



DATA

ON

0.5 GHz TO 18.0 GHz

(10MHz to 18GHz optional)

LOW LOSS

HIGH SPEED

HIGH ISOLATION

REFLECTIVE/ABSORPTIVE

SP6T

MINIATURE RECTANGULAR

MULTI-THROW SOLID-STATE SWITCH

(SURFACE MOUNTABLE)

AMC MODEL No:

MSN-0518-6DR-05 (Reflective)

(Serial Number: 6MS70846)

DESIGNED

BY

ASH GORWARA, RENE AFABLE, & WAYNE PURDHAM

REPORT PREPARED

BY

RENE AFABLE

DECEMBER 11, 1997

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

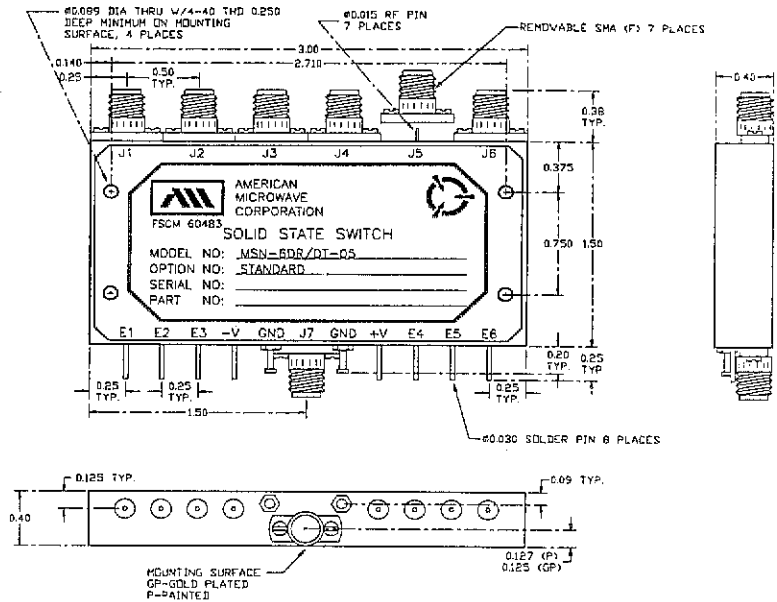
E-MAIL ADDRESS: AMCPMI@AOL.COM

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

SP6T REFLECTIVE/ABSORPTIVE PIN-DIODE SWITCH

KEY FEATURES

- 0.5 GHz TO 18 GHz (10MHz to 18GHz optional)
- HIGH SPEED
- HIGH ISOLATION
- MINIATURE
- TTL LOGIC COMPATIBLE
- SURFACE MOUNTABLE



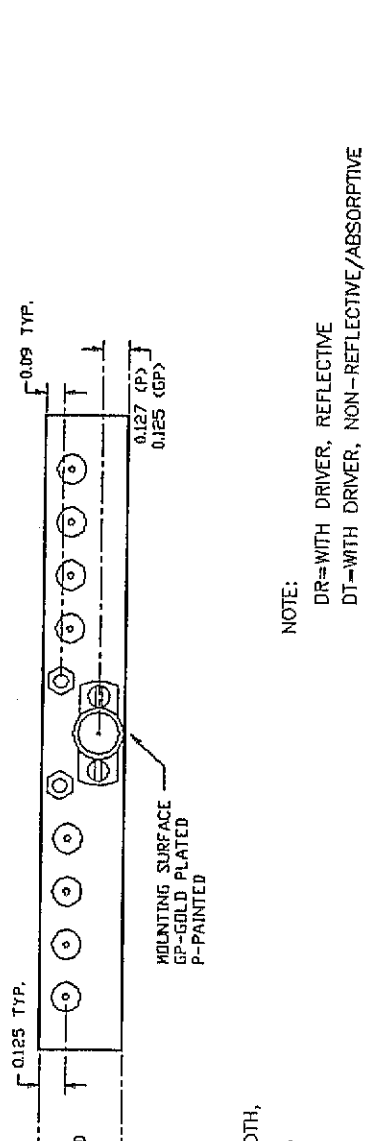
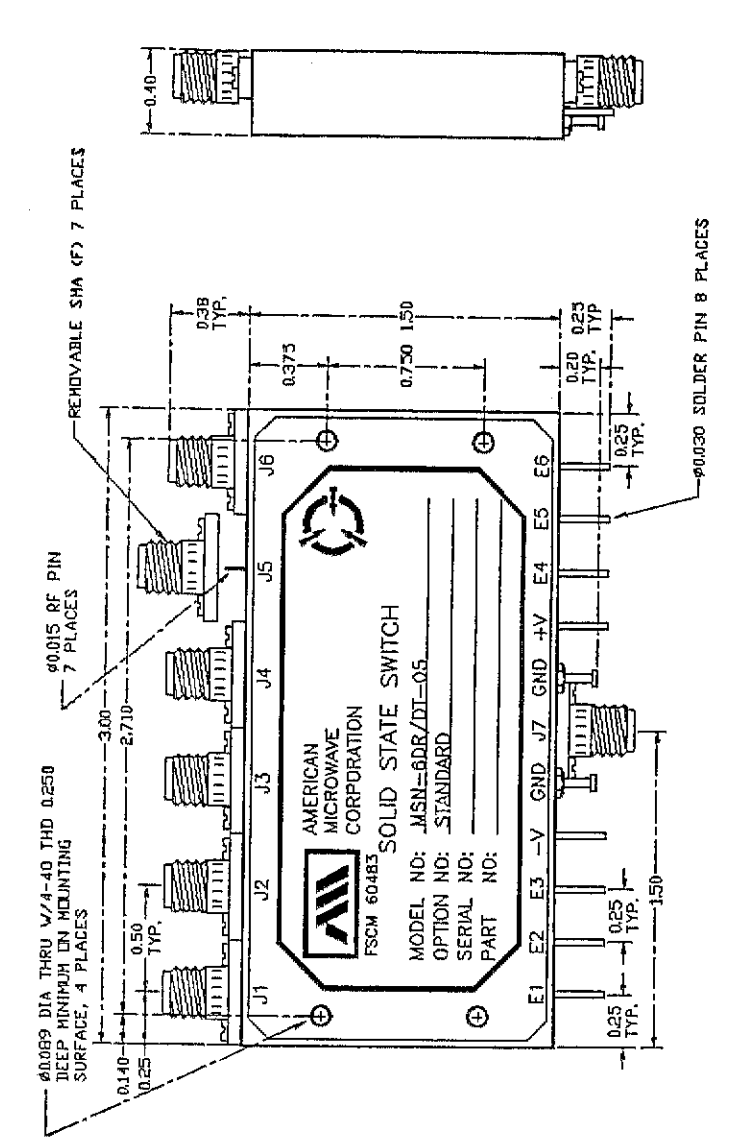
AMC MODEL No: MSN-0518-6DR-05

SPECIFICATIONS: (REFLECTIVE)

• FREQUENCY RANGE	:	0.5 GHz to 18.0 GHz (10MHz to 18GHz Optional)
• INSERTION LOSS	:	3.5 dB MAX.
	:	0.82 dB TYP. @ 2.0 GHz
	:	1.40 dB TYP. @ 8.0 GHz
	:	2.60 dB TYP. @ 18.0 GHz
• ISOLATION	:	≥ 70 dB MIN.
	:	≥ 85 dB TYP. @ 2.0 GHz
	:	≥ 80 dB TYP. @ 8.0 GHz
	:	≥ 75 dB TYP. @ 18.0 GHz
• VSWR	:	2.0:1
• SWITCHING SPEED	:	"RISE" 15nS MAX., 10nS TYP.
	:	"FALL" 15nS MAX., 10nS TYP.
	:	"ON" 100nS MAX., 75nS TYP.
	:	"OFF" 100nS MAX., 75nS TYP.
• CONTROL	:	TTL Compatible (Independent or with Decoder)
• VIDEO TRANSIENTS	:	≤3.0 V Peak to Peak, 300 MHZ Bandwidth
(Low video transients available)	:	≤1.4 V Peak to Peak, 20 MHZ Bandwidth
• RF INPUT POWER	:	+20dBm Operating, 1 Watt Survival (Other power Levels available)
• DC POWER SUPPLY	:	+5vdc @ +300mA MAX.
(Other supply voltages available)	:	- 5vdc @ -100mA MAX.
• SIZE	:	3.0" X 1.5" X 0.4"
• WEIGHT	:	≤ 3.5 oz.

DECEMBER 11, 1997

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APPROVALS	DATE	REV.
[Signature]	6/30/97	A
CHECKED	ISSUED	
[Signature]	[Signature]	
FSCM NO. 60483		DWG NO. 100-4151-1
SCALE N/S		SHEET 1 of 1

PART NO.		TITLE	
AMERICAN MICROWAVE CORPORATION FREDERICK, MARYLAND		OUTLINE DRAWING	
MSN-6DR/DT-05 - STANDARD		REFLECTIVE OR NON-REFLECTIVE/ABSORPTIVE	
SOLID STATE SWITCH			

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

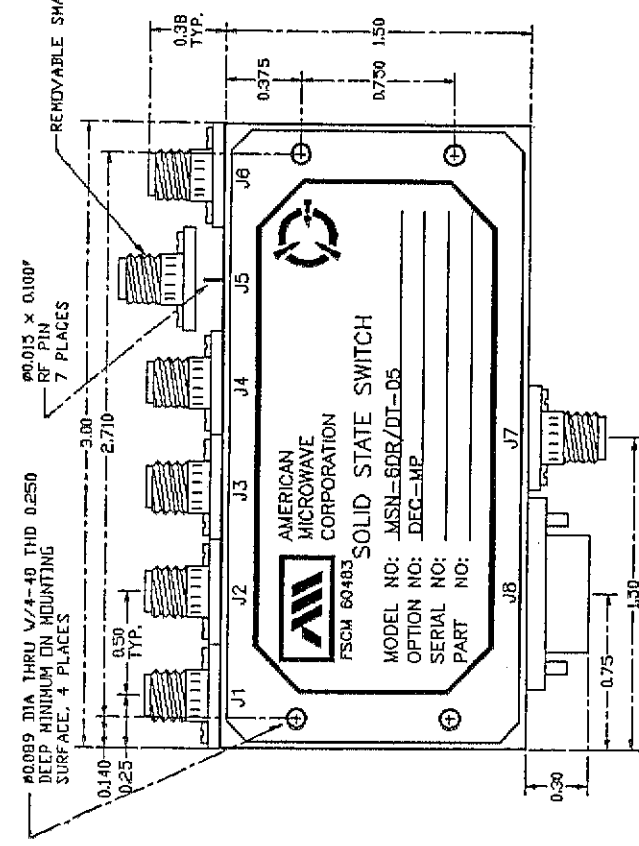
ALL DIMENSIONS ARE IN INCHES
 TOLERANCES:
 X.XX ±0.020
 X.XXX ±0.010

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

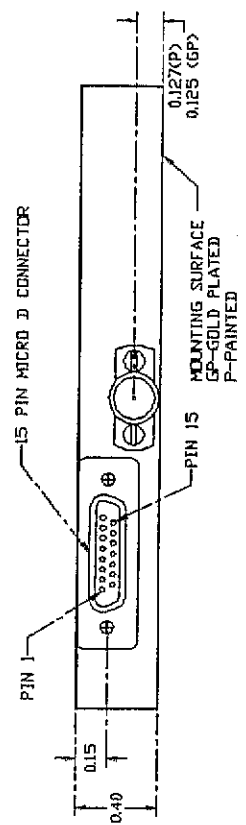
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

