



TEST REPORT
ON
50 MHz TO 500 MHz
SINGLE POLE TWO THROW
NON-REFLECTIVE / ABSORPTIVE SWITCH

AMC MODEL No:
MSN-2DT-05-IND
OPTION 561R310H01

Serial Numbers: 2MS406444 THRU 2MS406456

DESIGNED
BY
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TESTED
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REPORTED
BY
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June 23, 2005

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ISO9001 : 1994 CERTIFIED

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SINGLE POLE TWO THROW NON-REFLECTIVE / ABSORPTIVE SWITCH AMC MODEL No: MSN-2DT-05-IND OPT 561R310H01

FEATURES:

- 50 MHz TO 500 MHz
- HERMETICALLY SEALED
- SINGLE +5 VOLT SUPPLY
- INDEPENDENT CONTROLS

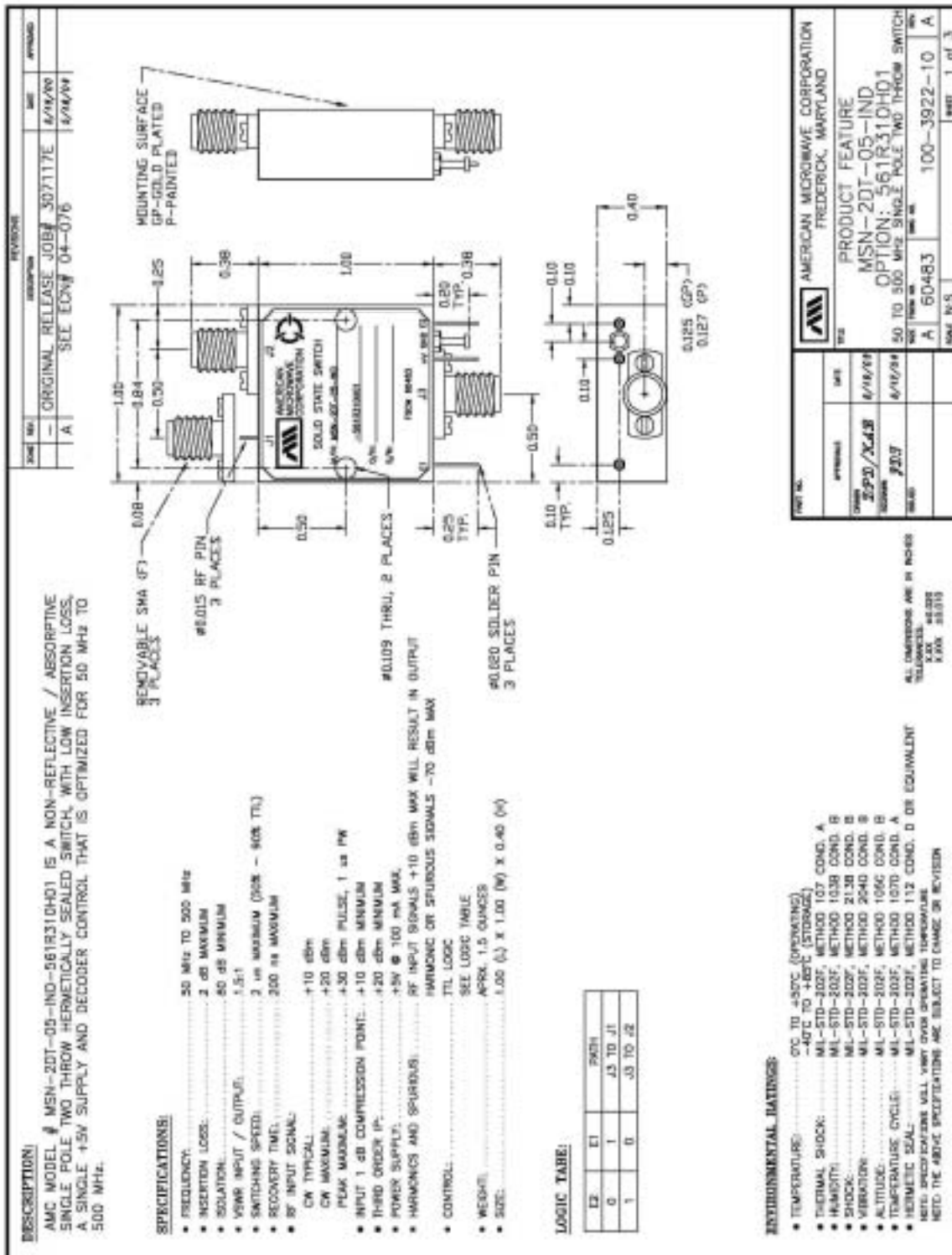


SPECIFICATIONS:

- FREQUENCY : 50 MHz TO 500 MHz
- INSERTION LOSS : 2 dB MAXIMUM
- ISOLATION : 60 dB MINIMUM
- VSWR : 1.5:1
- SWITCHING SPEED : 2 μ S MAXIMUM
- RECOVERY TIME : 200 nS MAXIMUM
- RF INPUT SIGNAL : CW TYPICAL: +10 dBm
: CW MAXIMUM: +20 dBm
: PEAK MAXIMUM: +30 dBm
- INPUT 1 DB COMPRESSION POINT : +10 dBm MINIMUM
- THIRD ORDER IP : +20 dBm MINIMUM
- POWER SUPPLY : +5 VOLTS @ 100 mA MAXIMUM
- HARMONICS AND SPURIOUS : RF INPUT SIGNALS +10 dBm MAXIMUM WILL
: RESULT IN OUTPUT HARMONIC OR SPURIOUS
: SIGNALS -70 dBm MAXIMUM
- CONTROL : TTL LOGIC
- WEIGHT : 1.5 OUNCES
- SIZE : 1.00"(L) X 1.00"(W) X 0.40"(H)

