



TEST REPORT
ON
0.3 TO 18 GHz
ABSORPTIVE BROAD BAND
SPST SWITCH MODULE

AMC MODEL No:
SW-2183-1AT-107

Serial Numbers: MS2121035 THRU MS2121043

DESIGNED
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TESTED
BY
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REPORTED
BY
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October 5, 2004

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ISO9001 : 1994 CERTIFIED



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ABSORPTIVE BROAD BAND SPST SWITCH MODULE AMC MODEL No: SW-2183-1AT-107

FEATURES:

- **0.3 TO 18 GHz FREQUENCY RANGE**
- **DIFFERENTIAL LINE RECEIVER CAPABILITY**
- **USE FOR APPLICATIONS WHERE CONTROL SIGNALS ARE CARRIED BY LONG AND NOISY TRANSMISSION LINES**

SPECIFICATIONS:

- FREQUENCY : 0.3 TO 18 GHz
- INSERTION LOSS : 3.5 dB MAXIMUM
- ISOLATION : 0.3 TO 1.0 GHz: 70 dB MINIMUM
: 1.0 TO 12.4 GHz: 80 dB MINIMUM
: 12.4 TO 18.0 GHz: 70 dB MINIMUM
- VSWR (ON/OFF) : 2.0:1 MAXIMUM
- SWITCHING TIME :
 - RISE (10% RF TO 90% RF) : 10 nS MAXIMUM
 - FALL (90% RF TO 10% RF) : 10 nS MAXIMUM
 - ON (50% CTL TO 90% RF) : 50 nS MAXIMUM
 - OFF (50% CTL TO 10% RF) : 50 nS MAXIMUM
- CONTROL : DIFFERENTIAL LINE RECIEVER, PAIRS (RI+, RI-),
: COMPATIBLE TO ST506, ST412, ESP, AND RS-422
: LOGIC FAMILIES. (100 Ω INPUT IMPEDENCE)
- RF POWER RATING :
 - OPERATING : +27 dBm CW, MAXIMUM
 - SURVIVAL : +30 dBm CW, OR 10 W (1 uS, PW)
- POWER SUPPLY : +5VDC \pm 5% @ 90 mA MAXIMUM
: -5VDC \pm 5% @ 75 mA MAXIMUM
- CONNECTORS :
 - RF INPUT / OUTPUT : SMA FEMALE
 - POWER : SOLDER PIN
 - CONTROL : SOLDER PIN
- SIZE : 1.00" x 1.00" x 0.53"



OUTLINE DRAWING

ZONE	REV.	DESCRIPTION	DATE	APPROVED
—	—	ORIGINAL RELEASE JOB# 210273	11/15/98	

DESCRIPTION

AMC MODEL SW-2183-1AT-107 IS AN ABSORPTIVE BROAD BAND SPST SWITCH MODULE WITH INTEGRAL DRIVER AND DIFFERENTIAL LINE RECEIVER INTERFACE CAPABILITY FOR APPLICATIONS WHERE CONTROL SIGNALS ARE CARRIED BY LONG AND NOISY TRANSMISSION LINES.

MECHANICAL OUTLINE

APPROVALS

DATE: 11/15/98

DRAWN: WCP

REVISION: 078

ISSUED:

