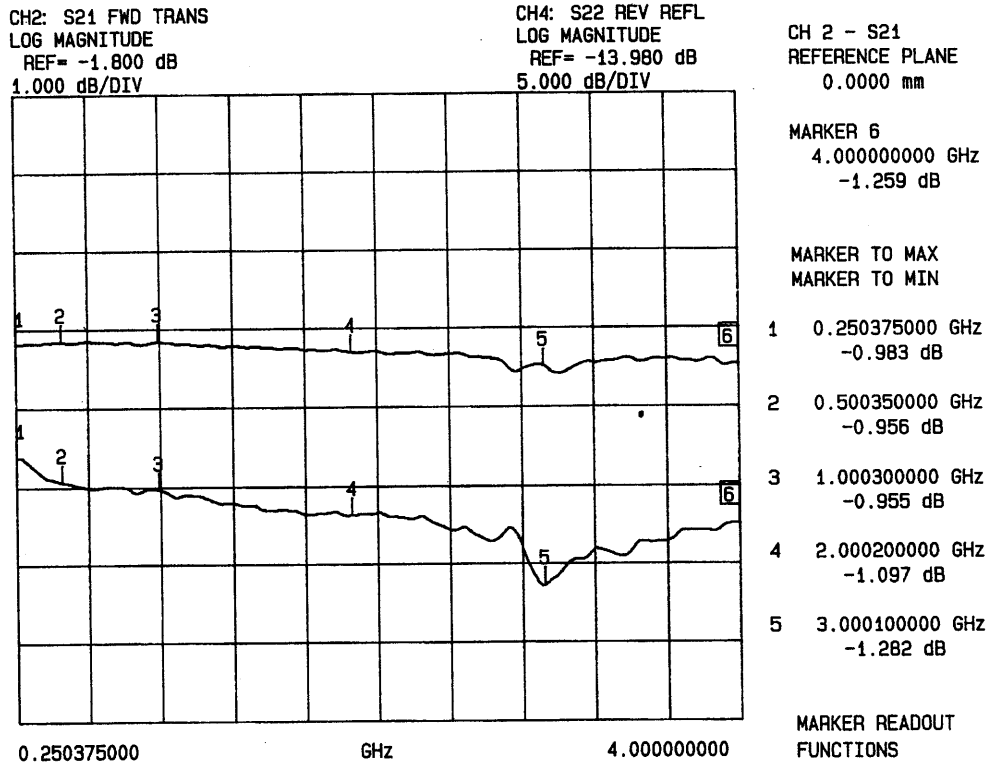


SUMMARY TEST DATA

MODEL NUMBER
OPTION NUMBER
SERIAL NUMBER
ENGINEER
VOLTAGE & CURRENT DRAW

: SWG-218-2DR-4NI (SW-7875-12)
: 024
: 2MS903143
: RENE AFABLE
: +5vdc @ 27mA; +15vdc @ 1mA

INSERTION LOSS & RETURN LOSS* J3-J1



***J3: INPUT ARM**

FREQUENCY	INSERTION LOSS	RETURN LOSS
250 MHz	0.98 dB	17.11 dB
500 MHz	0.95 dB	18.68 dB
1.0 GHz	0.95 dB	19.16 dB
2.0 GHz	1.09 dB	20.87 dB
3.0 GHz	1.28 dB	25.33 dB
4.0 GHz	1.25 dB	21.41 dB



**AMPLITUDE
DATA
BETWEEN
PORT TO PORT
FROM**

200 MHz TO 20 GHz

ON A

SP2T

**SOLID STATE SWITCH
(SURFACE MOUNTABLE)**

**AMC MODEL No:
SWG-218-2DR-4NI (SW-7875-12) OPTION 024
(Serial Number: 2MS903143)**

**PREPARED
BY
KATIE BAISEY**

**TESTED
BY
RENE AFABLE**

SEPTEMBER 15, 2000

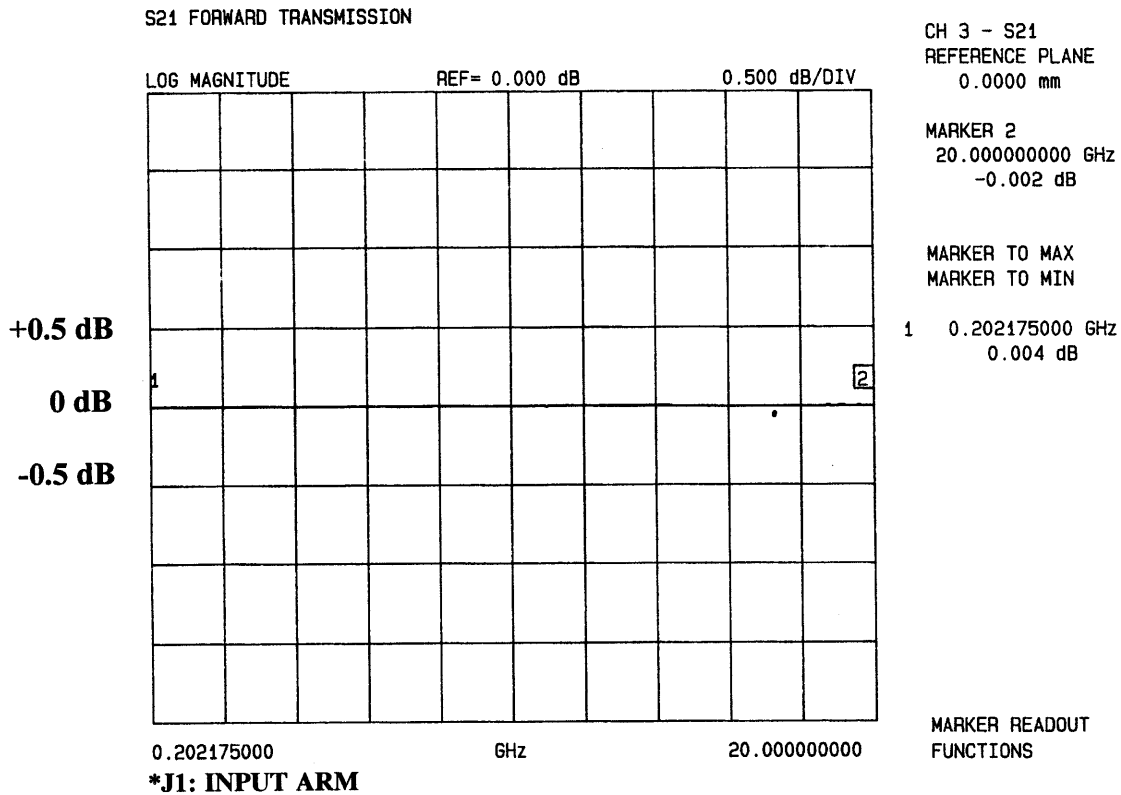
7311 G GROVE ROAD, FREDERICK, MARYLAND 21704 • Tel. (301) 662-4700 • Fax (301) 662-4938



SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA

AMPLITUDE* J1-J2 (REFERENCE)



FREQUENCY	AMPLITUDE (PEAK) (POSITIVE SIDE)	AMPLITUDE (PEAK) (NEGATIVE SIDE)
200 MHz	0.004 dB	
20.0 GHz		-0.002 dB

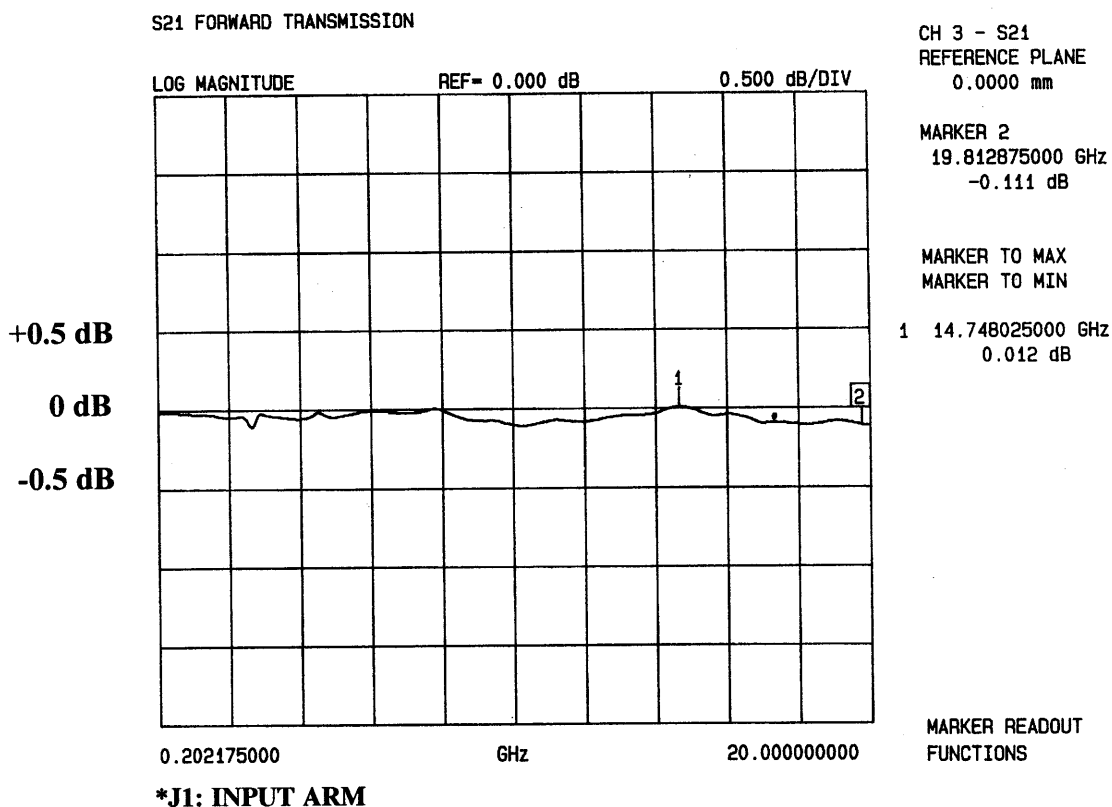
SEPTEMBER 15, 2000



SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA

AMPLITUDE* J1-J3



FREQUENCY	AMPLITUDE (PEAK) (POSITIVE SIDE)	AMPLITUDE (PEAK) (NEGATIVE SIDE)
14.74 GHz	0.012 dB	
19.81 GHz		-0.111 dB



**AMPLITUDE
DATA
BETWEEN
PORT TO PORT
FROM**

250 MHz TO 4 GHz

ON A

SP2T

**SOLID STATE SWITCH
(SURFACE MOUNTABLE)**

**AMC MODEL No:
SWG-218-2DR-4NI (SW-7875-12) OPTION 024