- SPECIFIC:**
- FREQUENCY: 0.5 GHz TO 18 GHz
 - INSERTION LOSS: REFLECTIVE: 3.5db
ABSORPTIVE: 4.25db
 - 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
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"=ON "1"=OFF
 - POWER SUPPLY: +5V @ 300 mA MAX.
-5V @ 75mA MAX. (REFLECTIVE)
100mA MAX. (ABSORPTIVE/NON-REFLECTIVE)

- OPTIONS:**
- INDEPENDENT CONTROL WITH SOLDER PIN STANDARD
 - DEC-MP 3 BIT DECODER WITH MULTIPIN
 - DEC-SP 3 BIT DECODER WITH SOLDER PIN
 - MP-IND INDEPENDENT CONTROL WITH MULTIPIN
 - 10M18 10 MHz TO 18 GHz (INSERTION LOSS INCREASES BY 1.5db AT 18 GHz 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 25 nsec MAXIMUM WHEN APPLICABLE
 - 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



PIN	DRIVER	TABLE
1	DR	1
2	DR	2
3	DR	3
4	DR	4
5	DR	5
6	DR	6
7	DR	7
8	DR	8
9	DR	9
10	DR	10
11	DR	11
12	DR	12
13	DR	13
14	DR	14
15	DR	15



NOTE:
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 - ISOLATION: 0.5 GHz TO 2 GHz: 60db
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ABSORPTIVE IN/OUT: 2.0:1
ABSORPTIVE OUT/OFF: 2.0:1
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 - SURVIVAL POWER: 1 WATT CW, 10 WATTS PEAK 1 usec
 - CONTROL: TTL LOGIC "0"=ON "1"=OFF
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-5V @ 75mA MAX.(REFLECTIVE)
100mA MAX.(ABSORPTIVE/NON-REFLECTIVE)

- OPTIONS:**
- INDEPENDENT CONTROL WITH SOLDER PIN STANDARD
 - DEC-MP: 3 BIT DECODER WITH MULTIPIN
 - DEC-SP: 3 BIT DECODER WITH SOLDER PIN
 - MP-IND: INDEPENDENT CONTROL WITH MULTIPIN
 - 10M1B: 10 MHz TO 18 GHz (INSERTION LOSS INCREASES BY 1.5db AT 10 MHz AND 0.5db AT 18 GHz)
 - 100M1B: 100 MHz TO 18 GHz (INSERTION LOSS INCREASES BY 1.5db AT 100 MHz AND 0.5db AT 18 GHz)
 - 11B: 1 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
 - 21B: 2 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
 - 41B: 4 GHz TO 12.4 GHz (NO CHANGE IN INSERTION LOSS)
 - 61B: 6 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
 - 121B: 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 25 nsec MAXIMUM WHEN APPLICABLE
 - 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 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

AMERICAN MICROWAVE CORPORATION
 FREDERICK, MARYLAND

OUTLINE DRAWING
 MSN-6DR/DT-05-DEC-MP
 REFLECTIVE OR NON-REFLECTIVE/ABSORPTIVE
 SOLID STATE SWITCH

DATE 10/30/97
 DRAWN WJG
 CHECKED L. M. M.
 ISSUED

REV. A
 FSCM NO. 60483
 DWG NO. 100-4151-2

SCALE N/S
 SHEET 1 of 1

SPECIFICAI 4

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100mA MAX.(ABSORPTIVE/NON-REFLECTIVE)

OPTIONS:

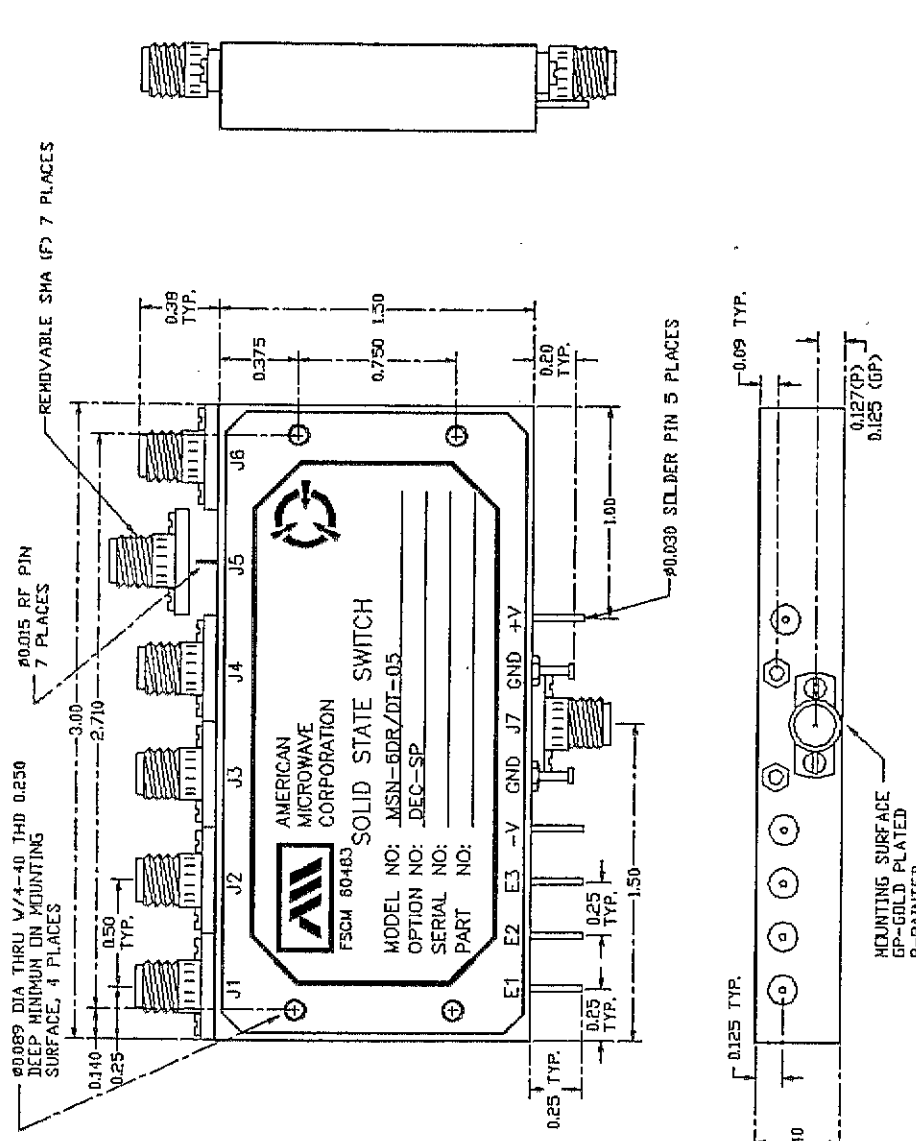
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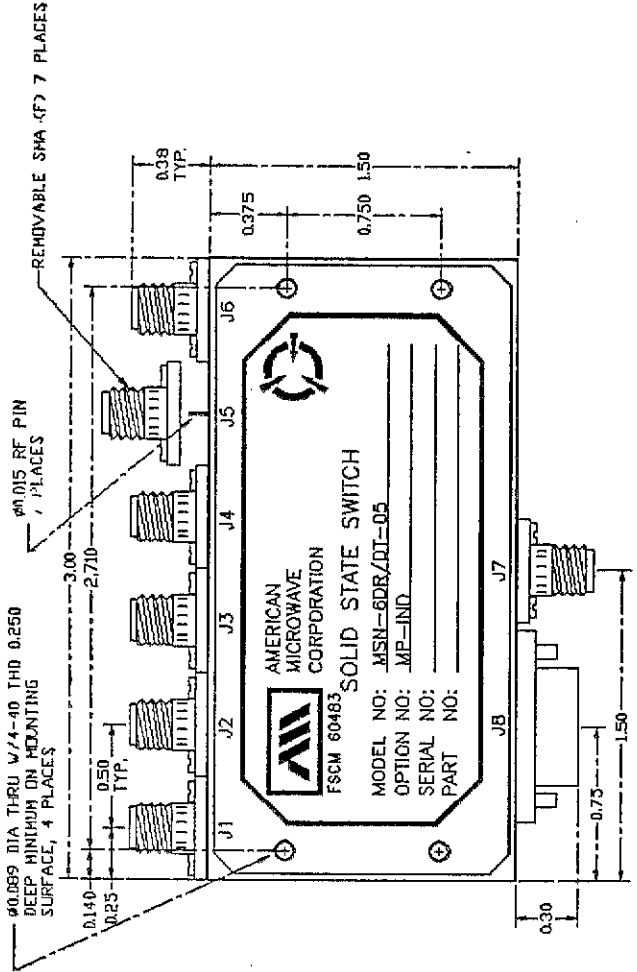
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ZONE	REV.	DESCRIPTION	DATE	APPROVED
A		ORIGINAL RELEASE	6/30/97	

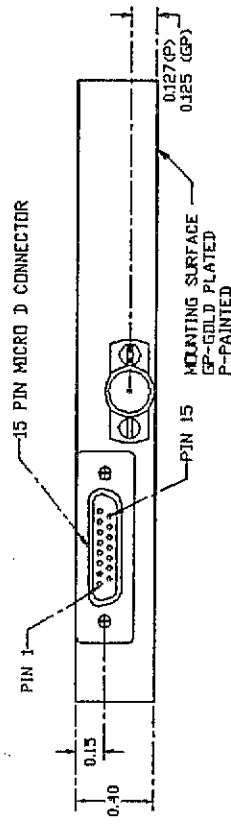


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DR=WITH DRIVER, REFLECTIVE
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PART NO.		APPROVALS		DATE	
DRAWN		CHECKED		DATE	
DESIGNED		DATE		DATE	
SCALE N/S		FSCM NO.		REV.	
A 60483		100-4151-3		A	
AMERICAN MICROWAVE CORPORATION FREDERICK, MARYLAND		OUTLINE DRAWING		MSN-6DR/DT-05-DEC-SP REFLECTIVE OR NON-REFLECTIVE/ABSORPTIVE SOLID STATE SWITCH	



PIN NO.	FUNCTION
1	E1
2	E2
3	E3
4	E4
5	E5
6	E6
7	N/C
8	N/C
9	N/C
10	N/C
11	N/C
12	RD
13	AV
14	-V
15	GRD



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PART NO.		APPROVALS		DATE	
AMERICAN MICROWAVE CORPORATION FREDERICK, MARYLAND		[Signature]		6/30/97	
TITLE		DRAWN		CHECKED	
OUTLINE DRAWING		[Signature]		[Signature]	
MSN-6DR/DT-05-MP-IND		REFLECTIVE OR NON-REFLECTIVE/ABSORPTIVE		SOLID STATE SWITCH	
SIZE	FSCM NO.	DWG NO.	REV.		
A	60483	100-4151-4	A		
SCALE N/S		SHEET 1 of 1			

ALL DIMENSIONS ARE IN INCHES
 TOLERANCES:
 X.XX ±0.020
 X.XXX ±0.010

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 - TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND. A

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**TYPICAL
MEASURED
TEST DATA
ON
REFLECTIVE
SP6T
PIN-DIODE SWITCH**

MODEL NO:

MSN-0518-6DR-05
(Serial Number: 6MS70846)