AMERICAN MICROWAVE CORPORATION

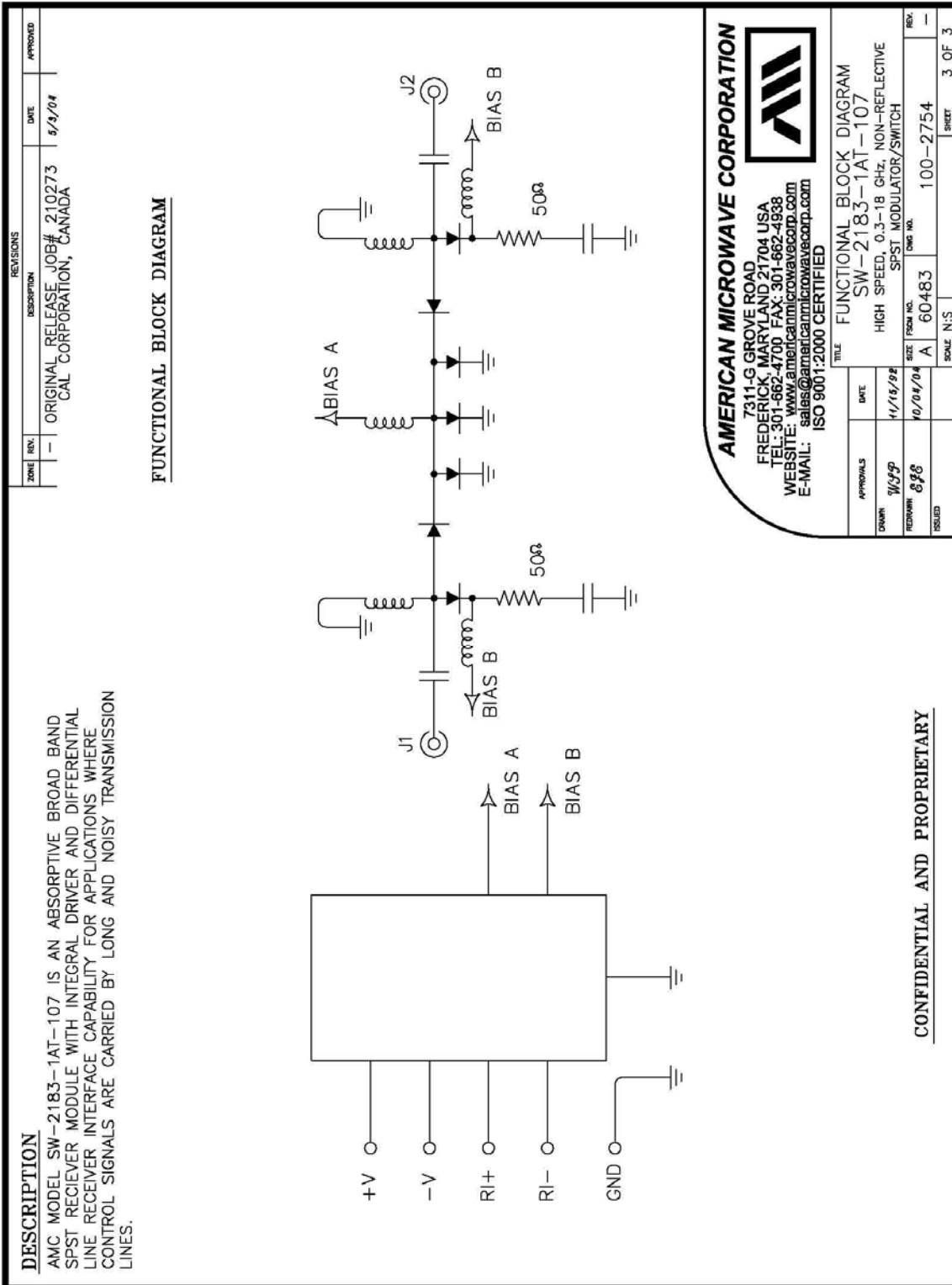
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 ISO 9001:2000 CERTIFIED

APPROVALS	DATE	TITLE	SCALE	SHEET
		MECHANICAL OUTLINE SW-2183-1AT-107	N/S	2 OF 3

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



FUNCTIONAL SCHEMATIC



FINAL TEST DATA

FINAL TEST DATA SHEETS

FOR

AMC MODEL NUMBER

SW-2183-1AT-107

Serial Numbers:

MS2121035 THRU MS2121043



FINAL TEST DATA

AMC MODEL NO: SW-2183-1AT-107, SERIAL NUMBER: MS2121035



AMERICAN MICROWAVE CORPORATION
 7311-G Grove Road
 Frederick, MD 21701
 Telephone: (301) 662-4700
 Fax: (301) 662-4938

FORM: SW-01/0791

DATED: 3/18/93

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 210293 MODEL NO: SW-2183-1A7 SERIAL NO: MS2121035
 CUSTOMER: CAL CORPORATION TECHNICIAN: R. MILLER
 SPECIFICATION: 107 FREQUENCY RANGE: 2.0 - 18.0 GHz

VSWR			
INSERTION LOSS	INPUT	OUTPUT ON	OUTPUT OFF
51-52 -2.6 dB	- 9.85 dB	- 7.9 dB	- 9.7 dB

SWITCHING SPEED				
ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
51-52 > 80 dB	—	10ns	—	8ns

NOTE: Any additional Test Data write on Back page.