(Serial Number: 2MS903143)**

**PREPARED
BY
KATIE BAISEY**

**TESTED
BY
RENE AFABLE**

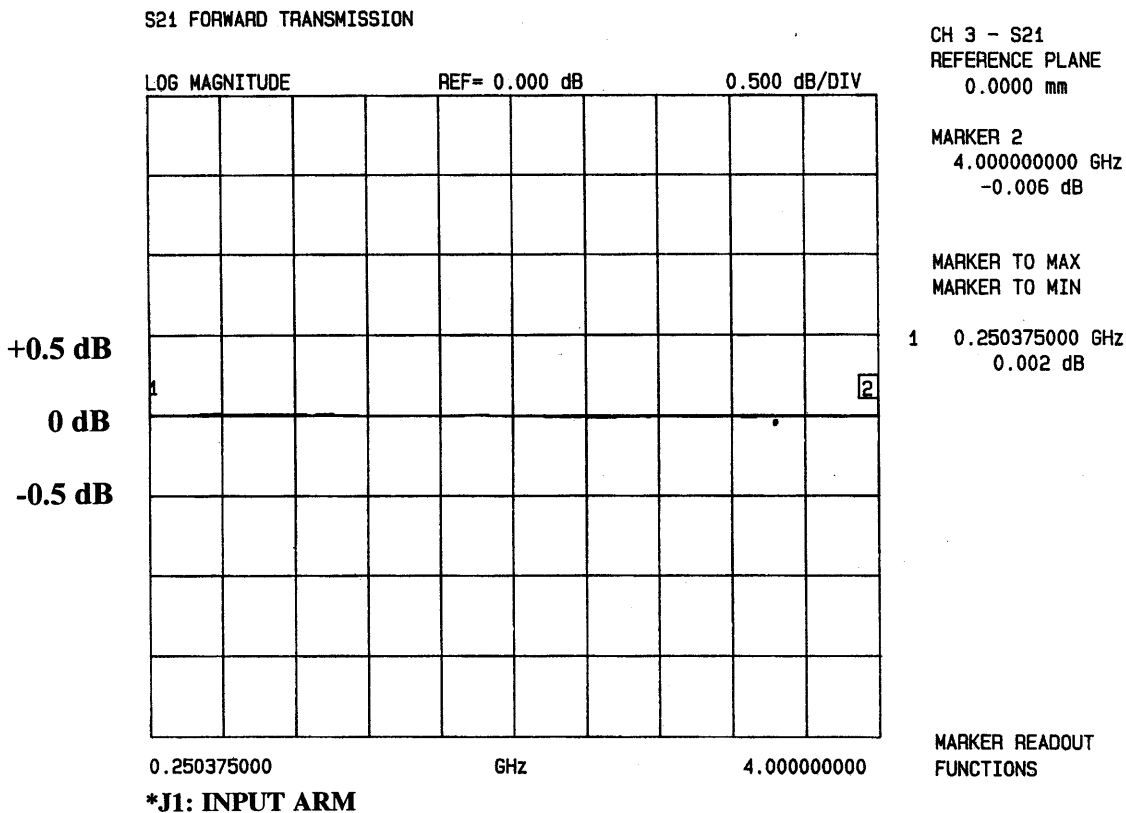
SEPTEMBER 15, 2000



SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA

AMPLITUDE* J1-J2 (REFERENCE)



FREQUENCY	AMPLITUDE (PEAK) (POSITIVE SIDE)	AMPLITUDE (PEAK) (NEGATIVE SIDE)
250 MHz	0.002 dB	
4.0 GHz		-0.006 dB

SEPTEMBER 15, 2000

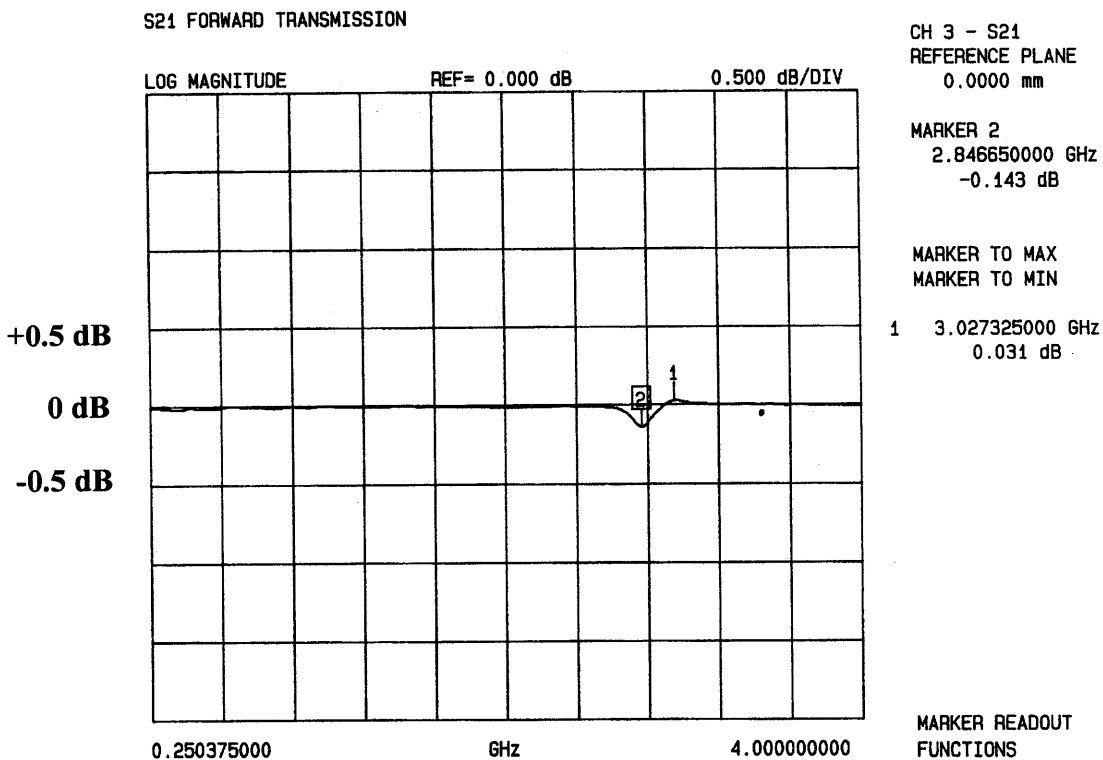


SUMMARY TEST DATA

MODEL NUMBER
 OPTION NUMBER
 SERIAL NUMBER
 ENGINEER
 VOLTAGE & CURRENT DRAW

: SWG-218-2DR-4NI (SW-7875-12)
 : 024
 : 2MS903143
 : RENE AFABLE
 : +5vdc @ 27mA; +15vdc @ 1mA