DECEMBER 11, 1997

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



SUMMARY TEST DATA

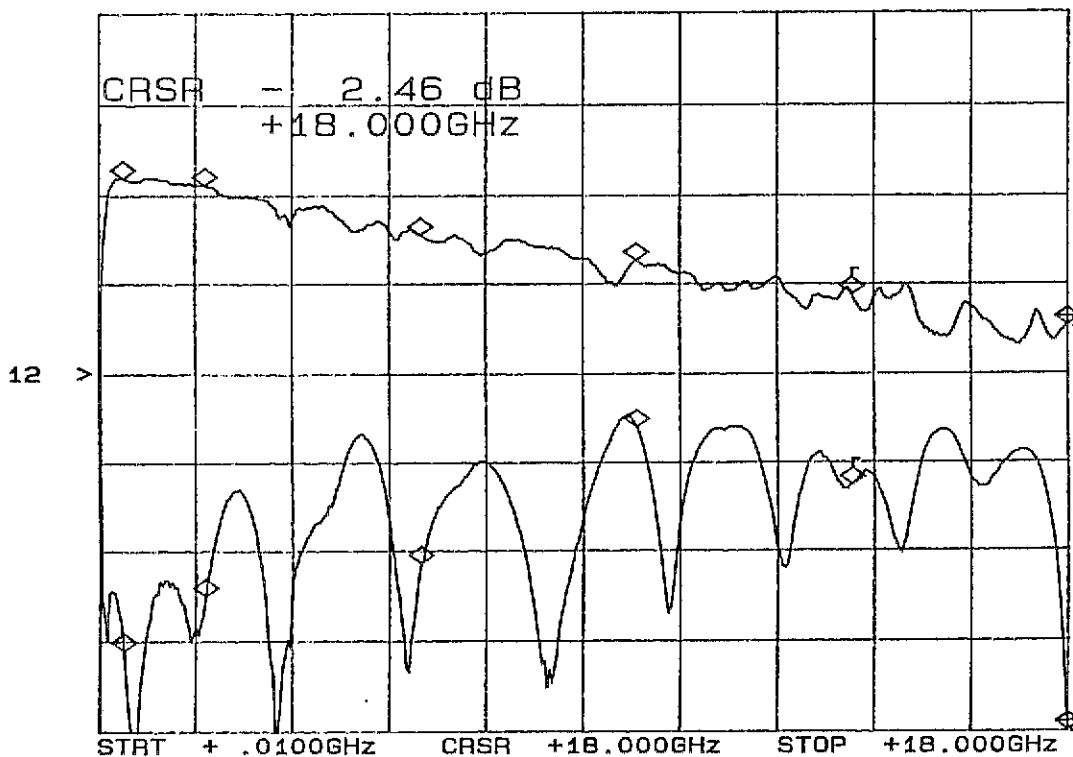
MSN-0518-6DR-05

SERIAL NUMBER : 6MS70846
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$: +295mA, -39mA

INSERTION LOSS & RETURN LOSS

CH1: R -M - 2.46 dB CH2: C -M - 29.41 dB
1.0 dB/ REF - 3.00 dB 5.0 dB/ REF - 9.54 dB

INSERTION LOSS/ SWR J7-J1



FREQUENCY	INSERTION LOSS	RETURN LOSS
0.5 GHz	-0.79 dB	-24.9 dB
2.0 GHz	-0.87 dB	-21.8 dB
6.0 GHz	-1.43 dB	-20.5 dB
10.0 GHz	-1.72 dB	-12.4 dB
14.0 GHz	-2.11 dB	-15.6 dB
18.0 GHz	-2.46 dB	-29.4 dB

DECEMBER 11, 1997



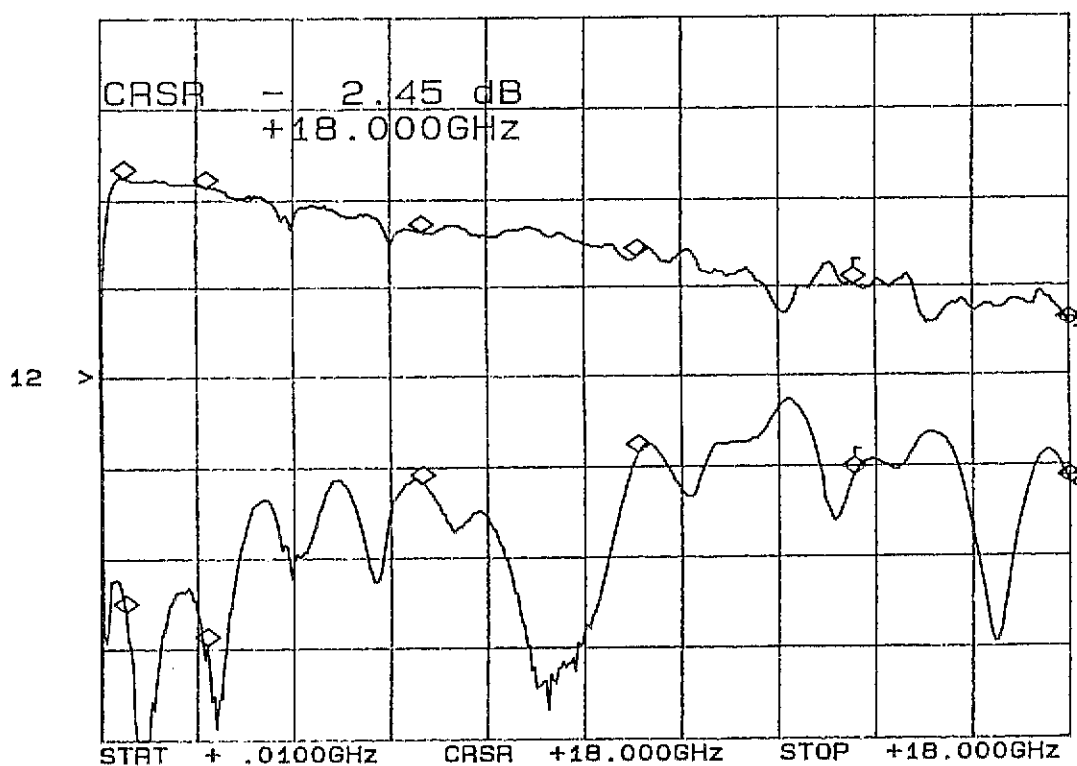
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TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$: +295mA, -39mA

INSERTION LOSS & RETURN LOSS

CH1: A -M - 2.45 dB CH2: C -M - 15.53 dB
1.0 dB/ REF - 3.00 dB 5.0 dB/ REF - 9.54 dB
INSERTION LOSS/ SWR J7-J2



FREQUENCY	INSERTION LOSS	RETURN LOSS
0.5 GHz	-0.73 dB	-22.5 dB
2.0 GHz	-0.84 dB	-25.2 dB
6.0 GHz	-1.36 dB	-15.4 dB
10.0 GHz	-1.64 dB	-13.7 dB
14.0 GHz	-1.96 dB	-14.9 dB
18.0 GHz	-2.45 dB	-15.5 dB

DECEMBER 11, 1997



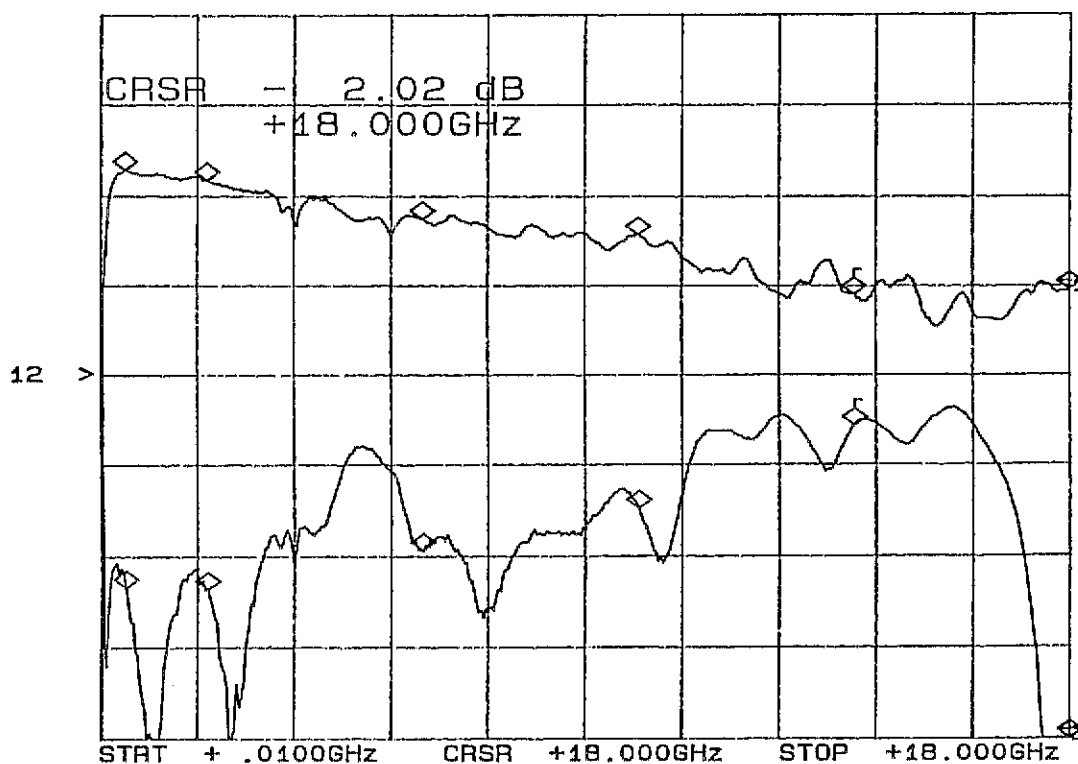
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MSN-0518-6DR-05

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TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$: +295mA, -39mA

INSERTION LOSS & RETURN LOSS

CH1: R -M - 2.02 dB CH2: C -M - 30.11 dB
1.0 dB/ REF - 3.00 dB 5.0 dB/ REF - 9.54 dB
INSERTION LOSS/ SWR J7-J3



FREQUENCY	INSERTION LOSS	RETURN LOSS
0.5 GHz	-0.71 dB	-21.3 dB
2.0 GHz	-0.82 dB	-21.4 dB
6.0 GHz	-1.23 dB	-19.0 dB
10.0 GHz	-1.40 dB	-16.8 dB
14.0 GHz	-2.08 dB	-12.3 dB
18.0 GHz	-2.02 dB	-30.1 dB

DECEMBER 11, 1997



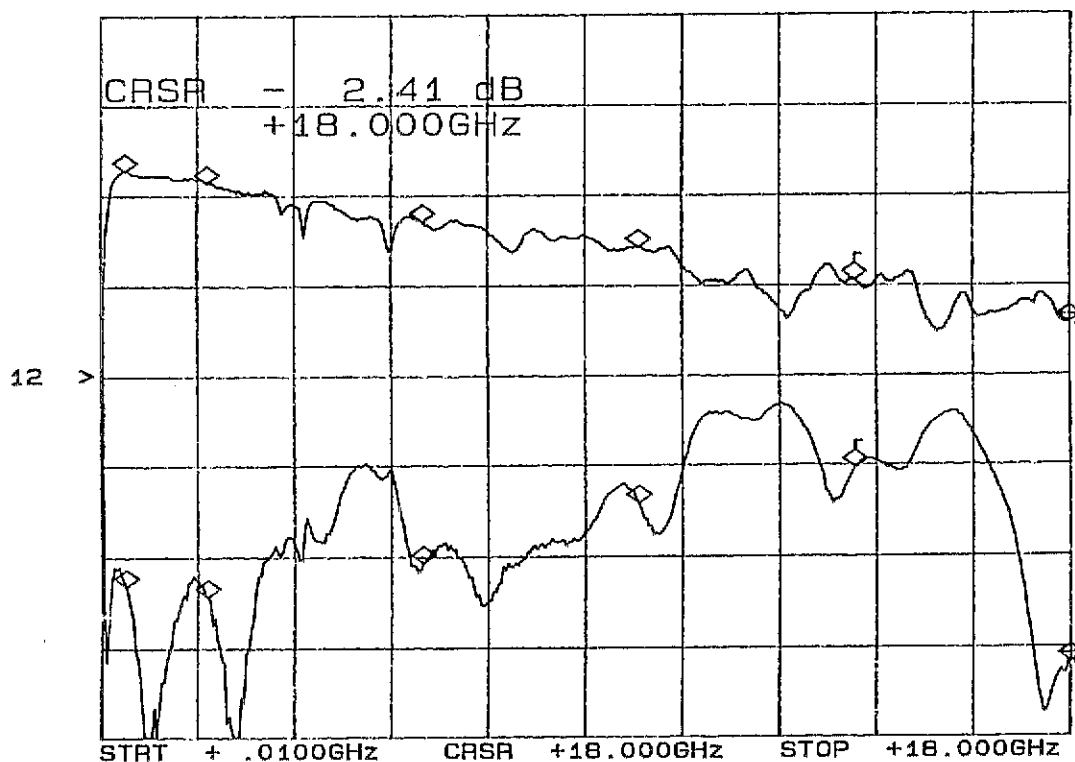
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SERIAL NUMBER : 6MS70846
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$: +295mA, -39mA