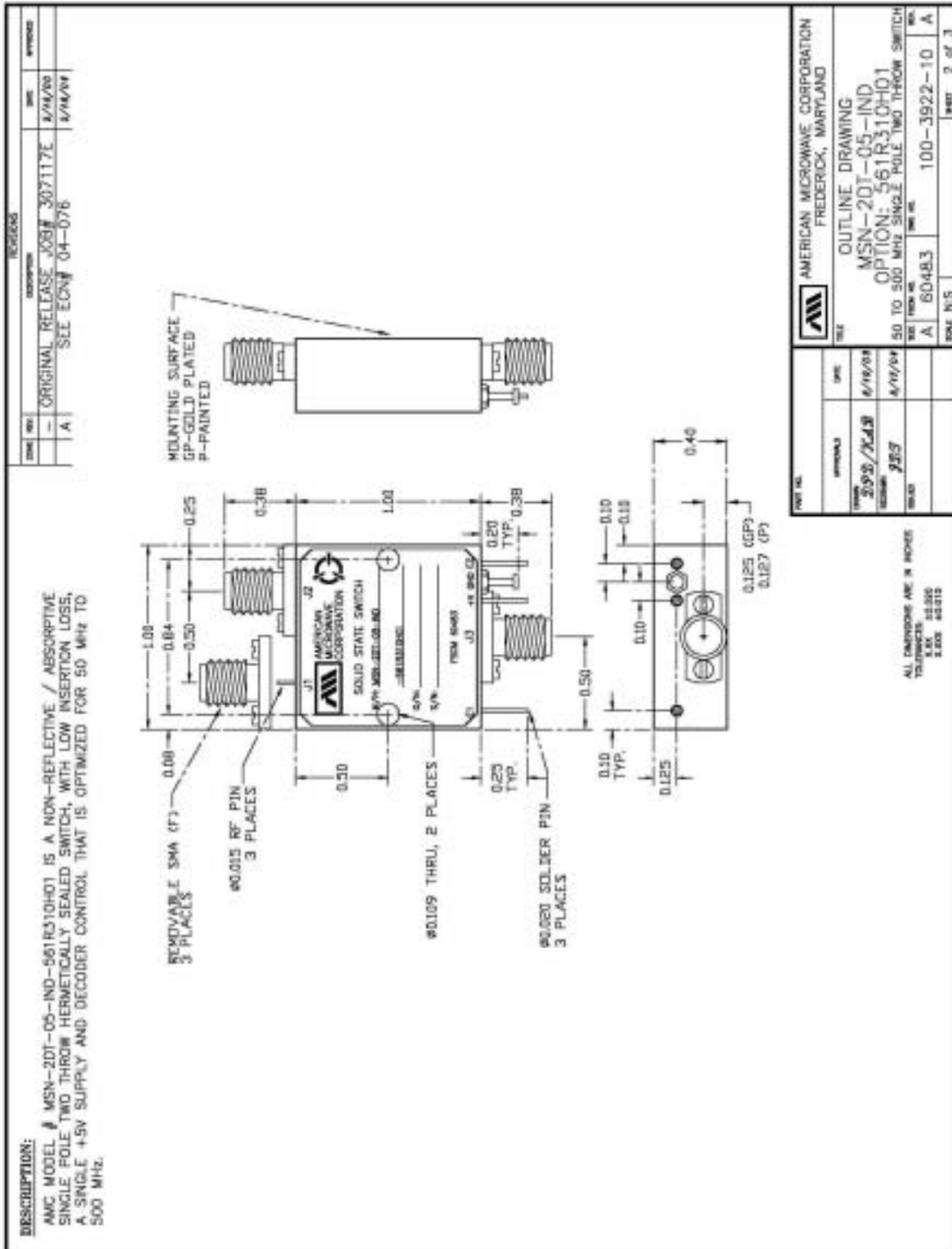


PRODUCT FEATURE



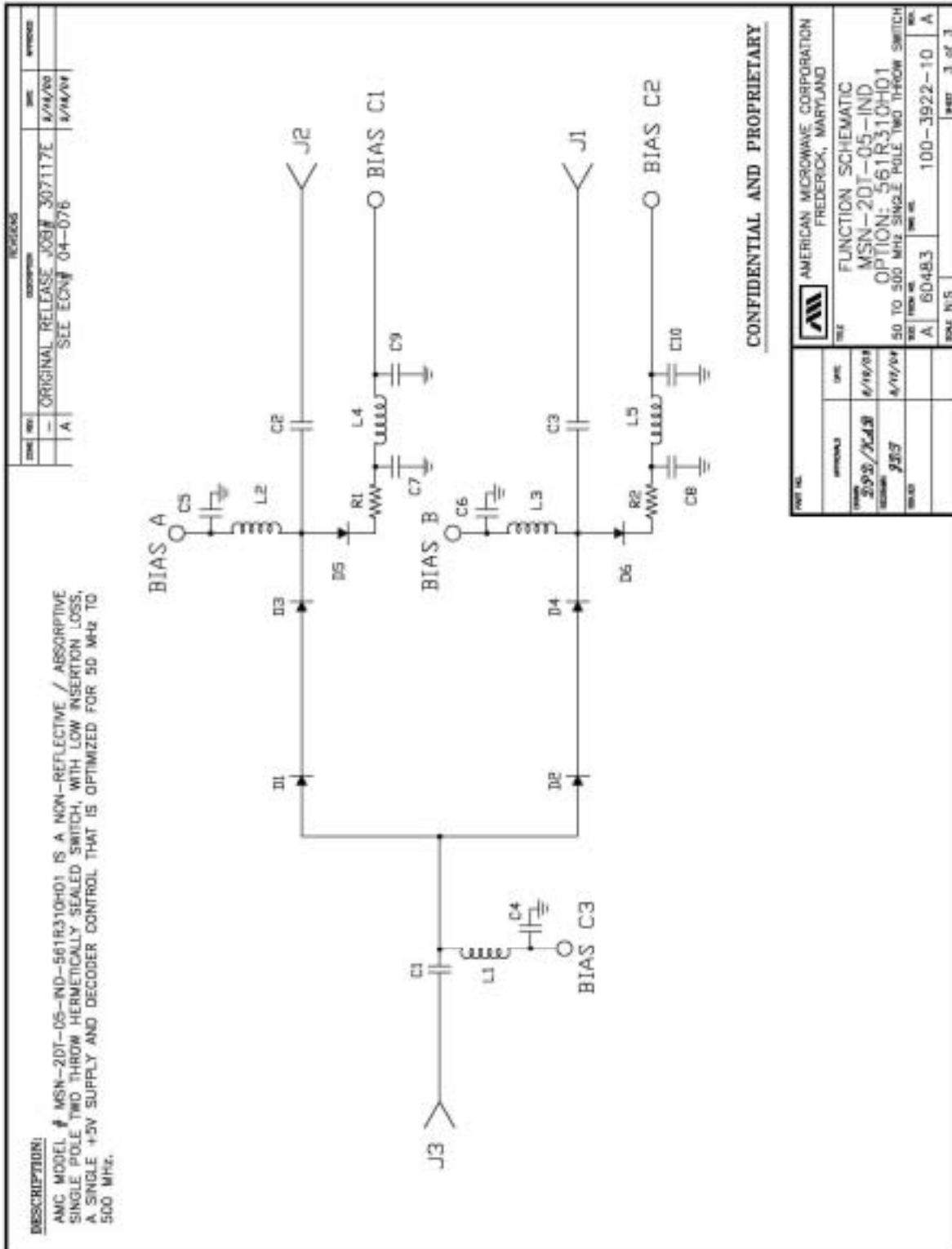


OUTLINE DRAWING





FUNCTIONAL SCHEMATIC



PERFORMANCE DATA

MSN-2DT-05-IND WITH OPTION 561R310H01				
ABSORPTIVE SPDT PIN DIODE SWITCH WHICH OPERATES FROM 50 MHz TO 500 MHz				
ALL FIGURES BELOW ARE "WORST CASE"				
Serial Number	Insertion Loss	Isolation	Input Return Loss	Output Return Loss
406456	0.88 dB	67.75 dB	19.17 dB	19.06 dB
406455	0.81 dB	65.42 dB	19.35 dB	19.23 dB
406454	0.98 dB	67.11 dB	19.67 dB	19.58 dB
406453	0.93 dB	62.30 dB	19.07 dB	18.99 dB
406452	0.89 dB	64.37 dB	21.07 dB	20.75 dB
406451	0.78 dB	66.06 dB	19.54 dB	19.37 dB
406450	0.78 dB	63.61 dB	20.78 dB	20.62 dB
406449	0.85 dB	64.87 dB	18.94 dB	18.90 dB
406448	0.76 dB	64.71 dB	19.94 dB	19.94 dB
406447	0.92 dB	68.21 dB	19.18 dB	19.05 dB
406446	0.90 dB	62.80 dB	19.16 dB	19.12 dB
406445	1.29 dB	65.26 dB	18.12 dB	17.66 dB
406444	0.83 dB	63.47 dB	18.61 dB	18.52 dB
AVERAGE	0.89 dB	65.07 dB	19.43 dB	19.29 dB



HEMETICALLY SEALED SWITCH

MIL-STD-202G, METHOD 112E, TEST CONDITION "A"

Bubble Test with Mineral Oil or Peanut Oil at 125°C.
 The specimen shall be immersed to a depth of 1 inch below the surface of the bath for a period of at least one minute. The specimen shall be carefully observed during the entire duration of the immersion for indication of a poor seal as evidenced by a continuous stream of bubbles emanating from the specimen.

