



TEST REPORT

ON

2 TO 18 GHz

SINGLE POLE THREE THROW
REFLECTIVE SWITCH MODULE

AMC MODEL No:
SWN-1140-3DR-STANDARD
OPTION 218, B08, B01-12V

Serial Numbers: 3MS007170 THRU 3MS007177

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ISO9001 : 2000 CERTIFIED

Handwritten signatures and initials:
DRH
JKM
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ESC
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JCW
PA
MS

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SINGLE POLE THREE THROW REFLECTIVE SWITCH MODULE

AMC MODEL No:

SWN-1140-3DR-STANDARD OPT 218, B08, B01-12V

FEATURES:

- **2 TO 18 GHz FREQUENCY RANGE**
- **LOW INSERTION LOSS**
- **HIGH SPEED**
- **LOW VIDEO TRANSIENT**

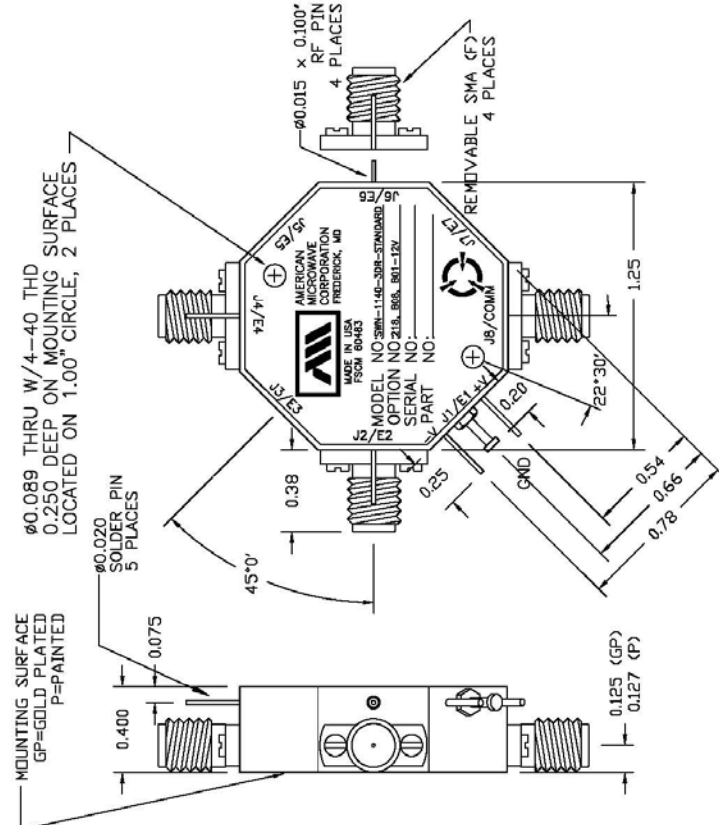
SPECIFICATIONS:

- **FREQUENCY** : 2 TO 18 GHz
- **INSERTION LOSS** : 3.5 dB MAXIMUM, 3.0 dB TYPICAL
- **ISOLATION** : 60 dB MINIMUM, 70 dB TYPICAL
- **VSWR** : 2.0:1
- **SPEED** : RISE: 20 nS MAXIMUM
: FALL: 20 nS MAXIMUM
: DELAY ON: 70 nS MAXIMUM
: DELAY OFF: 70 nS MAXIMUM
- **POWER INPUT** : (CW) +20 dBm (STANDARD), +10 dBm (HIGH SPEED)
- **SURVIVAL POWER** : 1 WATT CW, 10 WATTS PEAK 1 μ S
- **CONTROL** : TTL LOGIC "0"=ON, "1"=OFF
- **POWER SUPPLY** : +5V @ 150 mA MAXIMUM
: -12V @ 75 mA MAXIMUM
- **SIZE** : 1.25" (L) x 1.25" (W) x 0.40" (H)
- **WEIGHT** : 2.0 OZ

PRODUCT FEATURE

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	-	ORIGINAL RELEASE, JOB# 007168E	11/06/04	

MECHANICAL OUTLINE



0.089 THRU W/4-40 THD
 0.250 DEEP ON MOUNTING SURFACE
 LOCATED ON 1.00" CIRCLE, 2 PLACES

0.015 x 0.100"
 RF PIN
 4 PLACES

REMOVABLE SMA (F)
 4 PLACES

0.020
 SOLDER PIN
 5 PLACES

0.400

0.075

0.125 (GP)
 0.127 (P)

0.38

0.25

0.20

0.54

0.66

0.78

45°

22°30'

1.25

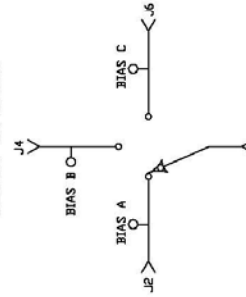
DESCRIPTION

AUC MODEL NUMBER SWN-1140-3DR-STANDARD, OPTIONS 218, B08, B01-12V IS A SINGLE POLE, THREE THROW, REFLECTIVE SWITCH MODULE WITH LOW INSERTION LOSS, LOW VIDEO TRANSIENT, HIGH SPEED AND INTEGRAL TTL DRIVER, DESIGNED FOR THE 2. GHz TO 18 GHz FREQUENCY BAND.