AMPLITUDE* J1-J3



*J1: INPUT ARM

FREQUENCY	AMPLITUDE (PEAK) (POSITIVE SIDE)	AMPLITUDE (PEAK) (NEGATIVE SIDE)
3.02 GHz	0.031 dB	
2.84 GHz		-0.143 dB

SEPTEMBER 15, 2000



**PHASE
DATA
BETWEEN
PORT TO PORT
FROM**

250 MHz TO 4 GHz

ON A

SP2T

**SOLID STATE SWITCH
(SURFACE MOUNTABLE)**

**AMC MODEL No:
SWG-218-2DR-4NI (SW-7875-12) OPTION 024
(Serial Number: 2MS903143)**

**PREPARED
BY
KATIE BAISEY**

**TESTED
BY
RENE AFABLE**

SEPTEMBER 15, 2000

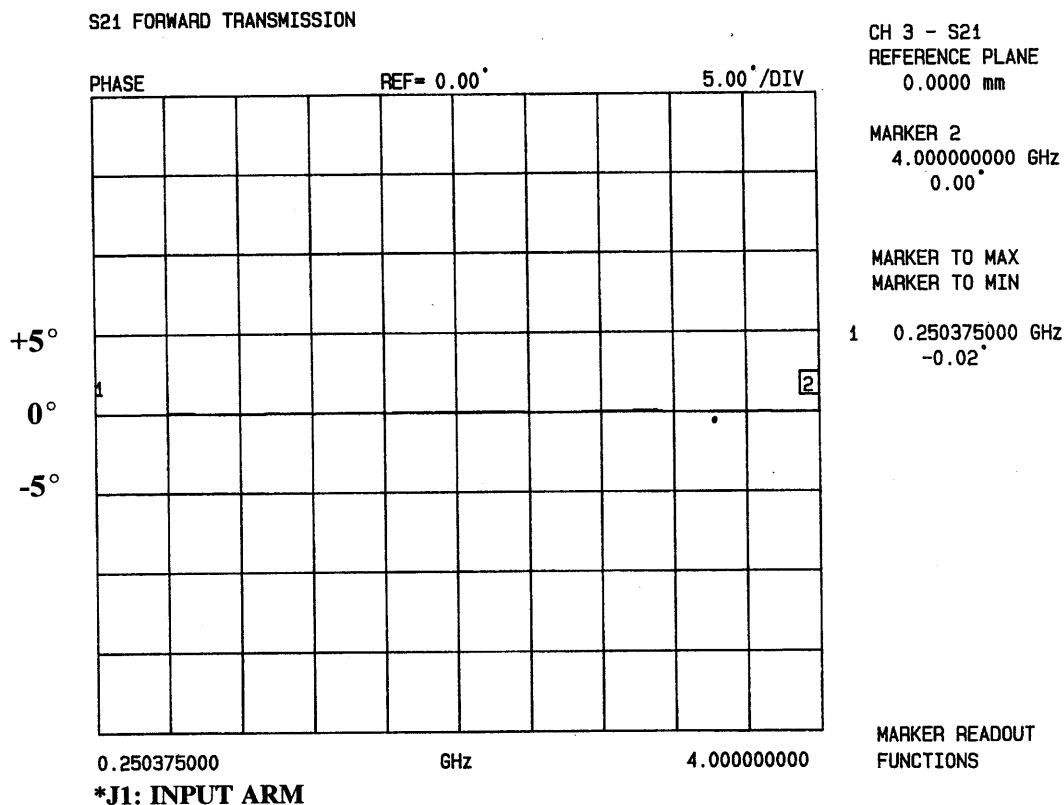


SUMMARY TEST DATA

MODEL NUMBER
 OPTION NUMBER
 SERIAL NUMBER
 ENGINEER
 VOLTAGE & CURRENT DRAW

: SWG-218-2DR-4NI (SW-7875-12)
 : 024
 : 2MS903143
 : RENE AFABLE
 : +5V @ 27mA; +15vdc @ 1mA

PHASE* J1-J2 (REFERENCE)