TEST DATA

INSERTION LOSS, RETURN LOSS, ISOLATION

AND

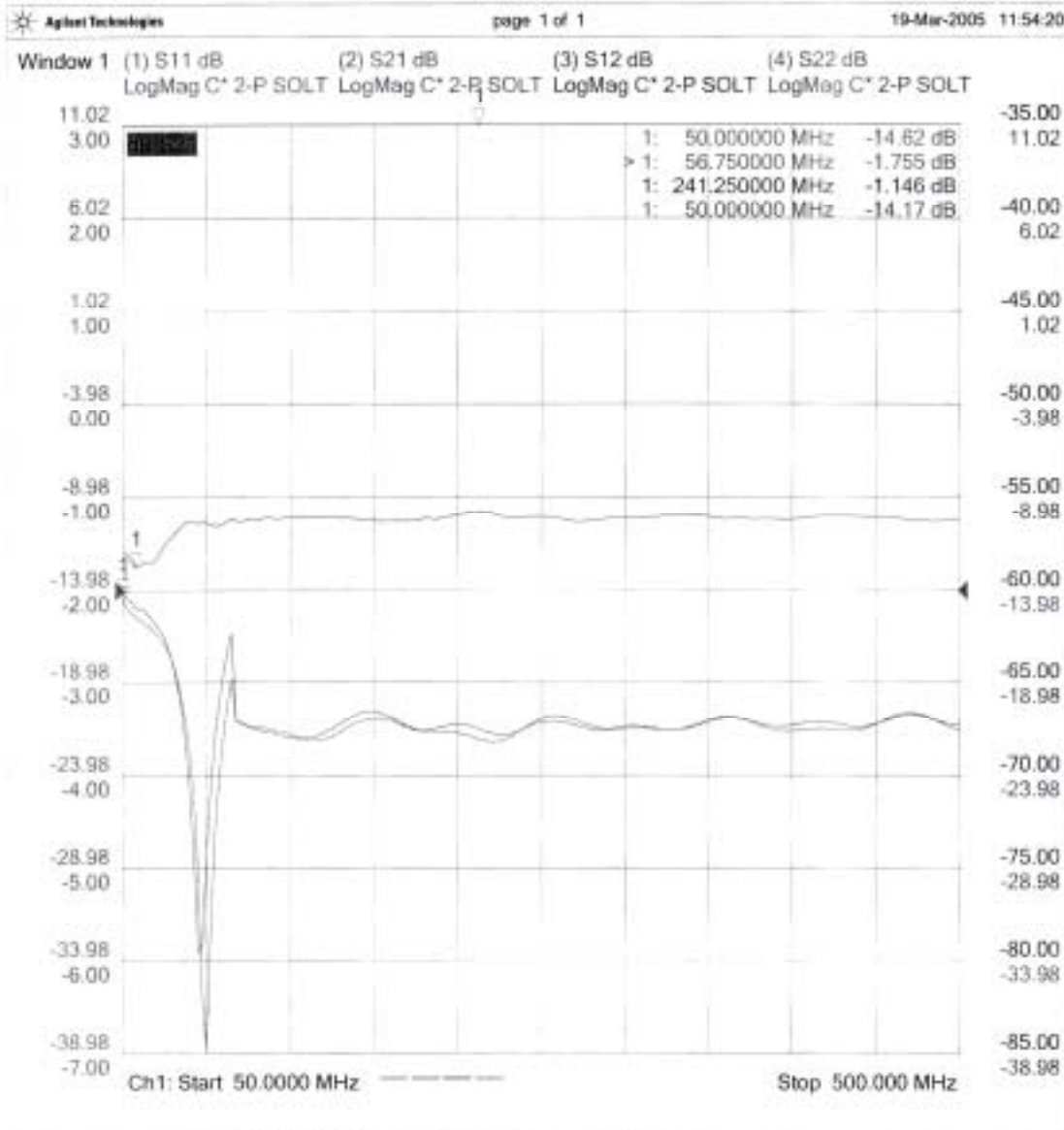
SWITCHING SPEED

FOR

MSN-2DT-05-IND
OPTION 561R310H01

Serial Number: 2MS406444

INSERTION LOSS AND RETURN LOSS S/N 2MS406444
AS MEASURED FROM 50 MHz TO 500 MHz, J3 TO J1 "ON"

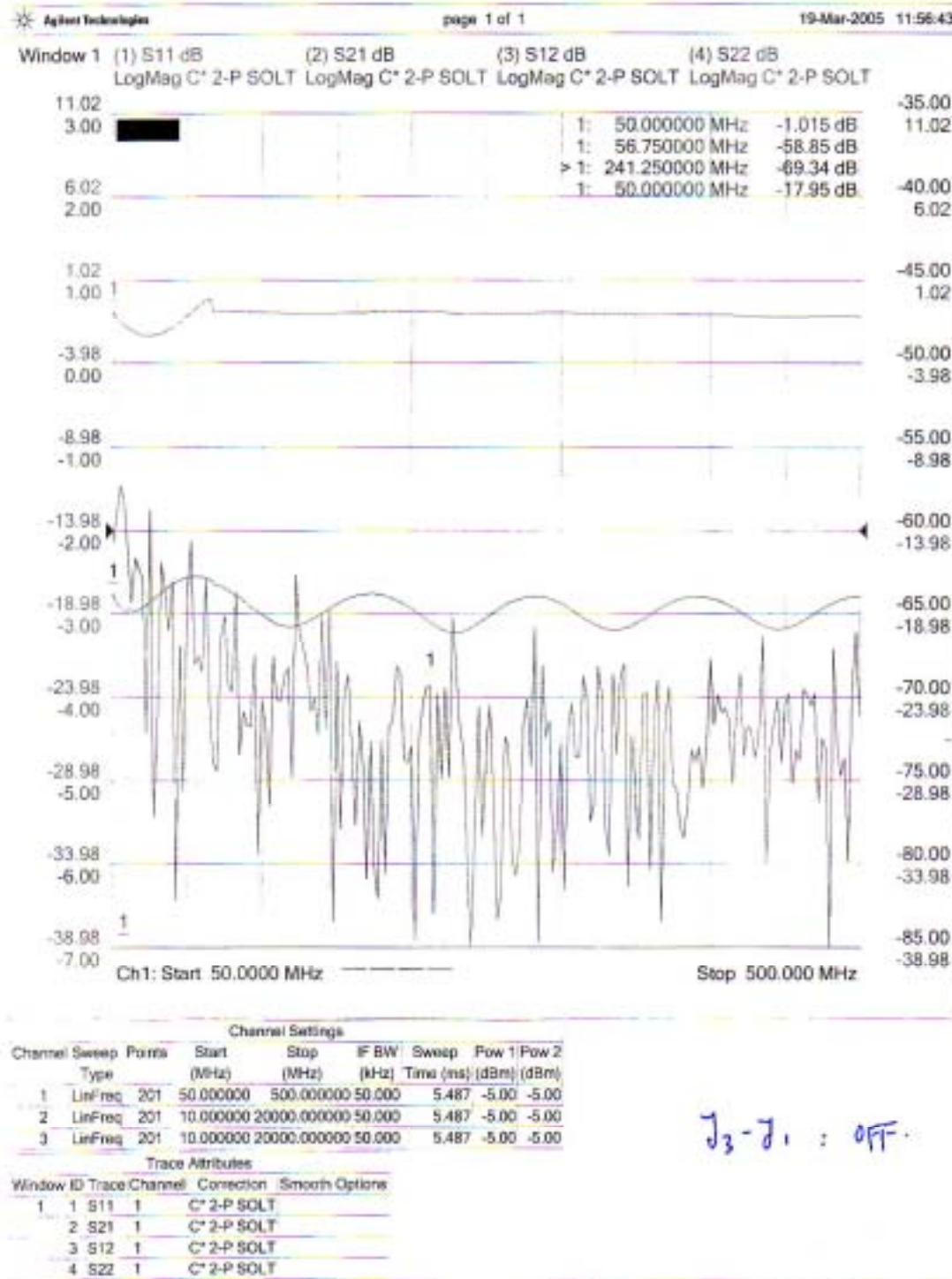


Channel Settings								
Channel	Sweep Type	Points	Start (MHz)	Stop (MHz)	IF BW (kHz)	Sweep Time (ms)	Pow 1 (dBm)	Pow 2 (dBm)
1	LinFreq	201	50.000000	500.000000	50.000	5.487	-5.00	-5.00
2	LinFreq	201	10.000000	20000.000000	50.000	5.487	-5.00	-5.00
3	LinFreq	201	10.000000	20000.000000	50.000	5.487	-5.00	-5.00