INSERTION LOSS & RETURN LOSS

CH1: R -M - 2.41 dB CH2: C -M - 25.77 dB
1.0 dB/ REF - 3.00 dB 5.0 dB/ REF - 9.54 dB
INSERTION LOSS/ SWR J7-J4



FREQUENCY	INSERTION LOSS	RETURN LOSS
0.5 GHz	-0.71 dB	-20.7 dB
2.0 GHz	-0.84 dB	-21.8 dB
6.0 GHz	-1.28 dB	-19.9 dB
10.0 GHz	-1.56 dB	-16.6 dB
14.0 GHz	-1.94 dB	-14.6 dB
18.0 GHz	-2.41 dB	-25.7 dB

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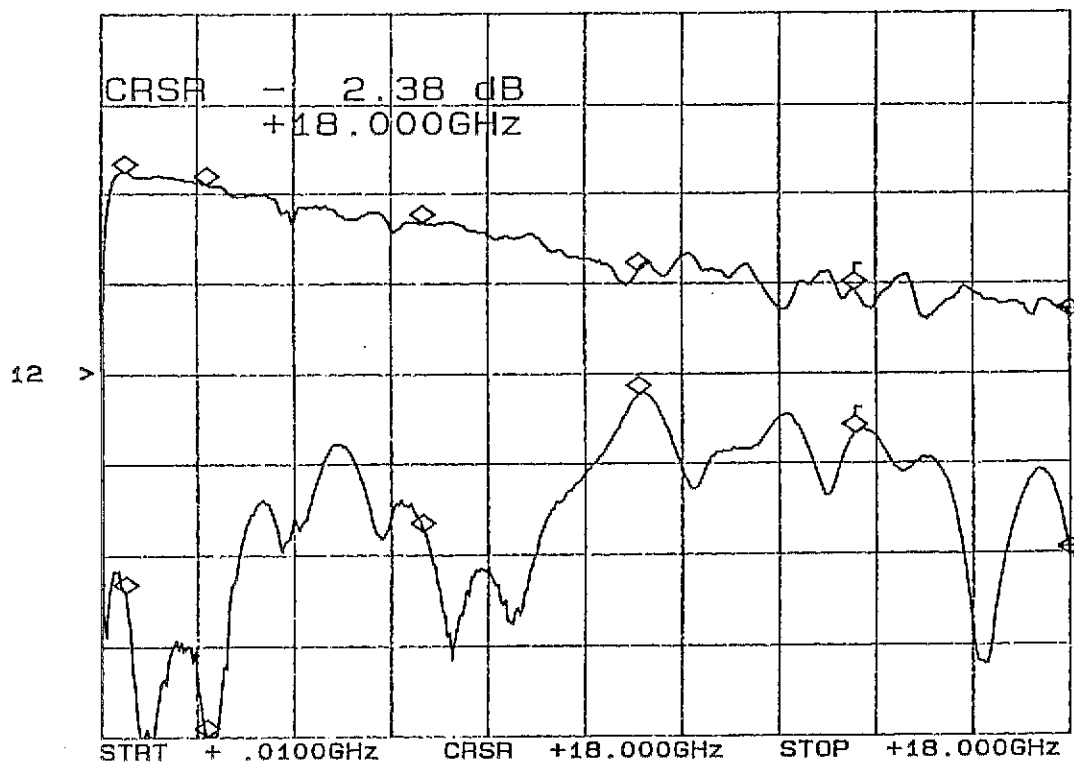
SUMMARY TEST DATA

MSN-0518-6DR-05

SERIAL NUMBER : 6MS70846
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$: +295mA, -39mA

INSERTION LOSS & RETURN LOSS

CH1: R -M - 2.38 dB CH2: C -M - 19.70 dB
1.0 dB/ REF - 3.00 dB 5.0 dB/ REF - 9.54 dB
INSERTION LOSS/ VSWR J7-J5



FREQUENCY	INSERTION LOSS	RETURN LOSS
0.5 GHz	-0.75 dB	-21.9 dB
2.0 GHz	-0.89 dB	-28.5 dB
6.0 GHz	-1.32 dB	-18.1 dB
10.0 GHz	-1.84 dB	-10.6 dB
14.0 GHz	-2.07 dB	-12.9 dB
18.0 GHz	-2.38 dB	-19.7 dB

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SUMMARY TEST DATA

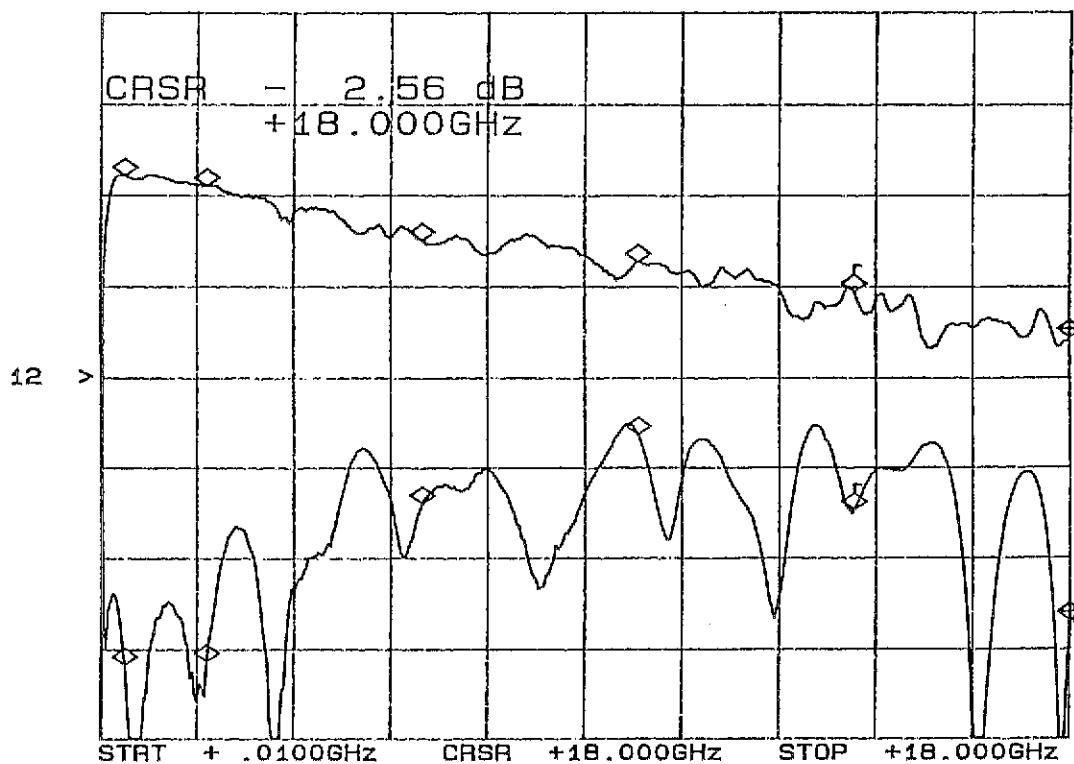
MSN-0518-6DR-05

SERIAL NUMBER : 6MS70846
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$: +295mA, -39mA

INSERTION LOSS & RETURN LOSS

CH1: F -M - 2.56 dB CH2: C -M - 22.95 dB
1.0 dB/ REF - 3.00 dB 5.0 dB/ REF - 9.54 dB

INSERTION LOSS/VSWR J7-J6



FREQUENCY	INSERTION LOSS	RETURN LOSS
0.5 GHz	-0.78 dB	-25.4 dB
2.0 GHz	-0.89 dB	-25.7 dB
6.0 GHz	-1.49 dB	-16.4 dB
10.0 GHz	-1.71 dB	-12.6 dB
14.0 GHz	-2.06 dB	-16.8 dB
18.0 GHz	-2.56 dB	-22.9 dB

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SUMMARY TEST DATA

MSN-0518-6DR-05

SERIAL NUMBER : 6MS70846
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$: +295mA, -39mA

ISOLATION* (AS MEASURED ON A SPECTRUM ANALYZER)

FREQUENCY	J1	J2	J3	J4	J5	J6
200 MHZ	-93 dB	-87 dB	-90 dB	-90 dB	-94 dB	-96 dB
500 MHZ	-93 dB	-87 dB	-88 dB	-89 dB	-89 dB	-94 dB
1 GHz	-94 dB	-88 dB	-88 dB	-88 dB	-89 dB	-94 dB
2 GHz	-97 dB	-90 dB	-92 dB	-92 dB	-90 dB	-96 dB
4 GHz	-90 dB	-90 dB	-90 dB	-90 dB	-90 dB	-92 dB
6 GHz	-93 dB	-92 dB	-91 dB	-93 dB	-92 dB	-92 dB
8 GHz	-88 dB	-85 dB	-86 dB	-87 dB	-85 dB	-88 dB
10 GHz	-86 dB	-83 dB	-84 dB	-84 dB	-85 dB	-87 dB
12 GHz	-82 dB	-80 dB	-83 dB	-83 dB	-80 dB	-84 dB
14 GHz	-78 dB	-76 dB	-78 dB	-78 dB	-75 dB	-78 dB
16 GHz	-75 dB	-75 dB	-76 dB	-76 dB	-74 dB	-74 dB
18 GHz	-75 dB	-76 dB	-76 dB	-76 dB	-74 dB	-75 dB

