



TEST REPORT
ON
5.4 TO 5.9 GHz
SINGLE POLE SINGLE THROW
PIN DIODE SWITCH
AMC MODEL No:
SW-2184-1A
OPTION 110, ITT

Serial Numbers: 1MS904156 AND 1MS904157

DESIGNED
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August 9, 2004

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ISO9001 : 1994 CERTIFIED

WJS
DRH *Ru* *JKM*
ESC *WJS* *JOT* *LC*

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SINGLE POLE SINGLE THROW PIN DIODE SWITCH AMC MODEL No: SW-2184-1A OPTIONS 110, ITT

FEATURES:

- **3.0 dB LOW INSERTION LOSS**
- **85 dB HIGH ISOLATION**
- **INTEGRAL TTL DRIVER**

SPECIFICATIONS:

- FREQUENCY : 5.4 GHz TO 5.9 GHz
- INSERTION LOSS : 3.0 dB MAXIMUM
- VSWR : 11 dBR
- ISOLATION : 85 dB MINIMUM
- SPEED : RISE: 100 nS MINIMUM, 150 nS MAXIMUM
- POWER INPUT : 33 dBm CW MAXIMUM @ 5.4 GHz TO 5.9 GHz
- RF CONNECTORS : SMA FEMALE
- DC POWER SUPPLY : +5 VDC @ 75 mA MAXIMUM
: -15 VDC @ 25 mA MAXIMUM
- CONTROL : TTL LOGIC "0"=ON, "1"=OFF

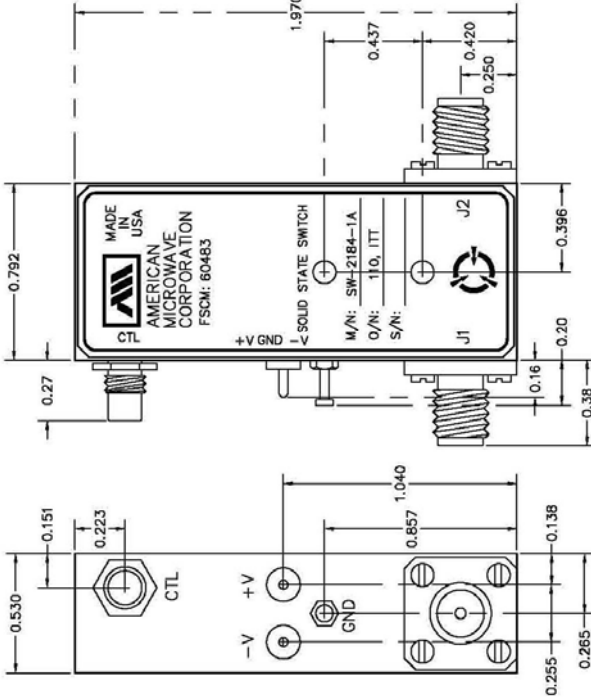
ENVIRONMENTAL RATINGS:

- TEMPERATURE : -55°C TO +85°C OPERATING
: -65°C TO +125°C NON-OPERATING
- 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

PRODUCT FEATURE

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	—	ORIGINAL RELEASE, JOB# 904057	10/30/03	

MECHANICAL OUTLINE

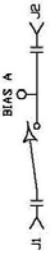


DESCRIPTION:
 AMC MODEL NUMBER SWN-2184-1A OPTIONS 110, ITT IS A 5.4 GHz TO 5.9 GHz IS A SINGLE POLE SINGLE THROW PIN DIODE SWITCH WITH LOW INSERTION LOSS AND VERY HIGH ISOLATION, WITH INTEGRAL TTL DRIVE. DESIGNED TO OPERATE OVER THE 5.4 GHz TO 5.9 GHz FREQUENCY RANGE.