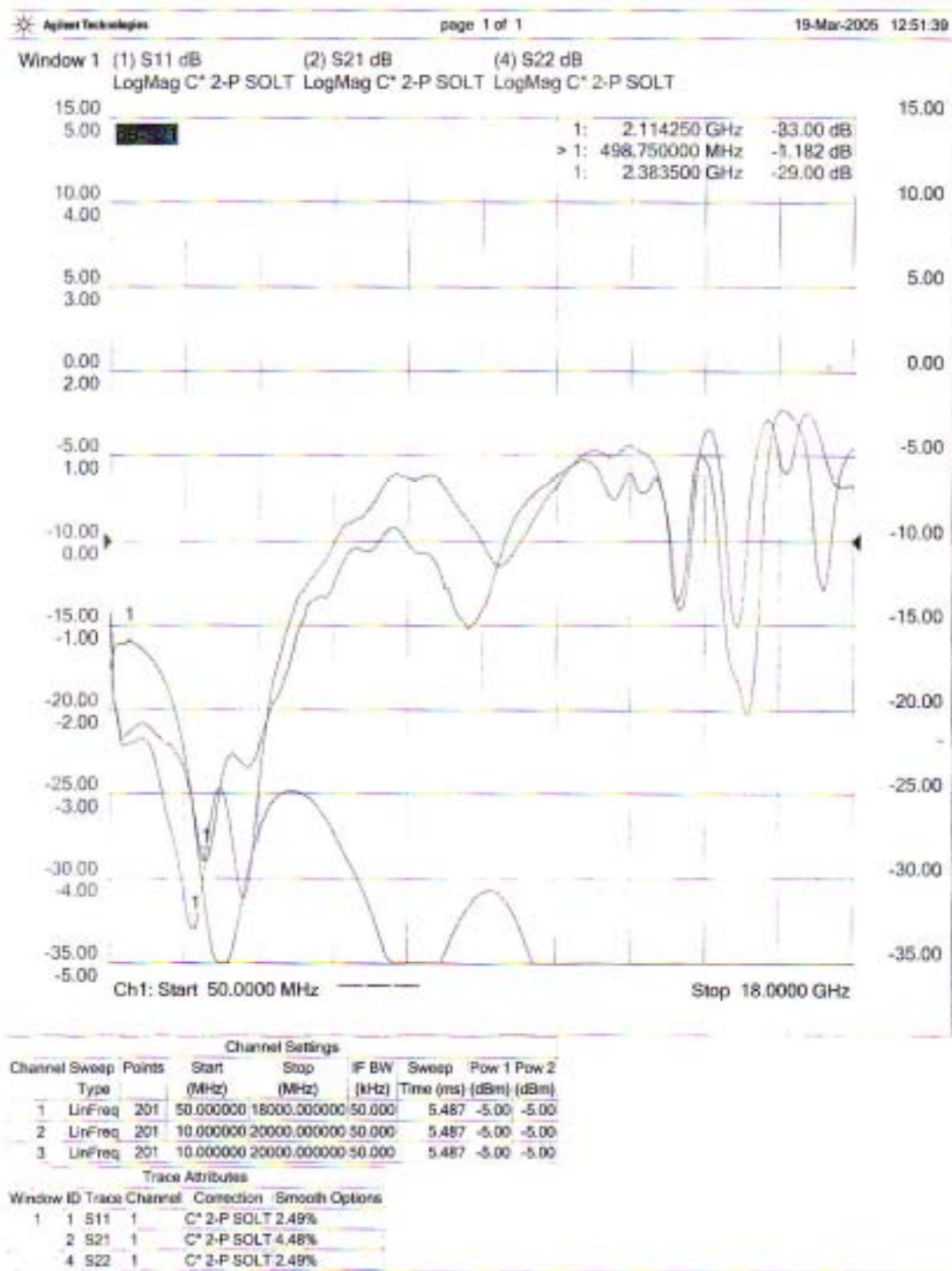
Trace Attributes				
Window ID	Trace	Channel	Correction	Smooth Options
1	1	S11	1	C* 2-P SOLT
	2	S21	1	C* 2-P SOLT
	3	S12	1	C* 2-P SOLT
	4	S22	1	C* 2-P SOLT

J3-J1 : "ON"

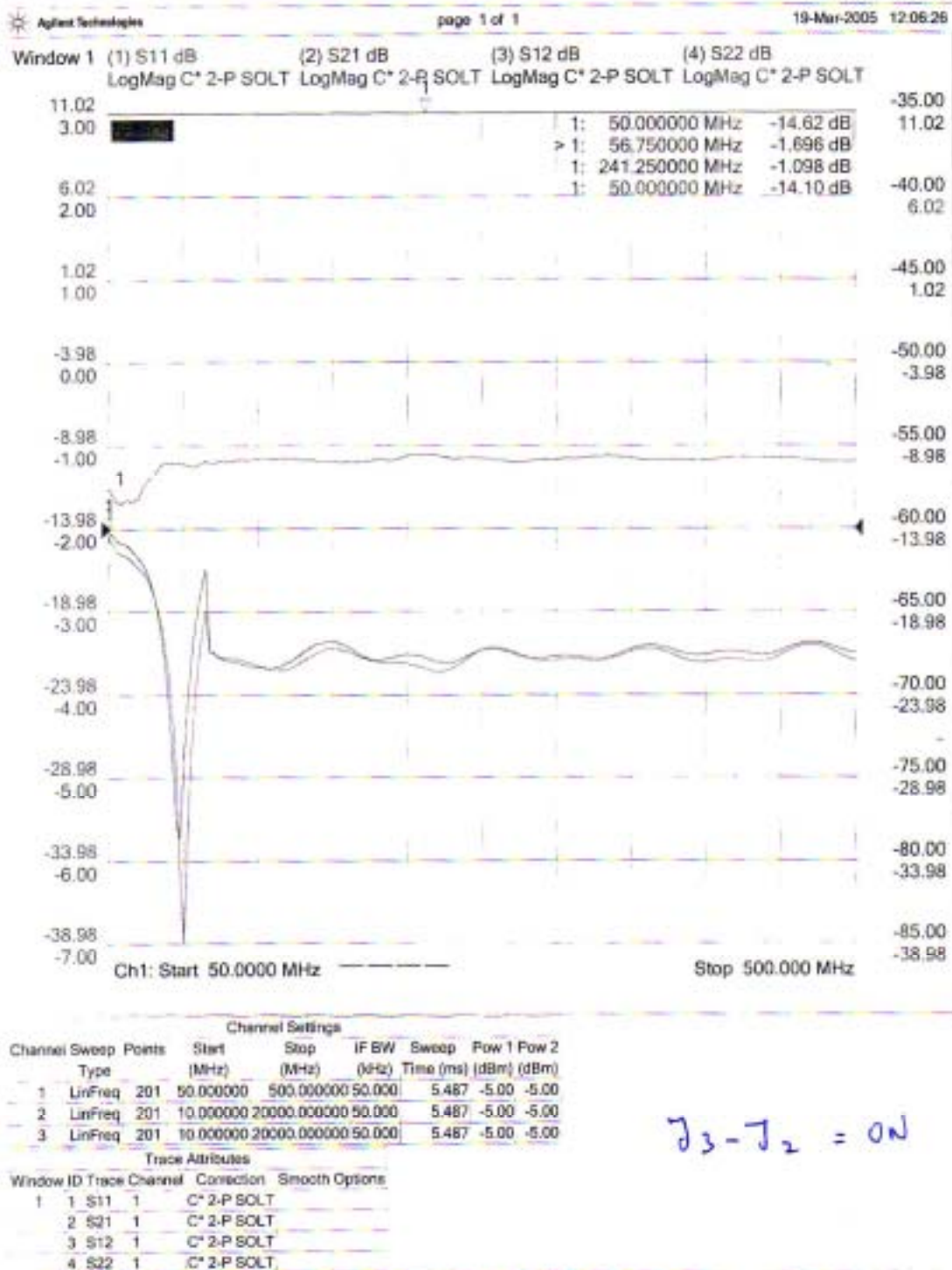
INSERTION LOSS, ISOLATION AND RETURN LOSS S/N 2MS406444
AS MEASURED FROM 50 MHz TO 500 MHz, J3 TO J1 "OFF"