* J7: COMMON ARM

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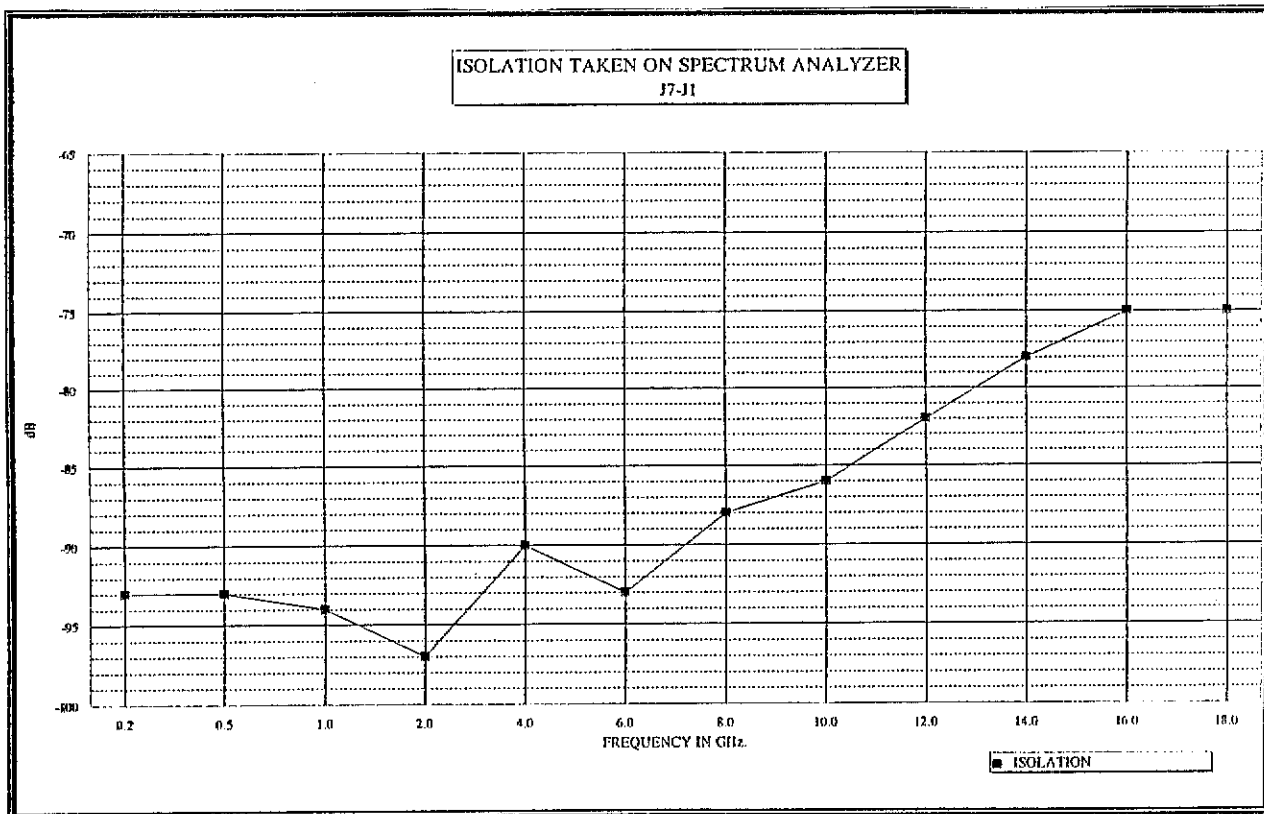


SUMMARY TEST DATA

MSN-0518-6DR-05

SERIAL NUMBER : 6MS70846
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$: +295mA, -39mA

ISOLATION (AS MEASURED ON A SPECTRUM ANALYZER)



DECEMBER 11, 1997

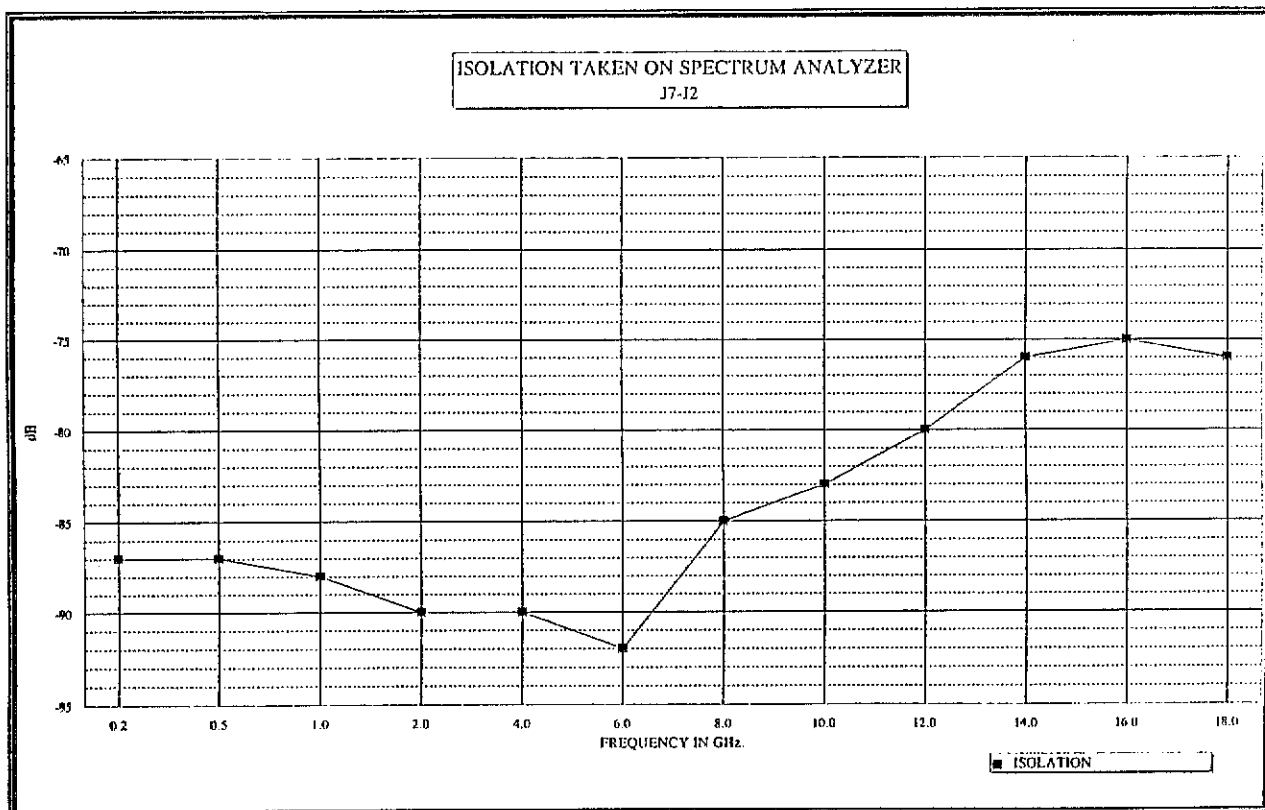


SUMMARY TEST DATA

MSN-0518-6DR-05

SERIAL NUMBER : 6MS70846
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$: +295mA, -39mA

ISOLATION (AS MEASURED ON A SPECTRUM ANALYZER)



DECEMBER 11, 1997

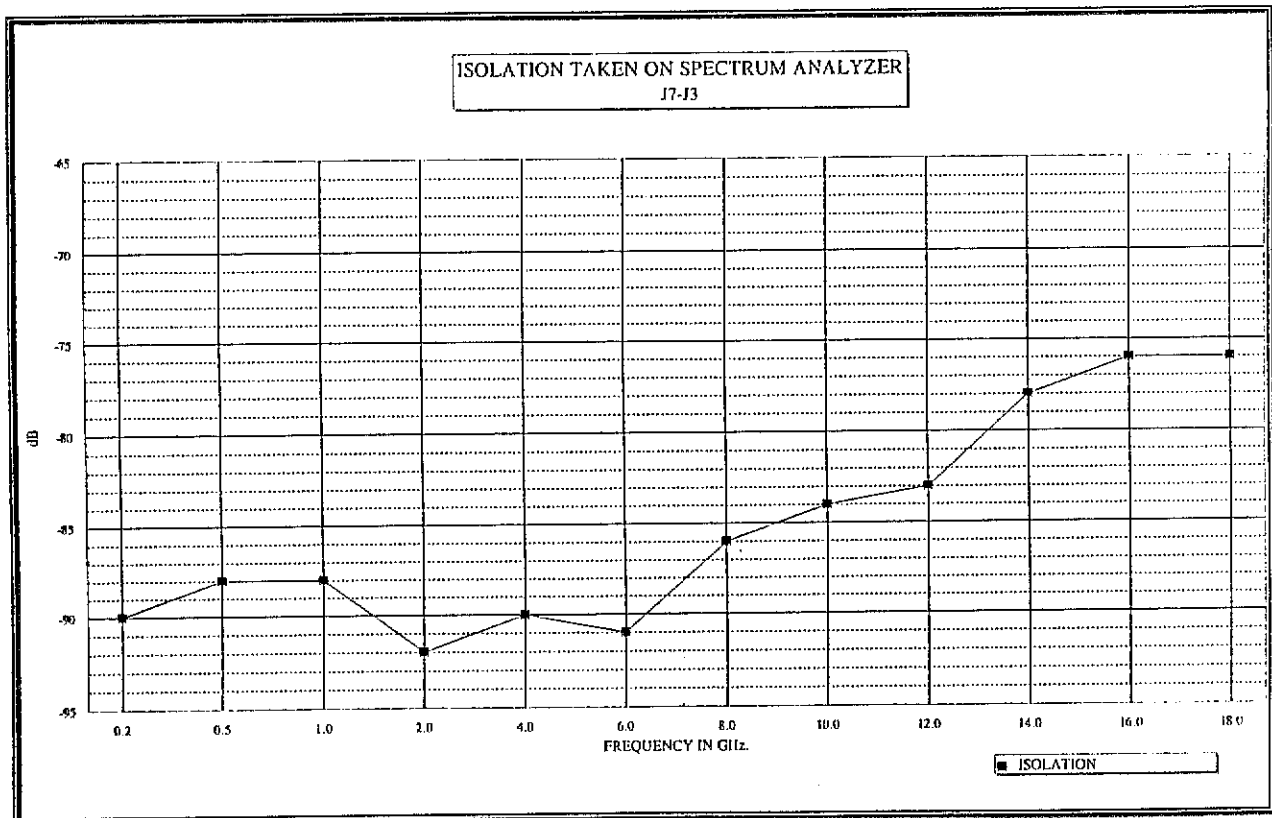


SUMMARY TEST DATA

MSN-0518-6DR-05

SERIAL NUMBER : 6MS70846
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$: +295mA, -39mA

ISOLATION (AS MEASURED ON A SPECTRUM ANALYZER)



DECEMBER 11, 1997

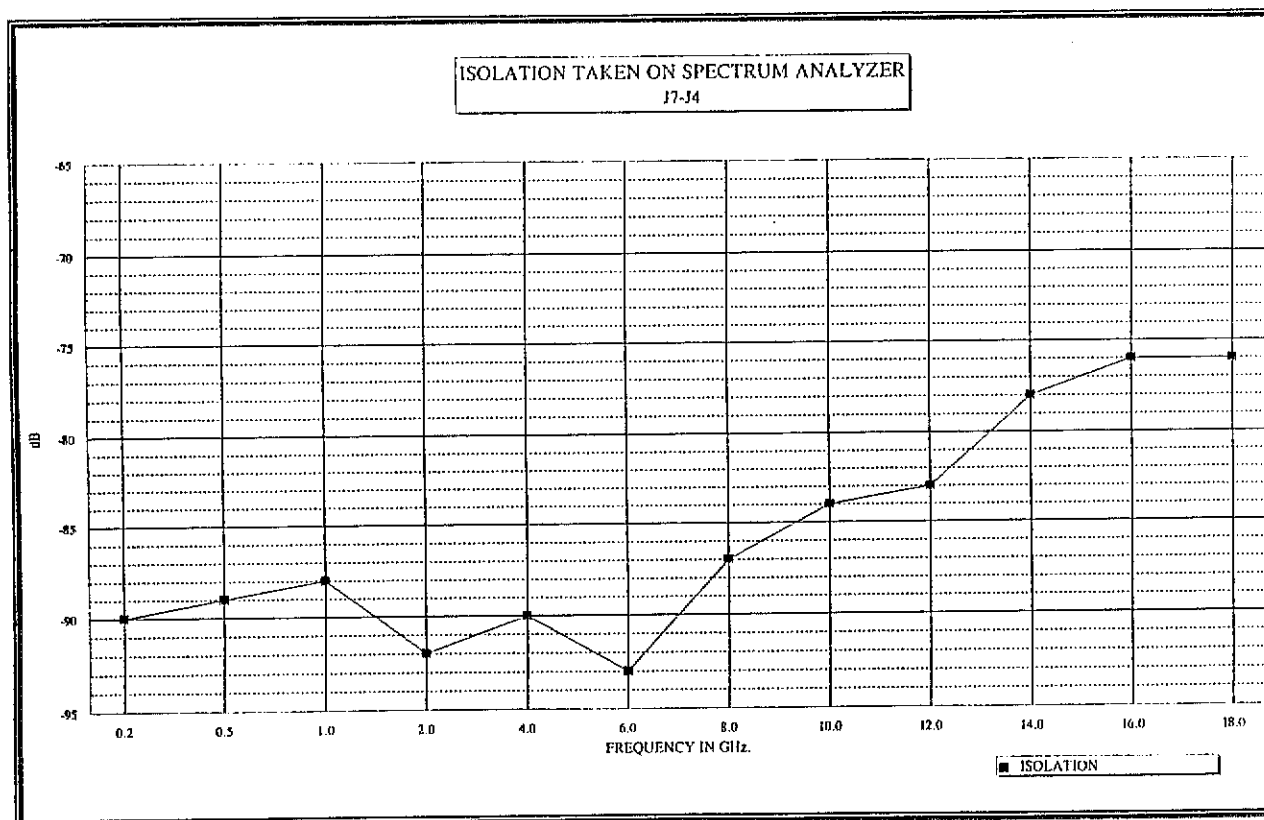


SUMMARY TEST DATA

MSN-0518-6DR-05

SERIAL NUMBER : 6MS70846
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$: +295mA, -39mA