SPECIFICATIONS:

- FREQUENCY: 5.4 GHz TO 5.9 GHz
- INSERTION LOSS: -3.0 dB MAXIMUM
- VSWR: 1.1 dBR
- ISOLATION: -85 dB MINIMUM
- SPEED: RISE: 100 nS MINIMUM, 150 nS MAXIMUM
- POWER INPUT: 33 dBm CW MAXIMUM @ 5.4 GHz TO 5.9 GHz
- RF CONNECTORS: SMA FEMALE
- DC POWER SUPPLY: +5VDC @ 75 mA MAXIMUM
 -15VDC @ 25 mA MAXIMUM
- CONTROL: TTL LOGIC "0"=ON "1"=OFF
- WEIGHT: 1.5 OUNCES TYPICAL

BLOCK DIAGRAM



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

ALL DIMENSIONS ARE IN INCHES
 TOLERANCES:
 X.XX ±0.010
 X.XXX ±0.005

PART NO.	DATE	APPROVALS	TITLE	REV.
	10/30/03	WBC	PRODUCT FEATURE	—

AMERICAN MICROWAVE CORPORATION
 FREDERICK, MARYLAND

SW-2184-1A
 OPTIONS 110, ITT

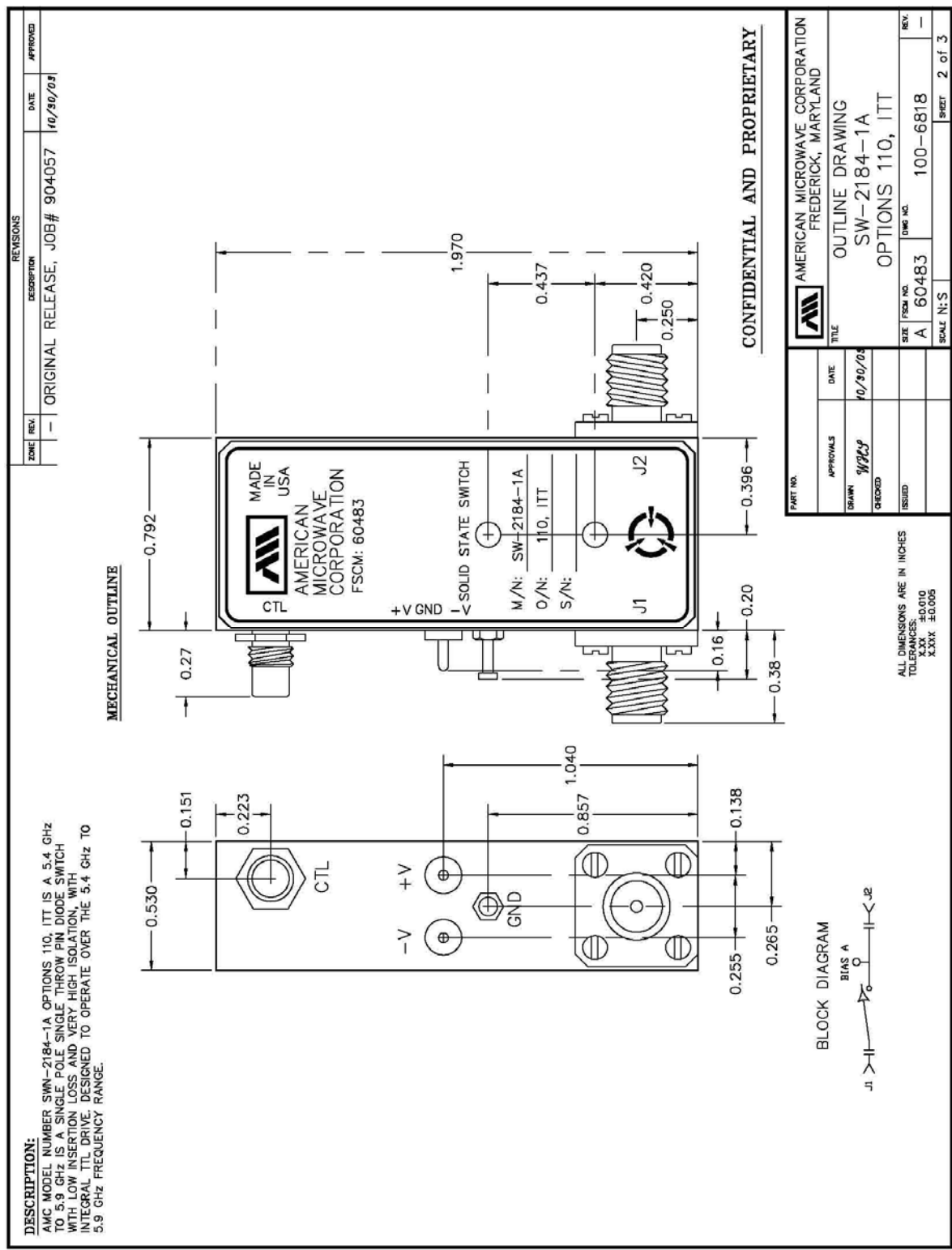
DWG NO. 100-6818
 SCALE N:S

SHEET 1 of 3

CONFIDENTIAL AND PROPRIETARY



OUTLINE DRAWING





FUNCTIONAL SCHEMATIC

REVISIONS		DATE	APPROVED
ZONE	REV	DESCRIPTION	
	-	ORIGINAL RELEASE, JOB# 904057	10/30/03
CUSTOMER: ITT FEDERAL SERVICES, CA			

FUNCTIONAL SCHEMATIC

DESCRIPTION:
 AMC MODEL NUMBER SW-2184-1A OPTIONS 110, ITT IS A 5.4 GHz TO 5.9 GHz SINGLE POLE THROW PIN DIODE SWITCH WITH LOW INSERTION LOSS AND VERY HIGH ISOLATION, WITH INTEGRAL TTL DRIVE DESIGNED TO OPERATE OVER THE 5.4 GHz TO 5.9 GHz FREQUENCY RANGE.

BLOCK DIAGRAM

CONFIDENTIAL AND PROPRIETARY

PART NO.		AMERICAN MICROWAVE CORPORATION FREDERICK, MARYLAND	
APPROVALS	DATE	TITLE	
WPC	10/30/03	FUNCTIONAL SCHEMATIC	
ISSUED		SW-2184-1A OPTIONS 110, ITT	
SIZE	FORM NO.	DWG NO.	REV.
A	60483	100-6818	-
SCALE	N:S	SHEET 3 of 3	

ALL DIMENSIONS ARE IN INCHES
 TOLERANCES:
 X.XX ±0.010
 X.XXX ±0.005