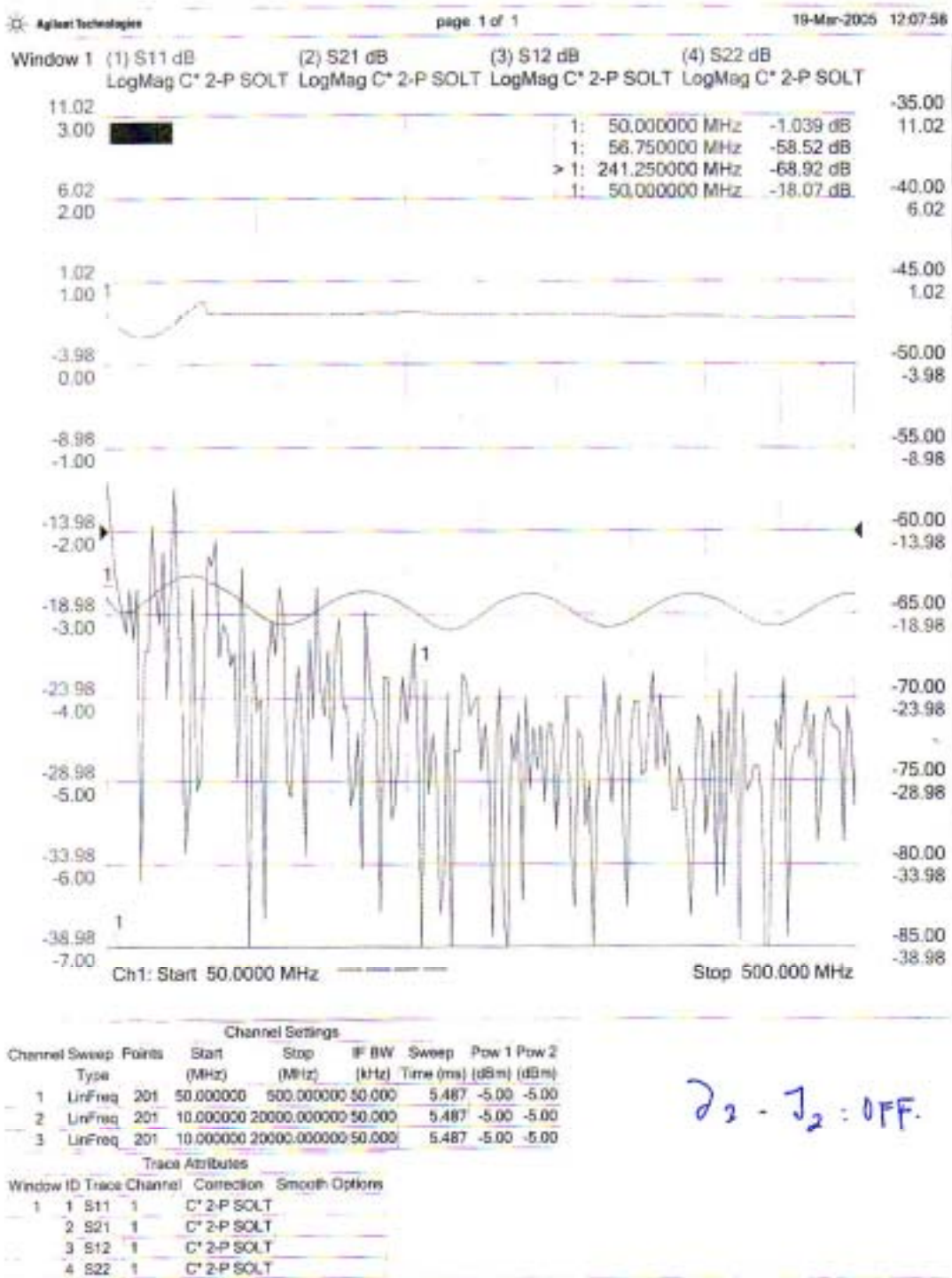
INSERTION LOSS AND RETURN LOSS S/N 2MS406444
AS MEASURED FROM 50 MHz TO 18 GHz, J3 TO J1 "ON"



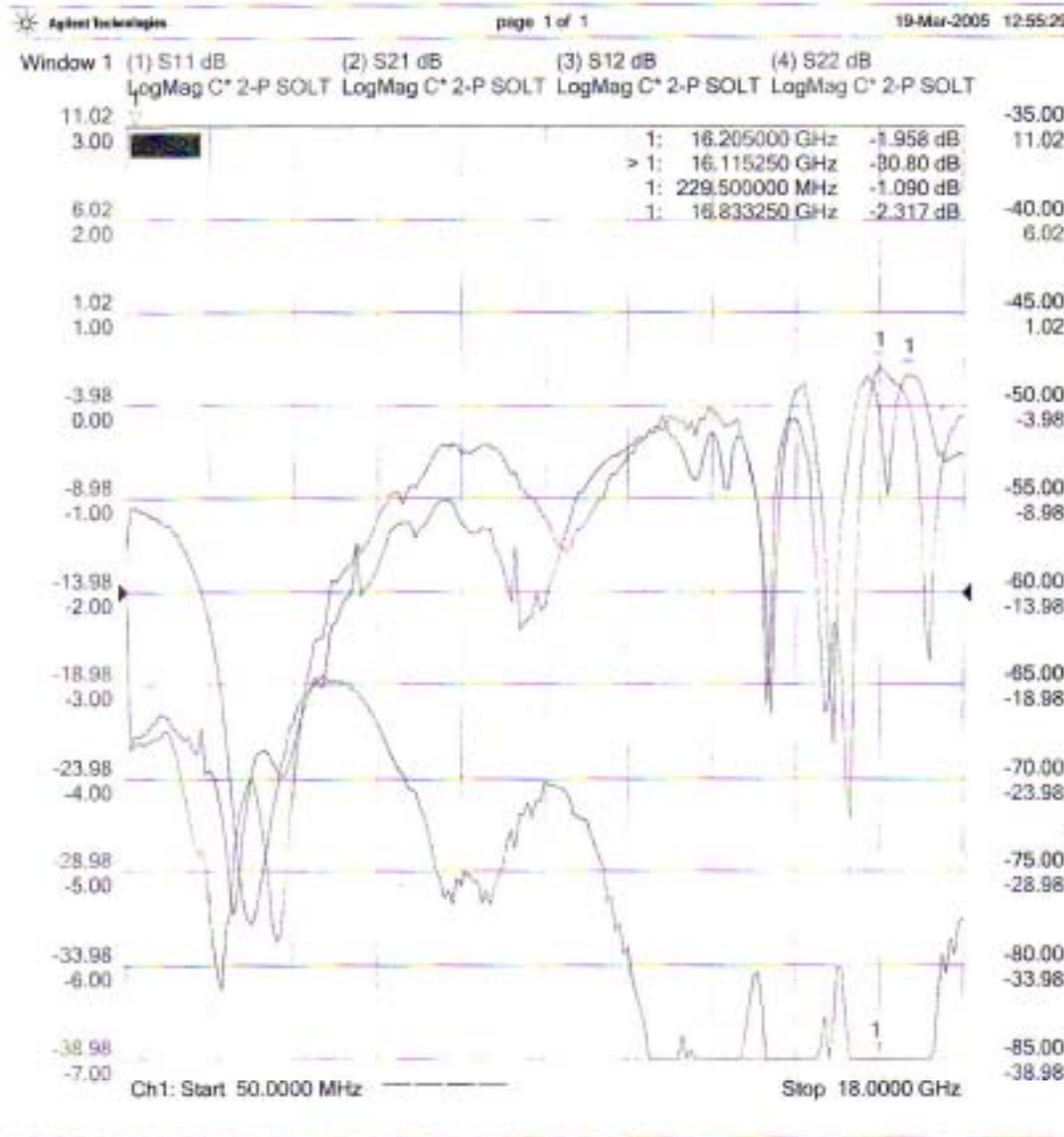
INSERTION LOSS AND RETURN LOSS S/N 2MS406444
AS MEASURED FROM 50 MHz TO 500 MHz, J3 TO J2 "ON"



INSERTION LOSS, ISOLATION AND RETURN LOSS S/N 2MS406444
AS MEASURED FROM 50 MHz TO 500 MHz, J3 TO J2 "OFF"