Tested By: R. Miller
 QA/QC By: RJ
 DATED: 3/19/93



FINAL TEST DATA

AMC MODEL NO: SW-2183-1AT-107, SERIAL NUMBER: MS2121036



AMERICAN MICROWAVE CORPORATION
 7311-G Grove Road
 Frederick, MD 21701
 Telephone: (301) 662-4700
 Fax: (301) 662-4938

FORM: SW-01/0791

DATED: 4/5/93

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 210273 MODEL NO: SW-2183-1A7 SERIAL NO: MS2121036
 CUSTOMER: CAL CORPORATION TECHNICIAN: R. Miller
 SPECIFICATION: QPF-107 FREQUENCY RANGE: 20-18.0 GHz

VSWR

INSERTION LOSS	INPUT	OUTPUT ON	OUTPUT OFF
21-32 -3.1dB	-11.7dB	-10.6dB	-11.3dB

SWITCHING SPEED

ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
21-32 >80dB	—	Ens	—	7ms

NOTE: Any additional Test Data write on Back page.

Tested By: R. Miller
 QA/QC By: [Signature]
 DATED: 4/6/93



FINAL TEST DATA

AMC MODEL NO: SW-2183-1AT-107, SERIAL NUMBER: MS2121037



AMERICAN MICROWAVE CORPORATION
 7311-G Grove Road
 Frederick, MD 21701
 Telephone: (301) 662-4700
 Fax: (301) 662-4938

FORM: SW-01/0791

DATED: 3/18/93

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 210273 MODEL NO: SW-2183-1AT SERIAL NO: MS2121037
 CUSTOMER: CAL CORPORATION TECHNICIAN: P. MILLER
 SPECIFICATION: 107 FREQUENCY RANGE: 2.0 - 18.0 GHz

TSWR

INSERTION LOSS	INPUT	OUTPUT ON	OUTPUT OFF
J1-52 -2.55 dB	-10.7 dB	-18.9 dB	-9.5 dB

SWITCHING SPEED

ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
J1-52 >80 dB	—	9ns	—	8ns

NOTE: Any additional Test Data write on Back page.

Tested By: R. Miller
 QA/QC By: P.W.
 DATED: 3/19/93



FINAL TEST DATA

AMC MODEL NO: SW-2183-1AT-107, SERIAL NUMBER: MS2121038



AMERICAN MICROWAVE CORPORATION
 7311-G Grove Road
 Frederick, MD 21701
 Telephone: (301) 662-4700
 Fax: (301) 662-4938

FORM: SW-01/0791

DATED: 2/12/93

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 210273 MODEL NO: SW-2183-1AT SERIAL NO: MS2121038
 CUSTOMER: CAL CORPORATION TECHNICIAN: BGEAY
 SPECIFICATION: 107 FREQUENCY RANGE: 2.0-18.0 GHz

VSWR

INSERTION LOSS	INPUT	OUTPUT ON	OUTPUT OFF
- 2.72 dB	- 11.2 dB	- 11.96 dB	- 10.5 dB
			- 12.2 ¹⁰ dB

SWITCHING SPEED

ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
- 75 dB AT 12.4-18 GHz (Worst Case)	NA	6 ns	NA	6 ns

NOTE: Any additional Test Data write on Back page.

Tested By: BGEAY

QA/QC By: [Signature]

DATED: 2/17/93



FINAL TEST DATA

AMC MODEL NO: SW-2183-1AT-107, SERIAL NUMBER: MS2121039



AMERICAN MICROWAVE CORPORATION
 7311-G Grove Road
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 Telephone: (301) 662-4700
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FORM: SW-01/0791

DATED: 4/5/93

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 210273 MODEL NO: SW-2183-1AT SERIAL NO: MS2121039
 CUSTOMER: CAL CORPORATION TECHNICIAN: R. MILLER
 SPECIFICATION: 107 FREQUENCY RANGE: 2.0-18.0 GHz

VSWR

INSERTION LOSS	INPUT	OUTPUT ON	OUTPUT OFF
51-52 -2.8dB	-10.8dB	-10.5dB	-10.2dB

SWITCHING SPEED

ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
51-52 780dB	—	9ns	—	9ns

NOTE: Any additional Test Data write on Back page.