ISOLATION (AS MEASURED ON A SPECTRUM ANALYZER)



DECEMBER 11, 1997

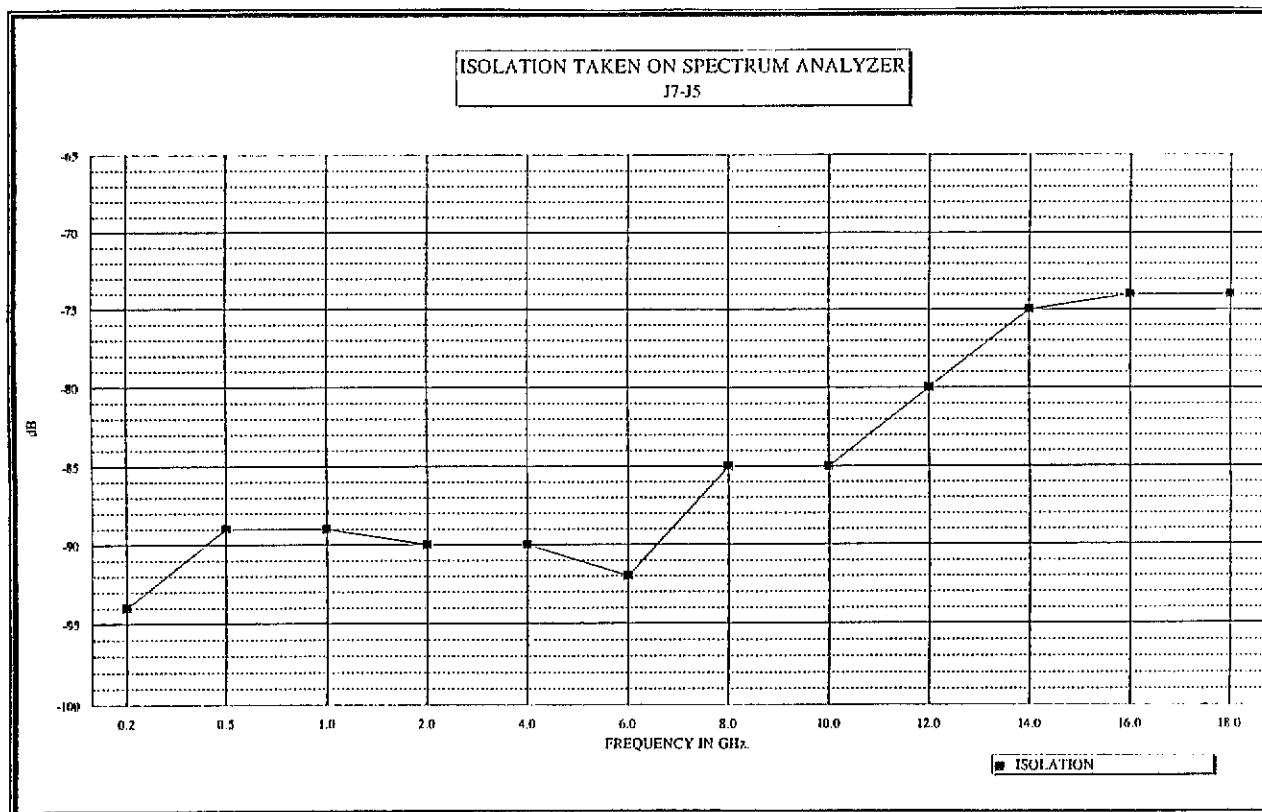


SUMMARY TEST DATA

MSN-0518-6DR-05

SERIAL NUMBER : 6MS70846
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$: +295mA, -39mA

ISOLATION (AS MEASURED ON A SPECTRUM ANALYZER)



DECEMBER 11, 1997

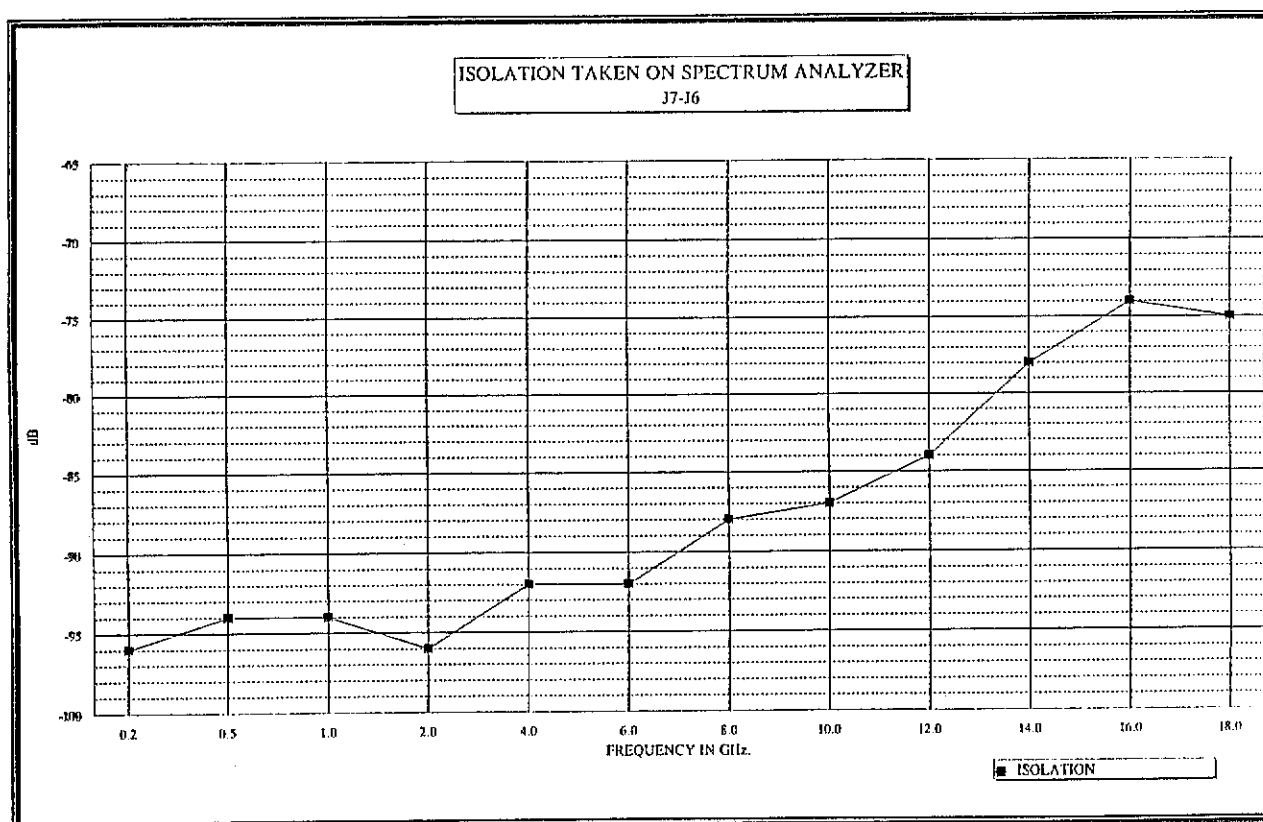


SUMMARY TEST DATA

MSN-0518-6DR-05

SERIAL NUMBER	: 6MS70846
TECHNICIAN	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: $\pm 5\text{vdc}$: +295mA, -39mA

ISOLATION (AS MEASURED ON A SPECTRUM ANALYZER)



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SUMMARY TEST DATA

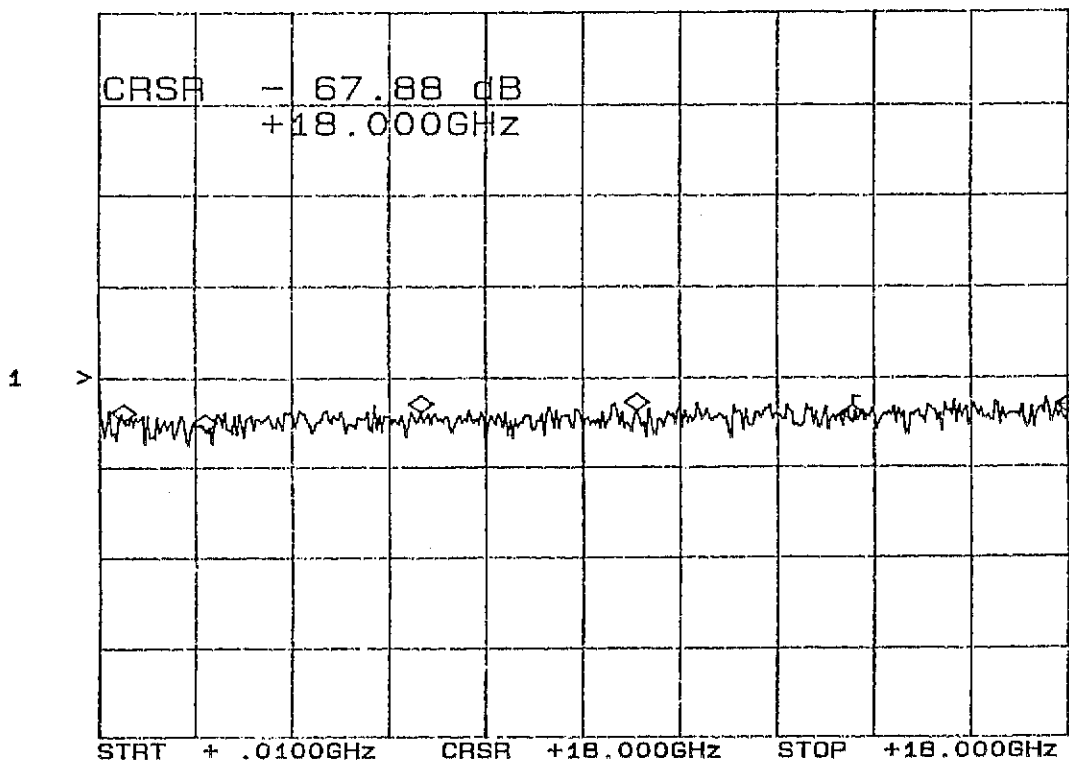
MSN-0518-6DR-05

SERIAL NUMBER : 6MS70846
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$: +295mA, -39mA

ISOLATION (AS MEASURED ON A SCALAR NETWORK ANALYZER)

CH1: R -M A - 67.88 dB
20.0 dB/ REF - 60.00 dB

ISOLATION J7-J1



FREQUENCY	ISOLATION
0.5 GHz	<-73.0 dB
2.0 GHz	<-71.3 dB
6.0 GHz	<-71.0 dB
10.0 GHz	<-66.8 dB
14.0 GHz	<-67.5 dB
18.0 GHz	<-67.8 dB