INSERTION LOSS AND RETURN LOSS S/N 2MS406444
AS MEASURED FROM 50 MHz TO 18 GHz, J3 TO J2 "ON"

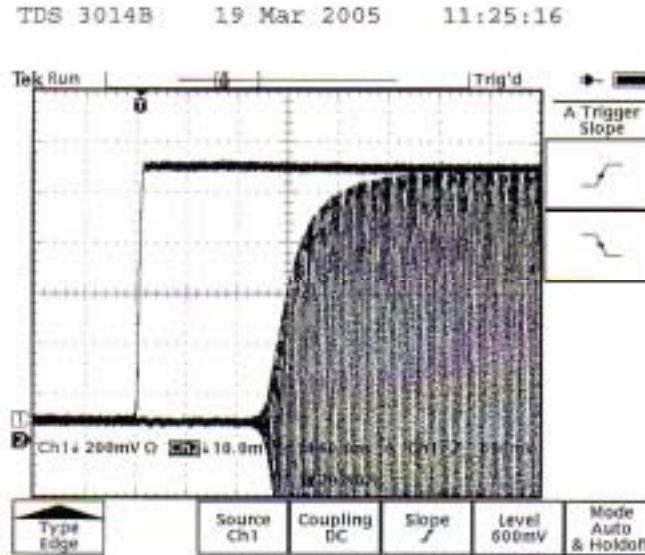


Channel Settings								
Channel	Sweep Type	Points	Start (MHz)	Stop (MHz)	IF BW (kHz)	Sweep Time (ms)	Pow 1 (dBm)	Pow 2 (dBm)
1	LinFreq	201	50.000000	18000.000000	50.000	5.487	-5.00	-5.00
2	LinFreq	201	10.000000	20000.000000	50.000	5.487	-5.00	-5.00
3	LinFreq	201	10.000000	20000.000000	50.000	5.487	-5.00	-5.00

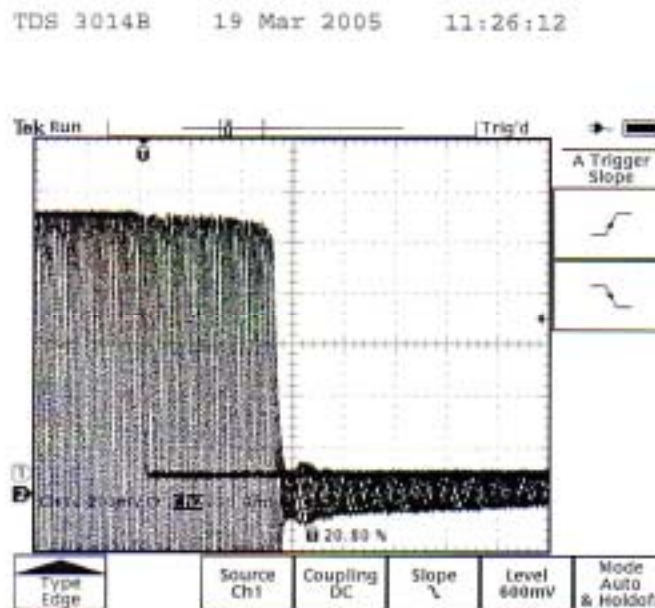
Trace Attributes			
Window ID	Trace Channel	Correction	Smooth Options
1	1 S11	1 C* 2-P SOLT	
	2 S21	1 C* 2-P SOLT	
	3 S12	1 C* 2-P SOLT	
	4 S22	1 C* 2-P SOLT	

SWITCHING SPEED AS MEASURED ON S/N 2MS406444

RISE & "ON" TIME



FALL & "OFF" TIME



FINAL TEST DATA

FINAL TEST DATA SHEETS

FOR

AMC MODEL NUMBER

MSN-2DT-05-IND
OPTION 561R310H01

Serial Numbers:

2MS406444 THRU 2MS406456

FINAL TEST DATA

AMC MODEL NO: MSN-2DT-05-IND OPTIONS 561R310H01, SERIAL NUMBER: 2MS406444

FORM: SW-DTA
 DATE: August 31, 2004



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 ISO 9001:1994 CERTIFIED

**FINAL TEST DATA
 ON
 MICROWAVE SWITCH**

CUSTOMER: NORTHROP GRUMMAN TECHNICIAN: P. Kuhn *P.Kuhn*
 JOB NO: 405086 CUSTOMER PART NO: _____
 MODEL NO: MSN-2DT-05-IND OPTION NO: 561R310H01
 SERIAL NO: 2MS406444 SPECIFICATION: MIL-STD-454
 CURRENT DRAW: + 5 VDC @ 62 mA FREQUENCY RANGE: 0.050 - 0.500 GHz

INSERTION LOSS (WORST CASE)		RETURN LOSS (WORST CASE)					
		INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2	0.79 dB @ 0.050-0.500 GHz	18.61 dB	1.27 : 1	18.52 dB	1.27 : 1	16.61 dB	1.35 : 1
J1-J3	0.83 dB @ 0.050-0.500 GHz	19.14 dB	1.25 : 1	19.09 dB	1.25 : 1	17.01 dB	1.33 : 1
ISOLATION		SWITCHING SPEED					
		DELAY ON	RISE TIME	DELAY OFF	FALLTIME		
J1-J2	63.47dB @ 0.050-0.500 GHz	180 nS	100 nS	100 nS	100 nS		
J1-J3	68.23dB @ 0.050-0.500 GHz	175 nS	80 nS	100 nS	100 nS		

* DENOTES A FAILURE

TESTED ON: HEWLETT PACKARD, 8720D, 0.7, 64
 QA/QC APPROVAL: *[Signature]*

DATED: 9/3/04



FINAL TEST DATA

AMC MODEL NO: MSN-2DT-05-IND OPTIONS 561R310H01, SERIAL NUMBER: 2MS406445

FORM: SW-DTA
 DATE: August 31, 2004



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**FINAL TEST DATA
 ON
 MICROWAVE SWITCH**

CUSTOMER: NORTHROP GRUMMAN	TECHNICIAN: P. Kuhn <i>P. Kuhn</i>
JOB NO: 405086	CUSTOMER PART NO:
MODEL NO: MSN-2DT-05-IND	OPTION NO: 561R310H01
SERIAL NO: 2MS406445	SPECIFICATION: MIL-STD-454
CURRENT DRAW: +5 VDC @ 62 mA	FREQUENCY RANGE: 0.050 - 0.500 GHz

INSERTION LOSS (WORST CASE)	RETURN LOSS (WORST CASE)					
	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2 0.80 dB @ 0.050-0.500 GHz	20.29 dB	1.21 : 1	20.17 dB	1.22 : 1	17.97 dB	1.33 : 1
J1-J3 1.29 dB @ 0.050-0.500 GHz	18.12 dB	1.28 : 1	17.66 dB	1.30 : 1	15.10 dB	1.43 : 1
ISOLATION	SWITCHING SPEED					
	DELAY ON	RISE TIME	DELAY OFF	FALLTIME		
J1-J2 65.26dB @ 0.050-0.500 GHz	140 nS	100 nS	100 nS	100 nS		
J1-J3 69.05dB @ 0.050-0.500 GHz	130 nS	100 nS	100 nS	100 nS		

* DENOTES A FAILURE

TESTED ON: HEWLETT PACKARD 8720D, 0, 7.64
 QA/QC APPROVAL: *[Signature]* DATED: 9/3/04



FINAL TEST DATA

AMC MODEL NO: MSN-2DT-05-IND OPTIONS 561R310H01, SERIAL NUMBER: 2MS406447

FORM: SW-DTA
 DATE: August 31, 2004



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**FINAL TEST DATA
 ON
 MICROWAVE SWITCH**

CUSTOMER: NORTHROP GRUMMAN	TECHNICIAN: <u>P. Kuhn</u> <i>P. Kuhn</i>
JOB NO: 405086	CUSTOMER PART NO:
MODEL NO: MSN-2DT-05-IND	OPTION NO: <u>561R310H01</u>
SERIAL NO: <u>2MS406447</u>	SPECIFICATION: <u>MIL-STD-454</u>
CURRENT DRAW: <u>+ 5 VDC @ 52 mA</u>	FREQUENCY RANGE: <u>0.050 - 0.500 GHz</u>