FREQUENCY	PHASE (PEAK) (POSITIVE SIDE)	PHASE (PEAK) (NEGATIVE SIDE)
250 MHz	0.02°	
4.0 GHz	0.00°	

SEPTEMBER 15, 2000

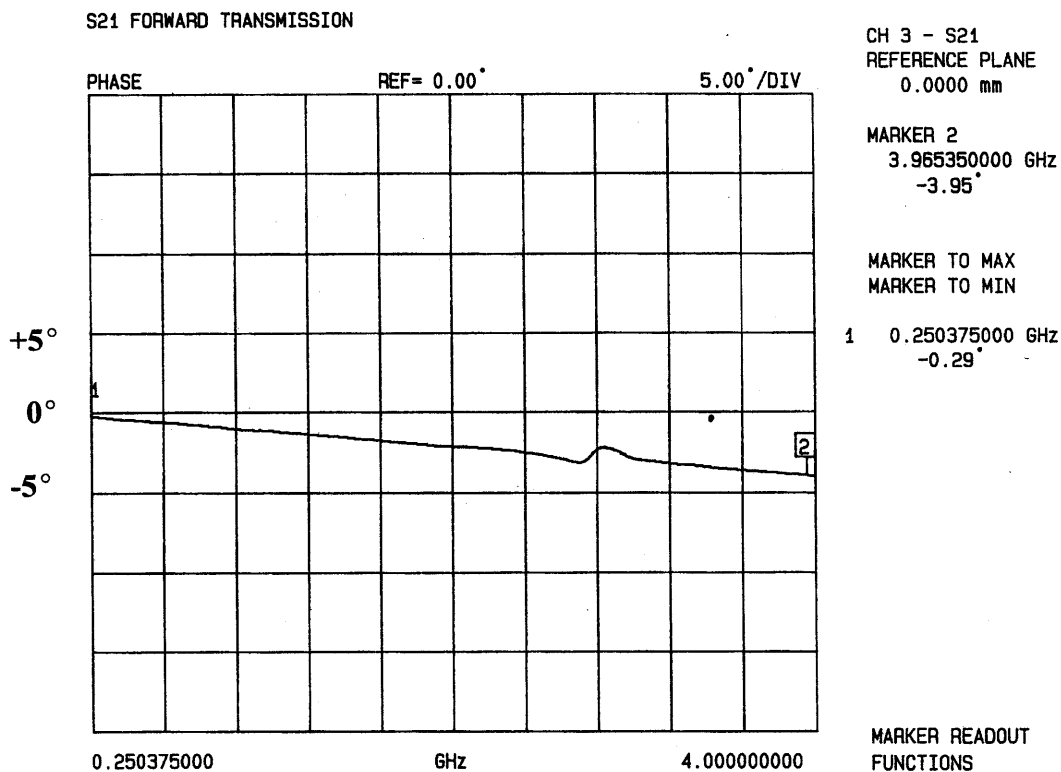


SUMMARY TEST DATA

MODEL NUMBER
 OPTION NUMBER
 SERIAL NUMBER
 ENGINEER
 VOLTAGE & CURRENT DRAW

: SWG-218-2DR-4NI (SW-7875-12)
 : 024
 : 2MS903143
 : RENE AFABLE
 : +5V @ 27mA; +15vdc @ 1mA

PHASE* J1-J3



*J1: INPUT ARM

FREQUENCY	PHASE (PEAK) (POSITIVE SIDE)	PHASE (PEAK) (NEGATIVE SIDE)
250 GHz		-0.29°
3.96 GHz		-3.95°

SEPTEMBER 15, 2000



SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA

SWITCHING SPEED

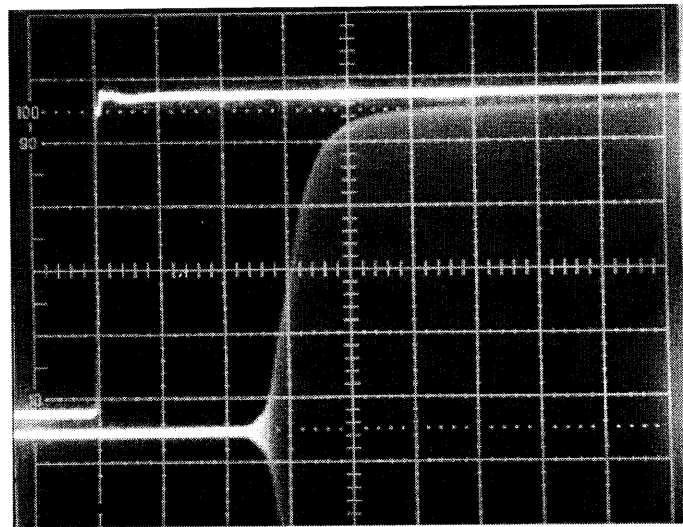
"Rise/Fall" Time: 10% RF to 90% RF & 90% RF to 10% RF
 "On/Off" Time: 50% TTL to 90% RF or 10% RF