FINAL TEST DATA

FINAL TEST DATA SHEETS

FOR

AMC MODEL NUMBER

SW-2184-1A
OPTIONS 110, ITT

Serial Numbers:

1MS904156 AND 1MS904157



FINAL TEST DATA

AMC MODEL NO: SW-2184-1A OPTIONS 110, ITT, SERIAL NUMBER: 1MS904156

FORM: SW-01/0698



DATE: 4-30-99

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 904057E MODEL NO: SW-2184-1A SERIAL NO: 1MS904156
 CUSTOMER: ITT Federal TECHNICIAN: R Butler
 SPECIFICATION: 110, ITT FREQUENCY RANGE: 5.4GHz to 5.9GHz

+5 -15 10 mA

RETURN LOSS						
INSERTION LOSS	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
<u>J1-J2 0.74 dB</u>	<u>24.75</u>	<u>1.12 :1</u>	<u>21.99</u>	<u>1.17 :1</u>		

SWITCHING SPEED				
ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
<u>J1-J2 780dB</u>	<u>N/A</u>	<u>110 ns</u>	<u>N/A</u>	<u>N/A</u>

NOTE: Any additional Test Data on Back

TESTED ON: 83500/P757A 1P

TEST: E#30
 QA/QC: Q3 PA
 DATE: MAY 01 1999



FINAL TEST DATA

AMC MODEL NO: SW-2184-1A OPTIONS 110, ITT, SERIAL NUMBER: 1MS904156

FORM: SW-01/0698



DATE: 4-30-99

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 904057E MODEL NO: SW-2184-1A SERIAL NO: 1MS904157
 CUSTOMER: ITT Federal TECHNICIAN: R Butler
 SPECIFICATION: 110, ITT FREQUENCY RANGE: 5.4GHz to 5.9GHz

+5 -15 10 10 mA

RETURN LOSS						
INSERTION LOSS	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J ₁ -J ₂ 0.71 dB	26.46	1.09 :1	29.00	1.07 :1		

SWITCHING SPEED				
ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
J ₁ -J ₂ 780dB	N/A	110 ns	N/A	N/A

NOTE: Any additional Test Data on Back

TESTED ON: 8350B/8757A

TEST : Q3 #30
 QA/QC : BT
 DATE : MAY 01 1999