INSERTION LOSS (WORST CASE)	RETURN LOSS (WORST CASE)					
	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2 0.98 dB @ 0.050-0.500 GHz	19.18 dB	1.25 : 1	19.05 dB	1.25 : 1	15.65 dB	1.40 : 1
J1-J3 0.92 dB @ 0.050-0.500 GHz	19.47 dB	1.24 : 1	19.34 dB	1.24 : 1	15.16 dB	1.42 : 1
ISOLATION	SWITCHING SPEED					
	DELAY ON	RISE TIME	DELAY OFF	FALLTIME		
J1-J2 48.21dB @ 0.050-0.500 GHz	140 nS	100 nS	110 nS	100 nS		
J1-J3 70.41dB @ 0.050-0.500 GHz	125 nS	100 nS	100 nS	100 nS		

* DENOTES A FAILURE

TESTED ON: HEWLETT PACKARD 8720D, 0, 7, 64
 QA/QC APPROVAL: *[Signature]*

DATED: 9/3/04

FINAL TEST DATA

AMC MODEL NO: MSN-2DT-05-IND OPTIONS 561R310H01, SERIAL NUMBER: 2MS406448

FORM: SW-DTA
 DATE: August 31, 2004



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**FINAL TEST DATA
 ON
 MICROWAVE SWITCH**

CUSTOMER: NORTHROP GRUMMAN TECHNICIAN: P. Kuhn *P. Kuhn*
 JOB NO: 405086 CUSTOMER PART NO: _____
 MODEL NO: MSN-2DT-05-IND OPTION NO: 561R310H01
 SERIAL NO: 2MS406448 SPECIFICATION: MIL-STD-454
 CURRENT DRAW: + 5 VDC @ 62 mA FREQUENCY RANGE: 0.050 - 0.500 GHz

INSERTION LOSS (WORST CASE)			RETURN LOSS (WORST CASE)					
			INPUT dB	INPUT VSWR	OUTPUT ON db	OUTPUT ON VSWR	OUTPUT OFF db	OUTPUT OFF VSWR
J1-J2	0.76 dB	@ 0.050-0.500 GHz	20.01 dB	1.22 : 1	19.95 dB	1.22 : 1	17.14 dB	1.32 : 1
J1-J3	0.76 dB	@ 0.050-0.500 GHz	19.94 dB	1.22 : 1	19.94 dB	1.22 : 1	15.99 dB	1.38 : 1
ISOLATION			SWITCHING SPEED					
			DELAY ON	RISE TIME	DELAY OFF	FALLTIME		
J1-J2	68.83dB	@ 0.050-0.500 GHz	150 nS	100 nS	100 nS	75 nS		
J1-J3	64.71dB	@ 0.050-0.500 GHz	160 nS	50 nS	100 nS	75 nS		

* DENOTES A FAILURE

TESTED ON: HEWLETT PACKARD 8720D, 0, 7.64
 QA/QC APPROVAL: *[Signature]* DATED: 9/3/04

FINAL TEST DATA

AMC MODEL NO: MSN-2DT-05-IND OPTIONS 561R310H01, SERIAL NUMBER: 2MS406450

FORM: SW-DTA
 DATE: August 31, 2004



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**FINAL TEST DATA
 ON
 MICROWAVE SWITCH**

CUSTOMER: <u>NORTHROP GRUMMAN</u>	TECHNICIAN: <u>P. Kuhn</u> <i>P. Kuhn</i>
JOB NO: <u>405086</u>	CUSTOMER PART NO: _____
MODEL NO: <u>MSN-2DT-05-IND</u>	OPTION NO: <u>561R310H01</u>
SERIAL NO: <u>2MS406450</u>	SPECIFICATION: <u>MIL-STD-454</u>
CURRENT DRAW: <u>+ 5 VDC @ 62 mA</u>	FREQUENCY RANGE: <u>0.050 - 0.500 GHz</u>

INSERTION LOSS (WORST CASE)			RETURN LOSS (WORST CASE)					
			INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2	0.78 dB @ 0.050-0.500 GHz		21.07 dB	1.19 : 1	20.92 dB	1.20 : 1	16.65 dB	1.34 : 1
J1-J3	0.78 dB @ 0.050-0.500 GHz		20.78 dB	1.20 : 1	20.62 dB	1.21 : 1	14.19 dB	1.49 : 1
ISOLATION			SWITCHING SPEED					
			DELAY ON	RISE TIME	DELAY OFF	FALLTIME		
J1-J2	63.61dB @ 0.050-0.500 GHz		160 nS	100 nS	100 nS	100 nS		
J1-J3	67.70dB @ 0.050-0.500 GHz		160 nS	100 nS	100 nS	100 nS		

* DENOTES A FAILURE

TESTED ON: HEWLETT PACKARD 8720D, 0,7,64
 QA/QC APPROVAL: *[Signature]* DATED: 9/3/04



FINAL TEST DATA

AMC MODEL NO: MSN-2DT-05-IND OPTIONS 561R310H01, SERIAL NUMBER: 2MS406451

FORM: SW-DTA
 DATE: August 31, 2004



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**FINAL TEST DATA
 ON
 MICROWAVE SWITCH**

CUSTOMER: NORTHROP GRUMMAN TECHNICIAN: P. Kuhn *P. Kuhn*
 JOB NO: 405086 CUSTOMER PART NO: _____
 MODEL NO: MSN-2DT-05-IND OPTION NO: 561R310H01
 SERIAL NO: 2MS406451 SPECIFICATION: MIL-STD-454
 CURRENT DRAW: + 5 VDC @ 62 mA FREQUENCY RANGE: 0.050 - 0.500 GHz

INSERTION LOSS (WORST CASE)			RETURN LOSS (WORST CASE)					
			INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2	0.84 dB	@ 0.050-0.500 GHz	19.54 dB	1.24 : 1	19.37 dB	1.24 : 1	16.54 dB	1.35 : 1
J1-J3	0.78 dB	@ 0.050-0.500 GHz	20.38 dB	1.21 : 1	20.28 dB	1.21 : 1	16.79 dB	1.34 : 1
ISOLATION			SWITCHING SPEED					
			DELAY ON	RISE TIME	DELAY OFF	FALLTIME		
J1-J2	66.06dB	@ 0.050-0.500 GHz	154 nS	50 nS	100 nS	100 nS		
J1-J3	64.23dB	@ 0.050-0.500 GHz	150 nS	50 nS	100 nS	100 nS		

* DENOTES A FAILURE

TESTED ON: HEWLETT PACKARD, 8720D, 0, 7.64
 QA/QC APPROVAL: *[Signature]* DATED: 9/3/04

FINAL TEST DATA

AMC MODEL NO: MSN-2DT-05-IND OPTIONS 561R310H01, SERIAL NUMBER: **2MS406452**

FORM: SW-DTA
 DATE: August 31, 2004



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**FINAL TEST DATA
 ON
 MICROWAVE SWITCH**

CUSTOMER: <u>NORTHROP GRUMMAN</u>	TECHNICIAN: <u>P. Kuhn</u> <i>P. Kuhn</i>
JOB NO: <u>405086</u>	CUSTOMER PART NO: _____
MODEL NO: <u>MSN-2DT-05-IND</u>	OPTION NO: <u>561R310H01</u>
SERIAL NO: <u>2MS406452</u>	SPECIFICATION: <u>MIL-STD-454</u>
CURRENT DRAW: <u>+ 5 VDC @ 61 mA</u>	FREQUENCY RANGE: <u>0.050 - 0.500 GHz</u>

INSERTION LOSS (WORST CASE)	RETURN LOSS (WORST CASE)					
	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2 0.89 dB @ 0.050-0.500 GHz	21.41 dB	1.19 : 1	21.04 dB	1.19 : 1	16.71 dB	1.34 : 1
J1-J3 0.82 dB @ 0.050-0.500 GHz	21.07 dB	1.19 : 1	20.75 dB	1.20 : 1	17.16 dB	1.32 : 1
ISOLATION	SWITCHING SPEED					
	DELAY ON	RISE TIME	DELAY OFF	FALLTIME		
J1-J2 68.06dB @ 0.050-0.500 GHz	150 nS	50 nS	100 nS	75 nS		
J1-J3 64.37dB @ 0.050-0.500 GHz	150 nS	50 nS	100 nS	100 nS		