TYPICAL OF ALL ARMS

"DELAY ON": 180 nS
 "RISE TIME": 50 nS

HORIZONTAL SCALE:
 50 nS PER DIVISION

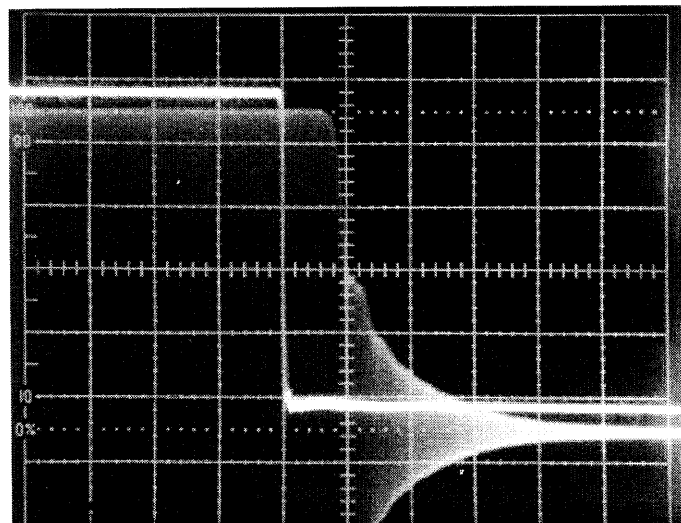
VERTICAL SCALE:
 10 mV PER DIVISION



"DELAY OFF": 130 nS
 "FALL TIME": 90 nS

HORIZONTAL SCALE:
 50 nS PER DIVISION

VERTICAL SCALE:
 10 mV PER DIVISION



SEPTEMBER 15, 2000



SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA

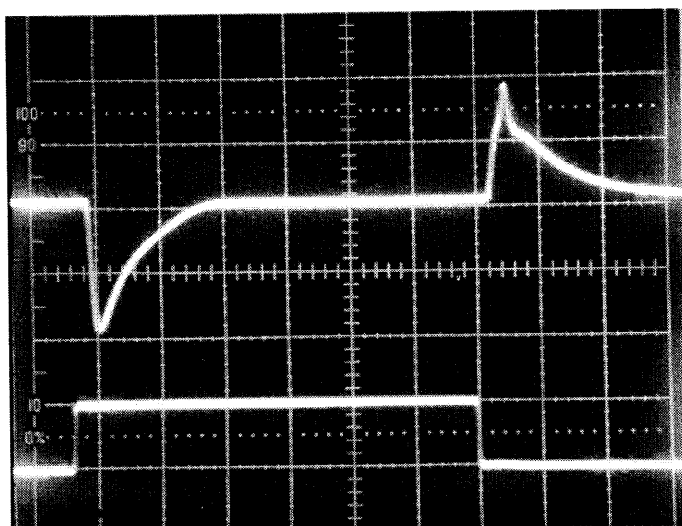
VIDEO TRANSIENTS

TYPICAL OF ALL ARMS

≤ 6.8 V P-P
MEASURED IN A
300 MHZ BANDWIDTH

VERTICAL SCALE:
2 V PER DIVISION

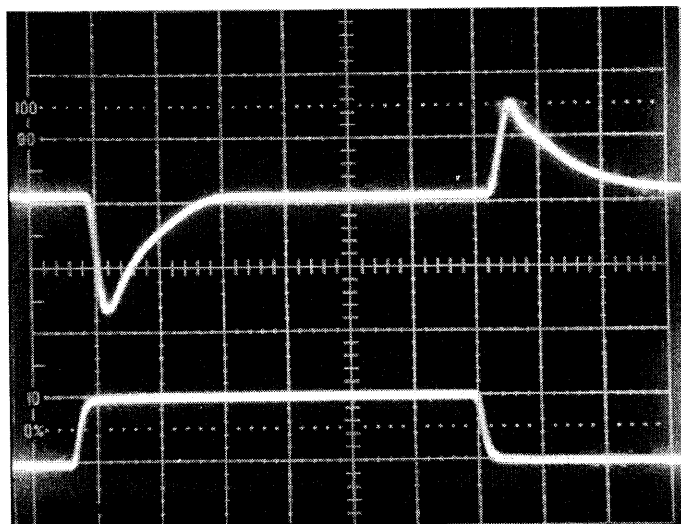
HORIZONTAL SCALE:
100 nS PER DIVISION



≤ 3.2 V P-P
MEASURED IN A
20 MHZ BANDWIDTH

VERTICAL SCALE:
2 V PER DIVISION

HORIZONTAL SCALE:
100 nS PER DIVISION



SEPTEMBER 15, 2000



APPENDIX A
MISCELLANEOUS
TEST DATA AND PLOTS
ON
ISOLATION
AS
MEASURED
ON A VECTOR NETWORK ANALYZER
ON A
SP2T
SOLID STATE SWITCH
(SURFACE MOUNTABLE)
AMC MODEL No:
SWG-218-2DR-4NI (SW-7875-12) OPTION 024
(Serial Number: 2MS903143)
FROM
40 MHz TO 20 GHz
40 MHz TO 4 GHz
AND FROM
250 MHz TO 4 GHz

SEPTEMBER 15, 2000

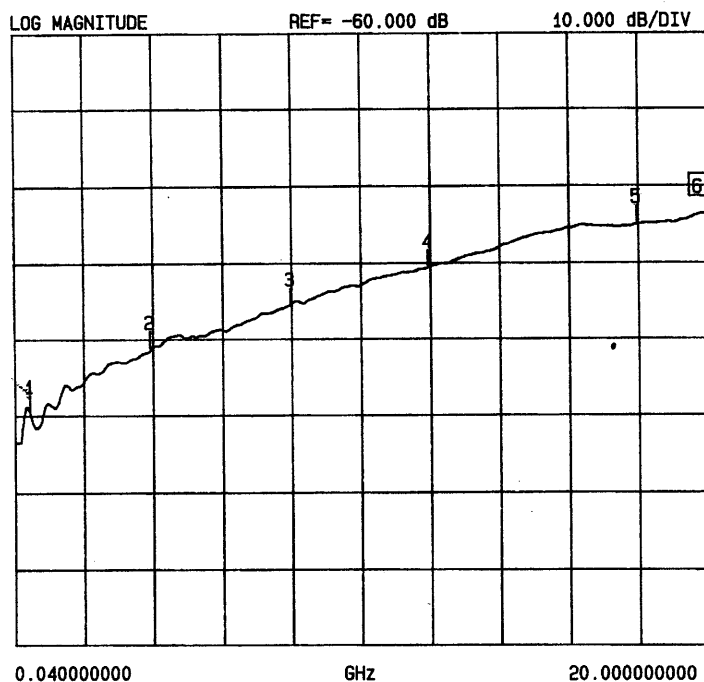


SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA

ISOLATION*
(AS MEASURED ON A VECTOR NETWORK ANALYZER)
J1-J2

S21 FORWARD TRANSMISSION



CH 3 - S21
REFERENCE PLANE
0.0000 mm

MARKER 6
20.000000000 GHz
-43.514 dB

MARKER TO MAX
MARKER TO MIN

- 1 0.501575000 GHz
-69.573 dB
- 2 4.007050000 GHz
-61.225 dB
- 3 8.011525000 GHz
-55.412 dB
- 4 12.003525000 GHz
-50.396 dB
- 5 18.004000000 GHz
-44.873 dB

MARKER READOUT
FUNCTIONS

0.040000000

GHz

20.000000000

***J1: INPUT ARM**

FREQUENCY	ISOLATION
500 MHz	69.57 dB
4.0 GHz	61.22 dB
8.0 GHz	55.41 dB
12.0 GHz	50.39 dB
18.0 GHz	44.87 dB
20.0 GHz	43.51 dB

SEPTEMBER 15, 2000

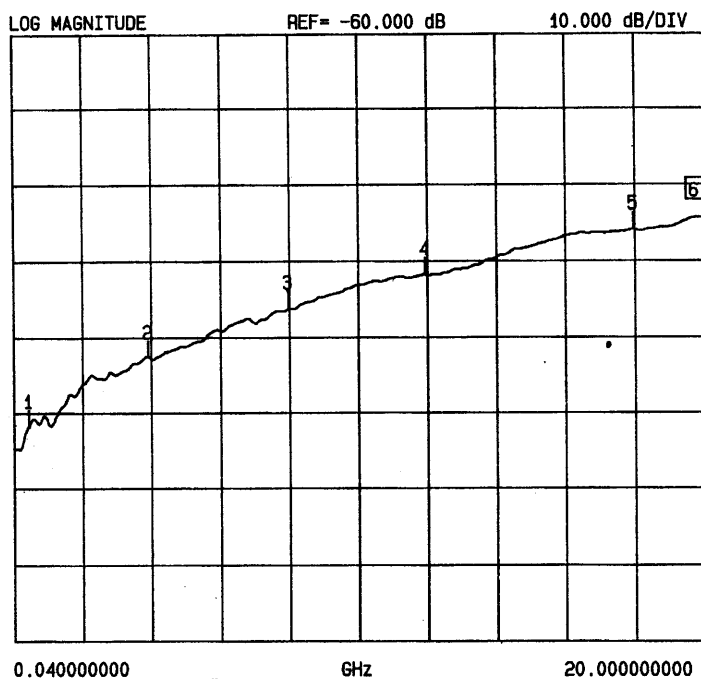


SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA

ISOLATION*
(AS MEASURED ON A VECTOR NETWORK ANALYZER)
J1-J3

S21 FORWARD TRANSMISSION



CH 3 - S21
REFERENCE PLANE
0.0000 mm

MARKER 6
20.000000000 GHz
-44.220 dB

MARKER TO MAX
MARKER TO MIN

- 1 0.501575000 GHz
-71.808 dB
- 2 4.007050000 GHz
-62.591 dB
- 3 8.011525000 GHz
-56.203 dB
- 4 12.003525000 GHz
-51.707 dB
- 5 18.004000000 GHz
-45.856 dB