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SUMMARY TEST DATA

MSN-0518-6DR-05

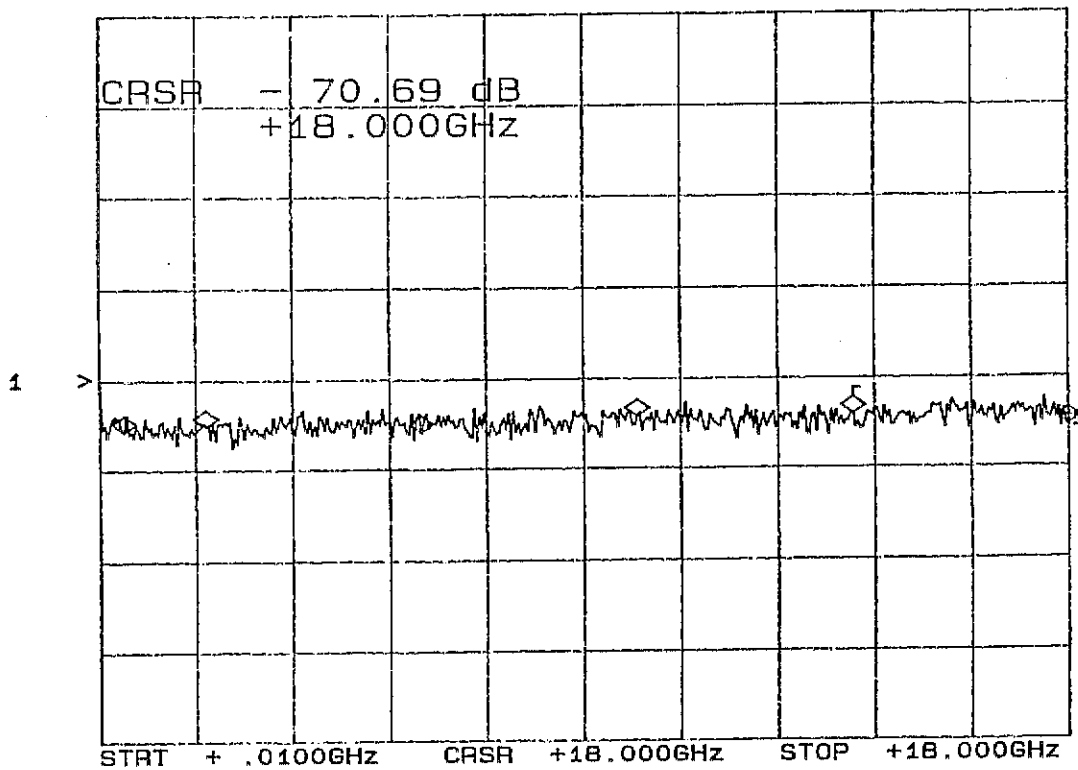
SERIAL NUMBER : 6MS70846
 TECHNICIAN : RENE AFABLE
 VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$: +295mA, -39mA

ISOLATION

(AS MEASURED ON A SCALAR NETWORK ANALYZER)

CH1: R -M A - 70.69 dB
 20.0 dB/ REF - 60.00 dB

ISOLATION J7-32



FREQUENCY	ISOLATION
0.5 GHz	<-71.0 dB
2.0 GHz	<-70.1 dB
6.0 GHz	<-69.9 dB
10.0 GHz	<-72.1 dB
14.0 GHz	<-67.4 dB
18.0 GHz	<-70.6 dB

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SUMMARY TEST DATA

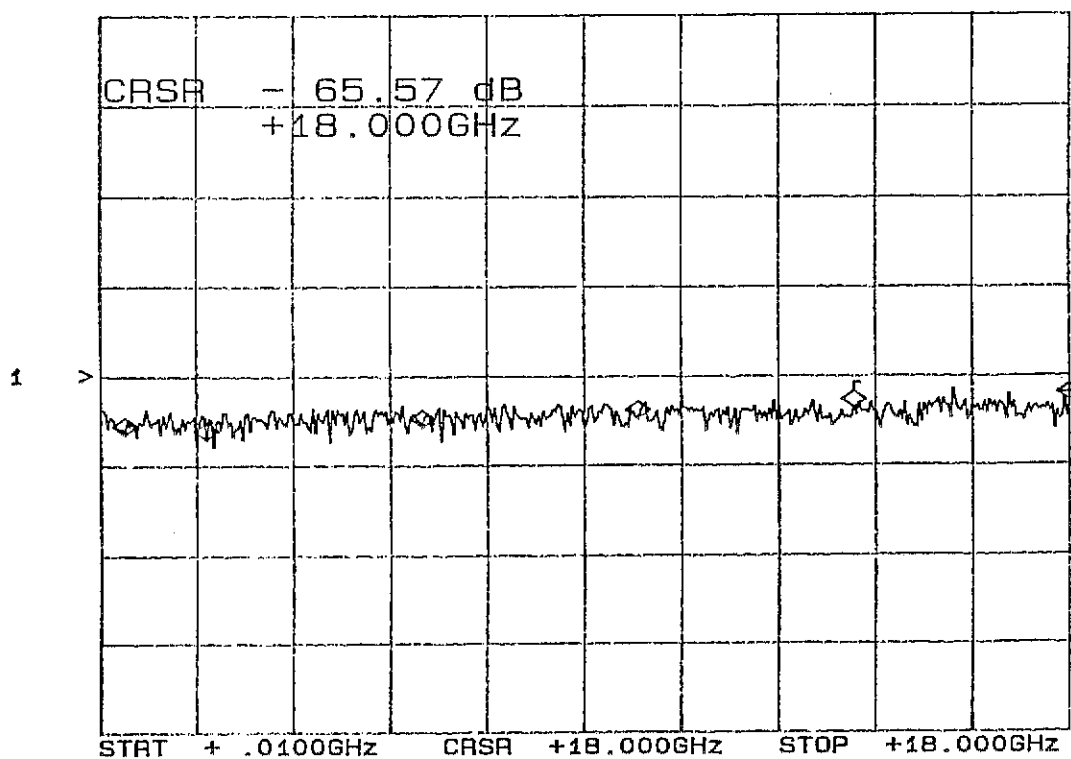
MSN-0518-6DR-05

SERIAL NUMBER	: 6MS70846
TECHNICIAN	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: ± 5 vdc: +295mA, -39mA

ISOLATION (AS MEASURED ON A SCALAR NETWORK ANALYZER)

CH1: R -M A - 65.57 dB
 20.0 dB/ REF - 60.00 dB

ISOLATION J7-J3



FREQUENCY	ISOLATION
0.5 GHz	<-68.6 dB
2.0 GHz	<-70.4 dB
6.0 GHz	<-72.8 dB
10.0 GHz	<-69.3 dB
14.0 GHz	<-68.3 dB
18.0 GHz	<-65.5 dB

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SUMMARY TEST DATA

MSN-0518-6DR-05

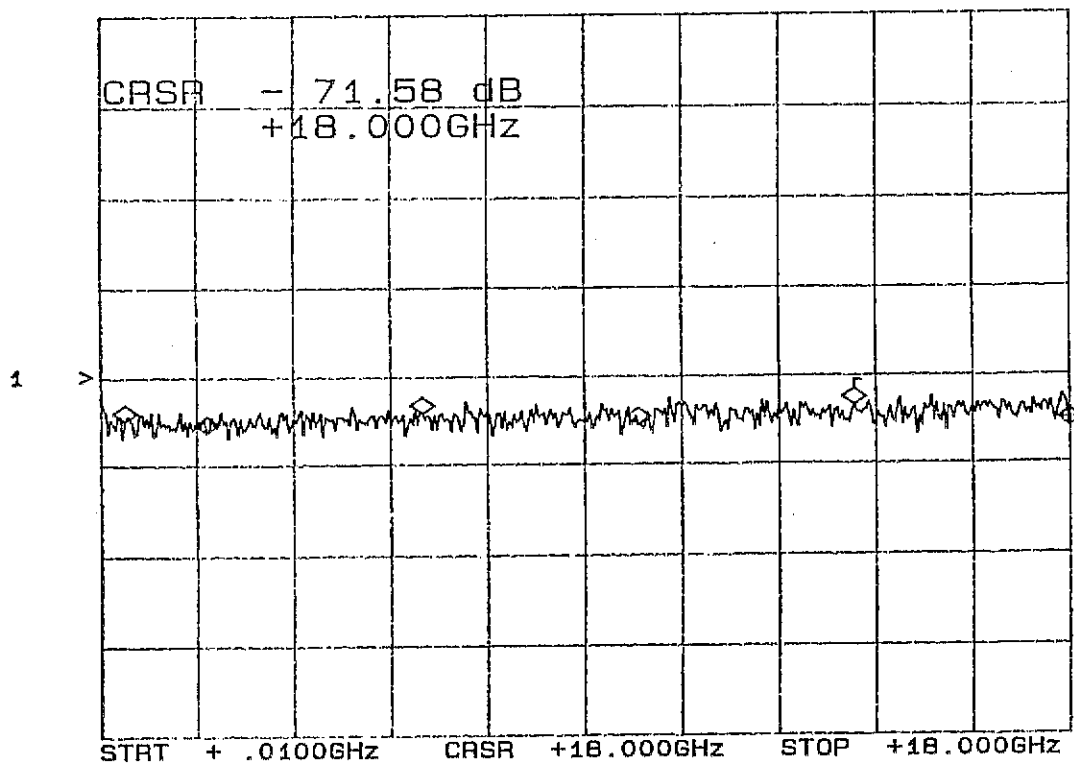
SERIAL NUMBER : 6MS70846
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$: +295mA, -39mA

ISOLATION

(AS MEASURED ON A SCALAR NETWORK ANALYZER)

CH1: R -M A - 71.58 dB
20.0 dB/ REF - 60.00 dB

ISOLATION 17-14



FREQUENCY	ISOLATION
0.5 GHz	<-70.2 dB
2.0 GHz	<-70.2 dB
6.0 GHz	<-68.6 dB
10.0 GHz	<-66.3 dB
14.0 GHz	<-67.3 dB
18.0 GHz	<-71.5 dB

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SUMMARY TEST DATA

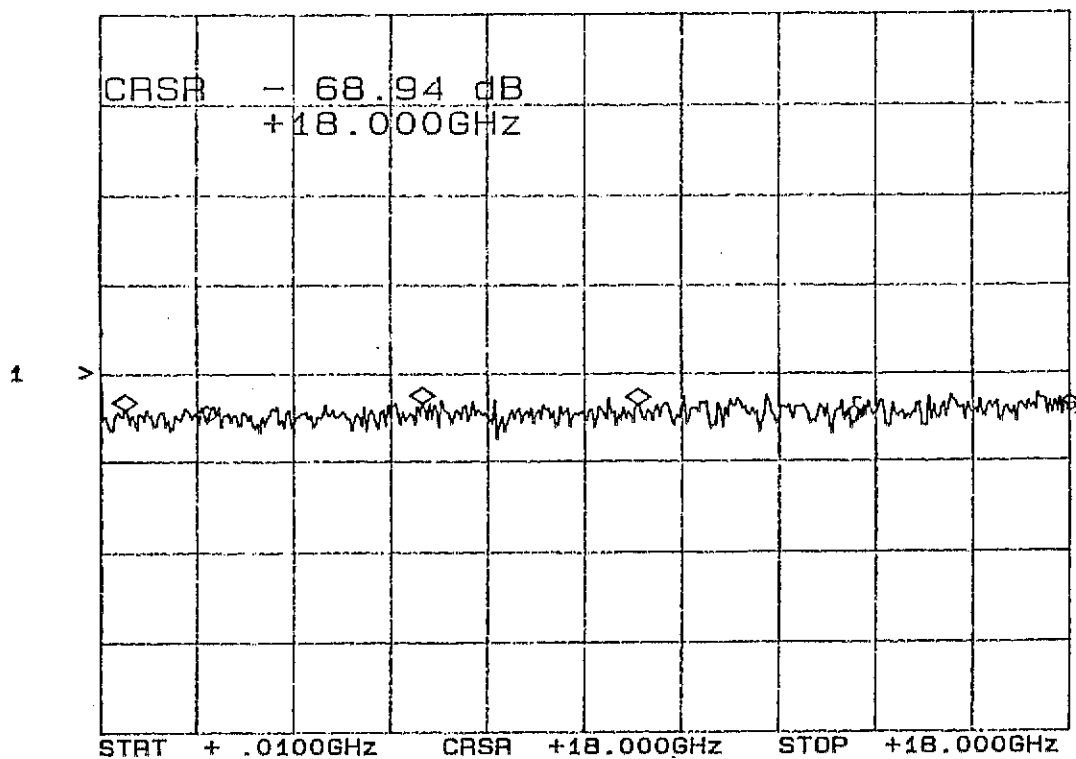
MSN-0518-6DR-05

SERIAL NUMBER : 6MS70846
TECHNICIAN : RENE AFABLE
VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$: +295mA, -39mA