* DENOTES A FAILURE

TESTED ON: HEWLETT PACKARD 8720D, 0,7,64
 QA/QC APPROVAL: [Signature]

DATED: 9/3/04



FINAL TEST DATA

AMC MODEL NO: MSN-2DT-05-IND OPTIONS 561R310H01, SERIAL NUMBER: 2MS406453

FORM: SW-DTA
 DATE: August 31, 2004



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FINAL TEST DATA ON MICROWAVE SWITCH

CUSTOMER: NORTHROP GRUMMAN	TECHNICIAN: P. Kuhn <i>P. Kuhn</i>
JOB NO: 405086	CUSTOMER PART NO:
MODEL NO: MSN-2DT-05-IND	OPTION NO: 561R310H01
SERIAL NO: 2MS406453	SPECIFICATION: MIL-STD-454
CURRENT DRAW: + 5 VDC @ 54 mA	FREQUENCY RANGE: 0.050 - 0.500 GHz

INSERTION LOSS (WORST CASE)			RETURN LOSS (WORST CASE)					
			INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2	0.92 dB @ 0.050-0.500 GHz		19.07 dB	1.25 : 1	18.99 dB	1.25 : 1	15.96 dB	1.38 : 1
J1-J3	0.93 dB @ 0.050-0.500 GHz		19.16 dB	1.25 : 1	19.07 dB	1.25 : 1	15.76 dB	1.39 : 1
ISOLATION			SWITCHING SPEED					
			DELAY ON	RISE TIME	DELAY OFF	FALLTIME		
J1-J2	62.30dB @ 0.050-0.500 GHz	125 nS	80 nS	100 nS	100 nS			
J1-J3	68.29dB @ 0.050-0.500 GHz	125 nS	100 nS	100 nS	100 nS			

* DENOTES A FAILURE

TESTED ON: HEWLETT PACKARD 8720D, 0,7,64
 QA/QC APPROVAL: *L. Doe* DATED: 9/8/04

AMERICAN MICROWAVE CORPORATION, 7311-G Grove Road, Frederick, MD 21704
 Tel: 301-662-4700 • Fax: 301-662-4938 • Email: sales@americanmicrowavecorp.com
 Website: <http://www.americanmicrowavecorp.com>

FINAL TEST DATA

AMC MODEL NO: MSN-2DT-05-IND OPTIONS 561R310H01, SERIAL NUMBER: **2MS406454**

FORM: SW-DTA
 DATE: August 31, 2004



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 ISO 9001:1994 CERTIFIED

FINAL TEST DATA
 ON
 MICROWAVE SWITCH

CUSTOMER:	<u>NORTHROP GRUMMAN</u>	TECHNICIAN:	<u>P. Kuhn</u> <i>P. Kuhn</i>
JOB NO:	<u>405086</u>	CUSTOMER PART NO:	<u></u>
MODEL NO:	<u>MSN-2DT-05-IND</u>	OPTION NO:	<u>561R310H01</u>
SERIAL NO:	<u>2MS406454</u>	SPECIFICATION:	<u>MIL-STD-454</u>
CURRENT DRAW:	<u>+ 5 VDC @ 53 mA</u>	FREQUENCY RANGE:	<u>0.050 - 0.500 GHz</u>

INSERTION LOSS (WORST CASE)	RETURN LOSS (WORST CASE)					
	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2 0.96 dB @ 0.050-0.500 GHz	19.67 dB	1.23 : 1	19.58 dB	1.23 : 1	15.55 dB	1.40 : 1
J1-J3 0.98 dB @ 0.050-0.500 GHz	19.68 dB	1.23 : 1	19.68 dB	1.23 : 1	15.59 dB	1.40 : 1
ISOLATION	SWITCHING SPEED					
	DELAY ON	RISE TIME	DELAY OFF	FALLTIME		
J1-J2 67.11dB @ 0.050-0.500 GHz	145 nS	70 nS	100 nS	100 nS		
J1-J3 67.11dB @ 0.050-0.500 GHz	125 nS	100 nS	100 nS	100 nS		

* DENOTES A FAILURE

TESTED ON: HEWLETT PACKARD, 8720D, 0, 7.64
 QA/QC APPROVAL: *[Signature]* DATED: 9/3/04

FINAL TEST DATA

AMC MODEL NO: MSN-2DT-05-IND OPTIONS 561R310H01, SERIAL NUMBER: 2MS406455

FORM: SW-DTA
 DATE: August 31, 2004



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FINAL TEST DATA ON MICROWAVE SWITCH

CUSTOMER: <u>NORTHROP GRUMMAN</u>	TECHNICIAN: <u>P. Kuhn</u> <i>P. Kuhn</i>
JOB NO: <u>405086</u>	CUSTOMER PART NO: _____
MODEL NO: <u>MSN-2DT-05-IND</u>	OPTION NO: <u>561R310H01</u>
SERIAL NO: <u>2MS406455</u>	SPECIFICATION: <u>MIL-STD-454</u>
CURRENT DRAW: <u>+ 5 VDC @ 68 mA</u>	FREQUENCY RANGE: <u>0.050 - 0.500 GHz</u>

INSERTION LOSS (WORST CASE)			RETURN LOSS (WORST CASE)					
			INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2	0.81 dB @ 0.050-0.500 GHz		19.35 dB	1.24 : 1	19.23 dB	1.25 : 1	17.39 dB	1.31 : 1
J1-J3	0.76 dB @ 0.050-0.500 GHz		19.94 dB	1.22 : 1	19.89 dB	1.23 : 1	17.59 dB	1.30 : 1
ISOLATION			SWITCHING SPEED					
			DELAY ON	RISE TIME	DELAY OFF	FALLTIME		
J1-J2	65.42dB @ 0.050-0.500 GHz		150 nS	100 nS	100 nS	100 nS		
J1-J3	67.35dB @ 0.050-0.500 GHz		150 nS	50 nS	100 nS	100 nS		

* DENOTES A FAILURE

TESTED ON: HEWLETT PACKARD 8720D, 0,7,64
 DATE: 9/3/04

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FINAL TEST DATA

AMC MODEL NO: MSN-2DT-05-IND OPTIONS 561R310H01, SERIAL NUMBER: 2MS406456

FORM: SW-DTA
 DATE: August 31, 2004



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FINAL TEST DATA ON MICROWAVE SWITCH

CUSTOMER: NORTHROP GRUMMAN TECHNICIAN: P. Kuhn *P. Kuhn*
 JOB NO: 405086 CUSTOMER PART NO: _____
 MODEL NO: MSN-2DT-05-IND OPTION NO: 561R310H01
 SERIAL NO: 2MS406456 SPECIFICATION: MIL-STD-454
 CURRENT DRAW: + 5 VDC @ 53 mA FREQUENCY RANGE: 0.050 - 0.500 GHz

INSERTION LOSS (WORST CASE)			RETURN LOSS (WORST CASE)					
			INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2	0.88 dB @ 0.050-0.500 GHz		19.33 dB	1.24 : 1	19.24 dB	1.25 : 1	15.58 dB	1.40 : 1
J1-J3	0.88 dB @ 0.050-0.500 GHz		19.17 dB	1.25 : 1	19.06 dB	1.25 : 1	15.58 dB	1.40 : 1

ISOLATION			SWITCHING SPEED			
			DELAY ON	RISE TIME	DELAY OFF	FALLTIME
J1-J2	70.51dB @ 0.050-0.500 GHz	140 nS	100 nS	100 nS	100 nS	
J1-J3	67.75dB @ 0.050-0.500 GHz	140 nS	100 nS	100 nS	100 nS	

* DENOTES A FAILURE

TESTED ON: HEWLETT PACKARD, 8720D, 0, 7, 64
 QA/QC APPROVAL: *[Signature]*

DATE: 9/2/04

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