MARKER READOUT
FUNCTIONS

0.040000000
*J1: INPUT ARM

FREQUENCY	ISOLATION
500 MHz	71.80 dB
4.0 GHz	62.59 dB
8.0 GHz	56.20 dB
12.0 GHz	51.70 dB
18.0 GHz	45.85 dB
20.0 GHz	44.22 dB

SEPTEMBER 15, 2000



**ISOLATION
DATA AND PLOTS
FROM
40 MHz TO 4 GHz
AS
MEASURED
ON A VECTOR NETWORK ANALYZER**

ON A

SP2T

**SOLID STATE SWITCH
(SURFACE MOUNTABLE)**

**AMC MODEL No:
SWG-218-2DR-4NI (SW-7875-12) OPTION 024
(Serial Number: 2MS903143)**

**PREPARED
BY
KATIE BAISEY**

**TESTED
BY
RENE AFABLE**

SEPTEMBER 15, 2000

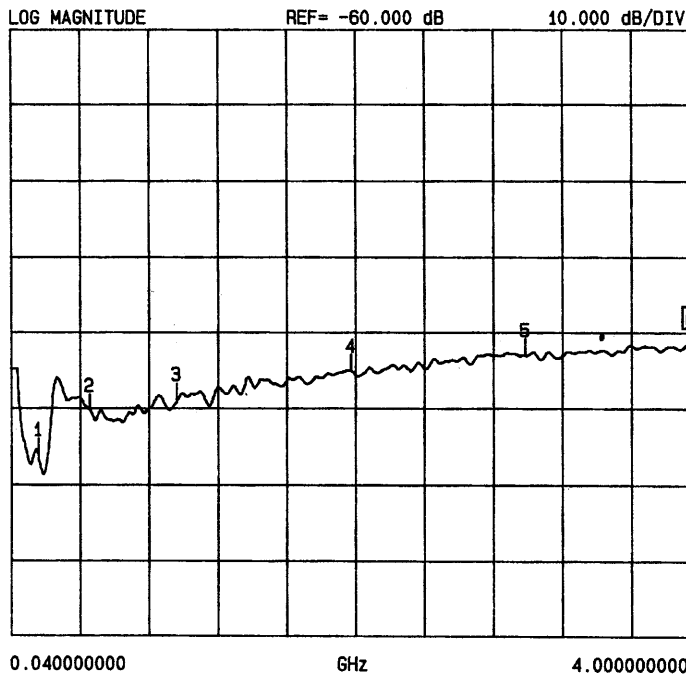


SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA

ISOLATION* (AS MEASURED ON A VECTOR NETWORK ANALYZER) J1-J2

S21 FORWARD TRANSMISSION



CH 3 - S21
REFERENCE PLANE
0.0000 mm

MARKER 6
4.000000000 GHz
-61.534 dB

MARKER TO MAX
MARKER TO MIN

- 1 0.200875000 GHz
-76.258 dB
- 2 0.500350000 GHz
-70.343 dB
- 3 1.000300000 GHz
-68.889 dB
- 4 2.000200000 GHz
-65.068 dB
- 5 3.000100000 GHz
-62.991 dB

MARKER READOUT
FUNCTIONS

*J1: INPUT ARM

FREQUENCY	ISOLATION
200 MHz	76.25 dB
500 MHz	70.34 dB
1.0 GHz	68.88 dB
2.0 GHz	65.06 dB
3.0 GHz	62.99 dB
4.0 GHz	61.53 dB

SEPTEMBER 15, 2000

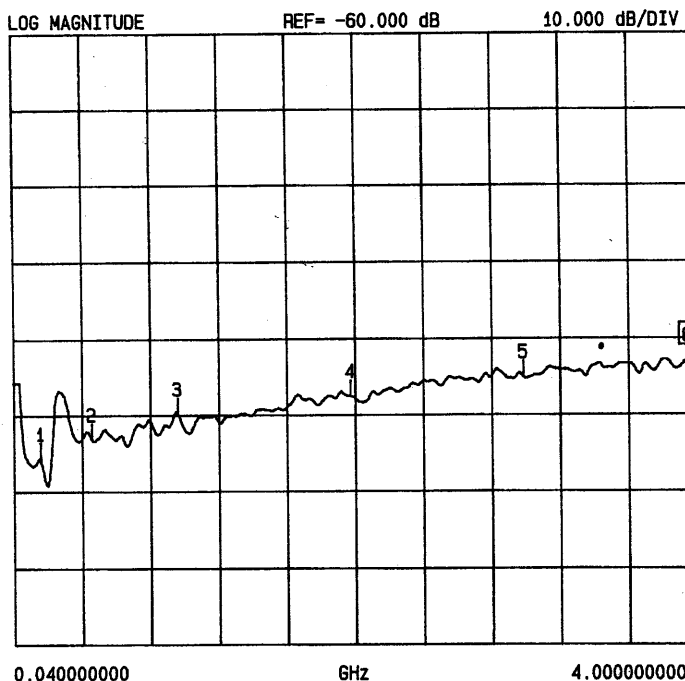


SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA

ISOLATION* (AS MEASURED ON A VECTOR NETWORK ANALYZER) J1-J3

S21 FORWARD TRANSMISSION



CH 3 - S21
REFERENCE PLANE
0.0000 mm

MARKER 6
4.000000000 GHz
-63.107 dB

MARKER TO MAX
MARKER TO MIN

1	0.200875000 GHz	-75.857 dB
2	0.500350000 GHz	-73.374 dB
3	1.000300000 GHz	-69.975 dB
4	2.000200000 GHz	-67.548 dB
5	3.000100000 GHz	-65.033 dB

MARKER READOUT
FUNCTIONS

0.040000000 GHz
***J1: INPUT ARM**

FREQUENCY	ISOLATION
200 MHz	75.85 dB
500 MHz	73.37 dB
1.0 GHz	69.97 dB
2.0 GHz	67.54 dB
3.0 GHz	65.03 dB
4.0 GHz	63.10 dB