ISOLATION (AS MEASURED ON A SCALAR NETWORK ANALYZER)

CH1: R -M A - 68.94 dB
20.0 dB/ REF - 60.00 dB

ISOLATION J7-J5



FREQUENCY	ISOLATION
0.5 GHz	<-70.7 dB
2.0 GHz	<-74.3 dB
6.0 GHz	<-70.7 dB
10.0 GHz	<-68.8 dB
14.0 GHz	<-73.3 dB
18.0 GHz	<-68.9 dB

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SUMMARY TEST DATA

MSN-0518-6DR-05

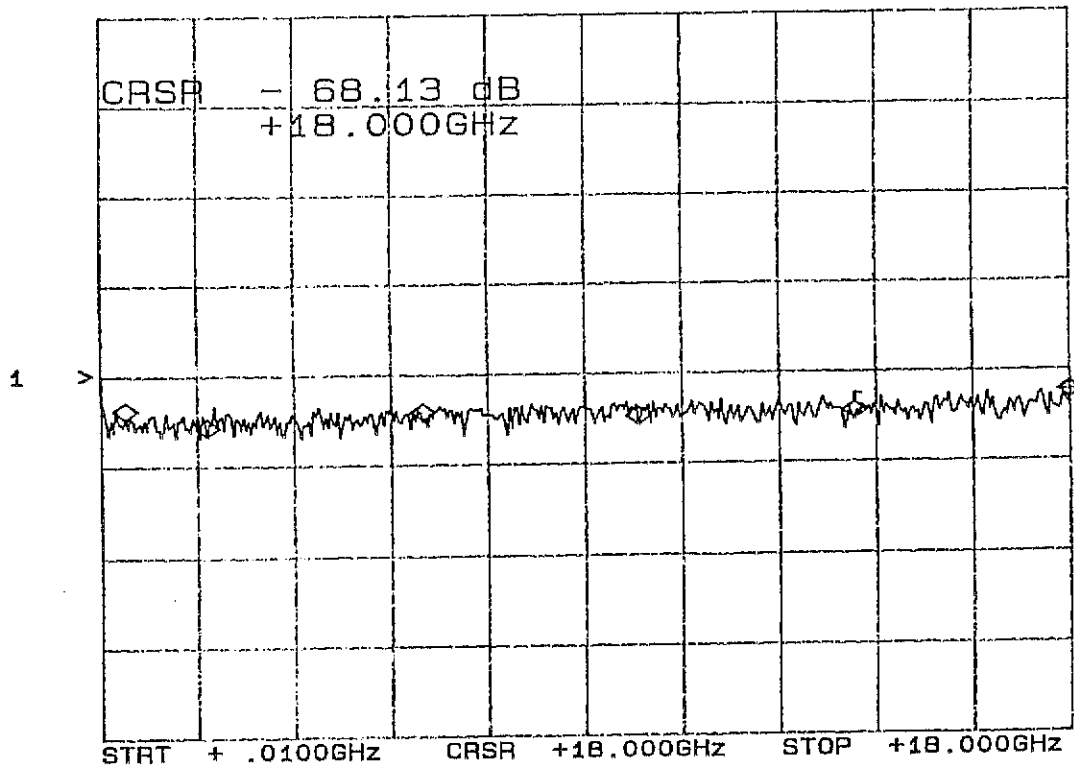
SERIAL NUMBER : 6MS70846
 TECHNICIAN : RENE AFABLE
 VOLTAGE & CURRENT DRAW : $\pm 5\text{vdc}$: +295mA, -39mA

ISOLATION

(AS MEASURED ON A SCALAR NETWORK ANALYZER)

CH1: R -M A - 68.13 dB
 20.0 dB/ REF - 60.00 dB

ISOLATION J7-J6



FREQUENCY	ISOLATION
0.5 GHz	<-68.5 dB
2.0 GHz	<-71.6 dB
6.0 GHz	<-69.8 dB
10.0 GHz	<-68.4 dB
14.0 GHz	<-67.9 dB
18.0 GHz	<-68.1 dB

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SUMMARY TEST DATA

MSN-0518-6DR-05

SERIAL NUMBER	: 6MS70846
TECHNICIAN	: RENE AFABLE
VOLTAGE & CURRENT DRAW	: $\pm 5\text{vdc}$: +295mA, -39mA

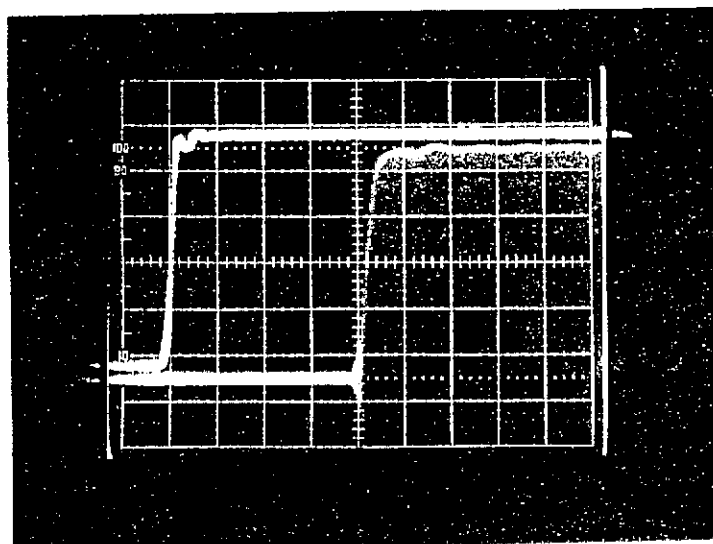
SWITCHING SPEED

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

"DELAY ON": 44nS
"RISE TIME": 4nS

HORIZONTAL SCALE:
10nS PER DIVISION

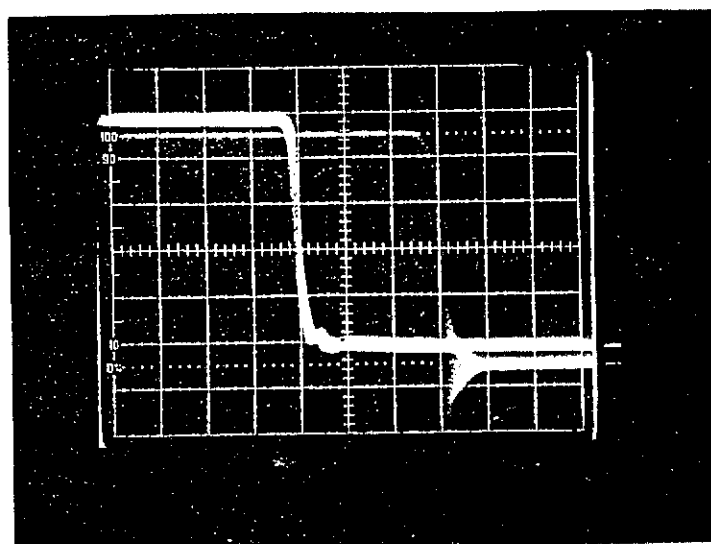
VERTICAL SCALE:
20mV PER DIVISION



"DELAY OFF": 32nS
"FALL TIME": 4nS

HORIZONTAL SCALE:
10nS PER DIVISION

VERTICAL SCALE:
20mV PER DIVISION



DECEMBER 11, 1997



SUMMARY TEST DATA

MSN-0518-6DR-05

SERIAL NUMBER

: 6MS70846

TECHNICIAN

: RENE AFABLE

VOLTAGE & CURRENT DRAW

: $\pm 5\text{vdc}$: +295mA, -39mA

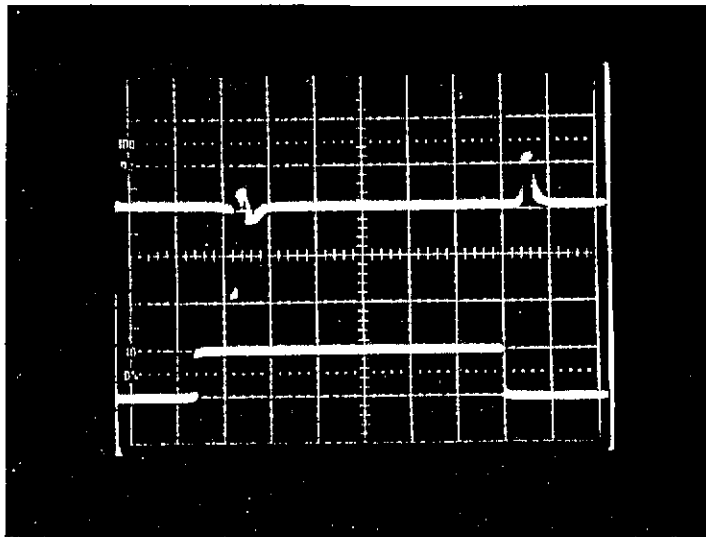
VIDEO TRANSIENTS

TYPICAL OF ALL ARMS

$\leq 3.0\text{ V P-P}$
MEASURED IN A
300 MHZ BANDWIDTH

VERTICAL SCALE:
1V PER DIVISION

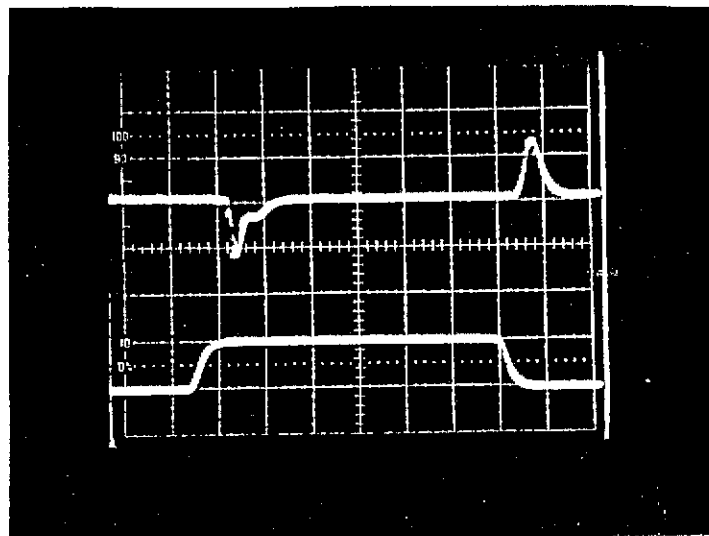
HORIZONTAL SCALE:
50ns PER DIVISION



$\leq 1.4\text{ V P-P}$
MEASURED IN A
20 MHZ BANDWIDTH

VERTICAL SCALE:
1V PER DIVISION

HORIZONTAL SCALE:
50ns PER DIVISION



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