Tested By: [Signature]
 QA/QC By: [Signature]
 DATED: 4/6/93



FINAL TEST DATA

AMC MODEL NO: SW-2183-1AT-107, SERIAL NUMBER: MS2121040



AMERICAN MICROWAVE CORPORATION
 7311-G Grove Road
 Frederick, MD 21701
 Telephone: (301) 662-4700
 Fax: (301) 662-4938

FORM: SW-01/0791

DATED: _____

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 210273 MODEL NO: SW-2183-1AT SERIAL NO: MS2121040
 CUSTOMER: CAL CORPORATION TECHNICIAN: B Gray
 SPECIFICATION: 107 FREQUENCY RANGE: 2.0-18.0 GHz

VSWR

INSERTION LOSS	INPUT	OUTPUT ON	OUTPUT OFF
-2.9 dB	-12.2 dB	-12.6 dB	-12.7 dB
			-14.1 dB

SWITCHING SPEED

ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
-75 dB @ 18 GHz	NA	8 ns	NA	8 ns

NOTE: Any additional Test Data write on Back page.

Tested By: B Gray
 QA/QC By: [Signature]
 DATED: 2/11/93



FINAL TEST DATA

AMC MODEL NO: SW-2183-1AT-107, SERIAL NUMBER: MS2121041



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 Telephone: (301) 662-4700
 Fax: (301) 662-4938

FORM: SW-01/0791

DATED: 2/12/93

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 210273 MODEL NO: SW-2183-1AT SERIAL NO: MS2121041
 CUSTOMER: CAL CORPORATION TECHNICIAN: B Gray
 SPECIFICATION: 107 FREQUENCY RANGE: 2.0-18.0 GHz

VSWR

INSERTION LOSS	INPUT	OUTPUT ON	OUTPUT OFF
<u>-2.58 dB</u>	<u>-10.92 dB</u>	<u>-10.9 dB</u>	<u>-12.4 dB</u> <u>-13.37 dB</u>

SWITCHING SPEED

ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
<u>-7.5 dB</u> <u>(12.4-18.0 GHz)</u> <u>(Worst Case)</u>	<u>NA</u>	<u>6 ns</u>	<u>NA</u>	<u>6 ns</u>

NOTE: Any additional Test Data write on Back page.

Tested By: B Gray
 QA/QC By: [Signature]
 DATED: 2/12/93



FINAL TEST DATA

AMC MODEL NO: SW-2183-1AT-107, SERIAL NUMBER: MS2121042



AMERICAN MICROWAVE CORPORATION
 7311-G Grove Road
 Frederick, MD 21701
 Telephone: (301) 662-4700
 Fax: (301) 662-4938

FORM: SW-01/0791

DATED: 2/12/93

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 210273 MODEL NO: SW-2183-1AT SERIAL NO: MS212-1042
 CUSTOMER: CAL CORPORATION TECHNICIAN: B Gray
 SPECIFICATION: 107 FREQUENCY RANGE: 20-18.0 GHz

VSWR

INSERTION LOSS	INPUT	OUTPUT ON	OUTPUT OFF
<u>-2.65 dB</u>	<u>-9.71 dB</u>	<u>-10.57 dB</u>	<u>-9.66 dB</u>
			<u>-13.0^{TD} dB</u>

SWITCHING SPEED

ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
<u>+76 dB</u> <small>AT 12.4-18 GHz (WORST CASE)</small>	<u>NA</u>	<u>10 ns</u>	<u>NA</u>	<u>6 ns</u>

NOTE: Any additional Test Data write on Back page.

Tested By: B Gray
 QA/QC By: [Signature]
 DATED: 2/17/93



FINAL TEST DATA

AMC MODEL NO: SW-2183-1AT-107, SERIAL NUMBER: MS2121043



AMERICAN MICROWAVE CORPORATION
 7311-G Grove Road
 Frederick, MD 21701
 Telephone: (301) 662-4700
 Fax: (301) 662-4938

FORM: SW-01/0791

DATED: _____

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 210273 MODEL NO: SW-2183-1AT SERIAL NO: MS2121043
 CUSTOMER: CAL CORPORATION TECHNICIAN: B Gray
 SPECIFICATION: 107 FREQUENCY RANGE: 2.0-18.0 GHz

VSWR

INSERTION LOSS	INPUT	OUTPUT ON	OUTPUT OFF
-2.76 dB	-10.0 dB	-10.2 dB	-14.1 dB
			-13.0 dB

SWITCHING SPEED

ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
-75 dB @ 18 GHz	NA	8 ns	NA	8 ns

NOTE: Any additional Test Data write on Back page.

Tested By: B Gray
 QA/QC By: [Signature]
 DATED: 2/11/93