SEPTEMBER 15, 2000



**ISOLATION
DATA AND PLOTS
FROM
250 MHz TO 4 GHz
AS
MEASURED
ON A VECTOR NETWORK ANALYZER**

**ON A
SP2T
SOLID STATE SWITCH
(SURFACE MOUNTABLE)
AMC MODEL No:
SWG-218-2DR-4NI (SW-7875-12) OPTION 024
(Serial Number: 2MS903143)**

**PREPARED
BY
KATIE BAISEY**

**TESTED
BY
RENE AFABLE**

SEPTEMBER 15, 2000

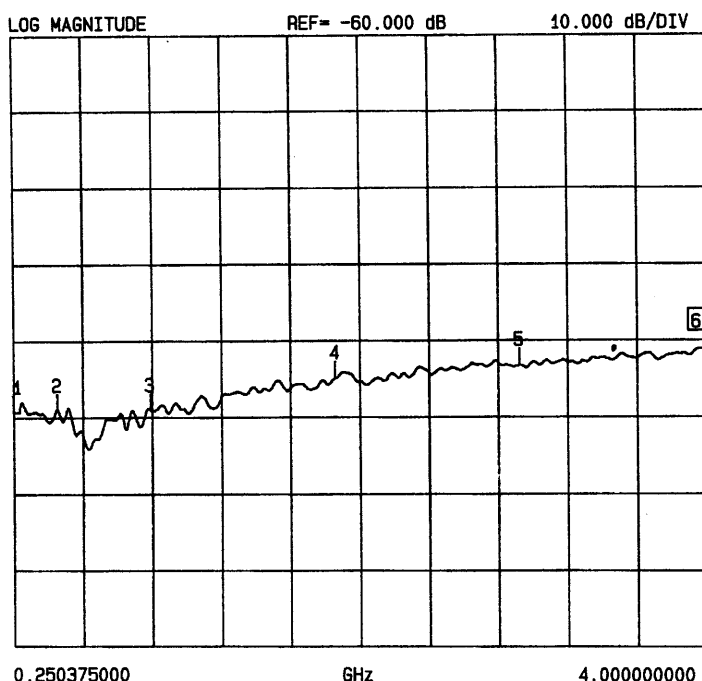


SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA

ISOLATION*
(AS MEASURED ON A VECTOR NETWORK ANALYZER)
J1-J2

S21 FORWARD TRANSMISSION



CH 3 - S21
REFERENCE PLANE
0.0000 mm

MARKER 6
4.000000000 GHz
-61.043 dB

MARKER TO MAX
MARKER TO MIN

- 1 0.250375000 GHz
-69.396 dB
- 2 0.500350000 GHz
-69.208 dB
- 3 1.000300000 GHz
-69.103 dB
- 4 2.000200000 GHz
-64.870 dB
- 5 3.000100000 GHz
-63.242 dB

MARKER READOUT
FUNCTIONS

*J1: INPUT ARM

FREQUENCY	ISOLATION
250 MHz	69.39 dB
500 MHz	69.20 dB
1.0 GHz	69.10 dB
2.0 GHz	64.87 dB
3.0 GHz	63.24 dB
4.0 GHz	61.04 dB

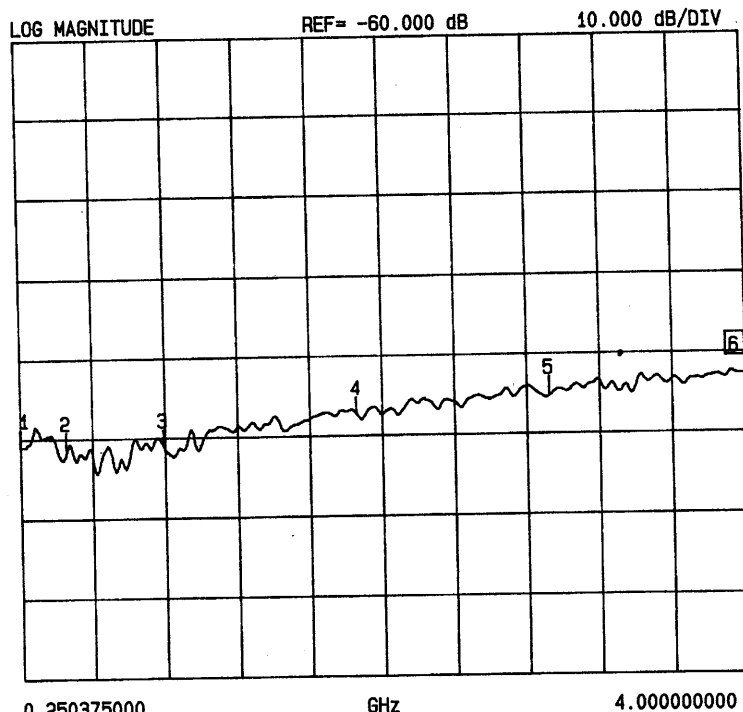


SUMMARY TEST DATA

MODEL NUMBER	: SWG-218-2DR-4NI (SW-7875-12)
OPTION NUMBER	: 024
SERIAL NUMBER	: 2MS903143
ENGINEER	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: +5vdc @ 27mA; +15vdc @ 1mA

ISOLATION*
(AS MEASURED ON A VECTOR NETWORK ANALYZER)
J1-J3

S21 FORWARD TRANSMISSION



CH 3 - S21
REFERENCE PLANE
0.0000 mm

MARKER 6
4.000000000 GHz
-62.647 dB

MARKER TO MAX
MARKER TO MIN

- 1 0.250375000 GHz
-71.031 dB
- 2 0.500350000 GHz
-71.394 dB
- 3 1.000300000 GHz
-71.270 dB
- 4 2.000200000 GHz
-67.366 dB
- 5 3.000100000 GHz
-65.239 dB

MARKER READOUT
FUNCTIONS

0.250375000 GHz 4.000000000

***J1: INPUT ARM**

FREQUENCY	ISOLATION
250 MHz	71.03 dB
500 MHz	71.39 dB
1.0 GHz	71.27 dB
2.0 GHz	67.36 dB
3.0 GHz	65.23 dB
4.0 GHz	62.64 dB

SEPTEMBER 15, 2000