SPECIFICATIONS:

- FREQUENCY: 2 GHz TO 18 GHz
- INSERTION LOSS: 3.5 dB MAXIMUM, 3.0 dB TYPICAL
- ISOLATION: 60 dB MINIMUM, 70 dB TYPICAL
- VSWR: REFLECTIVE IN/OUT: 2.0:1
- SPEED: RISE: 20 ns MAXIMUM (10% RF TO 90% RF)
- FALL: 20 ns MAXIMUM (90% RF TO 10% RF)
- DELAY: 70 ns MAXIMUM (50% TTL TO 10% RF)
- 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 @ 150 mA MAXIMUM
- SIZE: 1.25" (L) x 1.25" (W) x 0.40" (H)
- WEIGHT: 2.0 oz.

BLOCK DIAGRAM



ENVIRONMENTAL RATINGS:

- TEMPERATURE: -55°C TO +85°C (OPERATING)
- TEMPERATURE: -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 204B 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

AMERICAN MICROWAVE CORPORATION
 FREDERICK, MARYLAND

PRODUCT FEATURE

SWN-1140-3DR-STANDARD
 OPTIONS 218, B08, B01-12V
 RADIAL SOLID STATE SWITCH

SIZE FROM NO. A 60483 DWG NO. 100-6839

SCALE N/S SHEET 1 of 3

DATE: 11/06/04

DRAWN: WJG

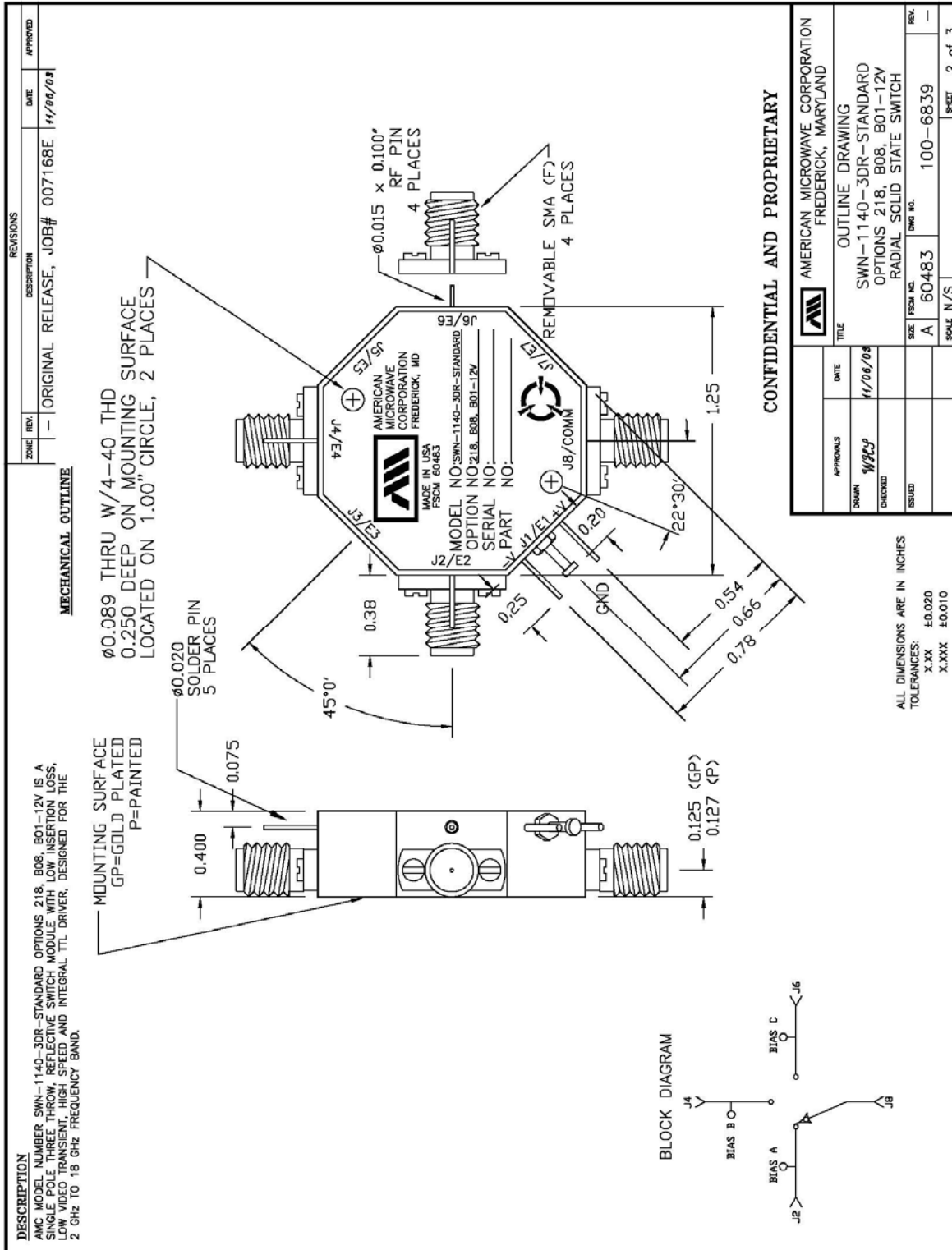
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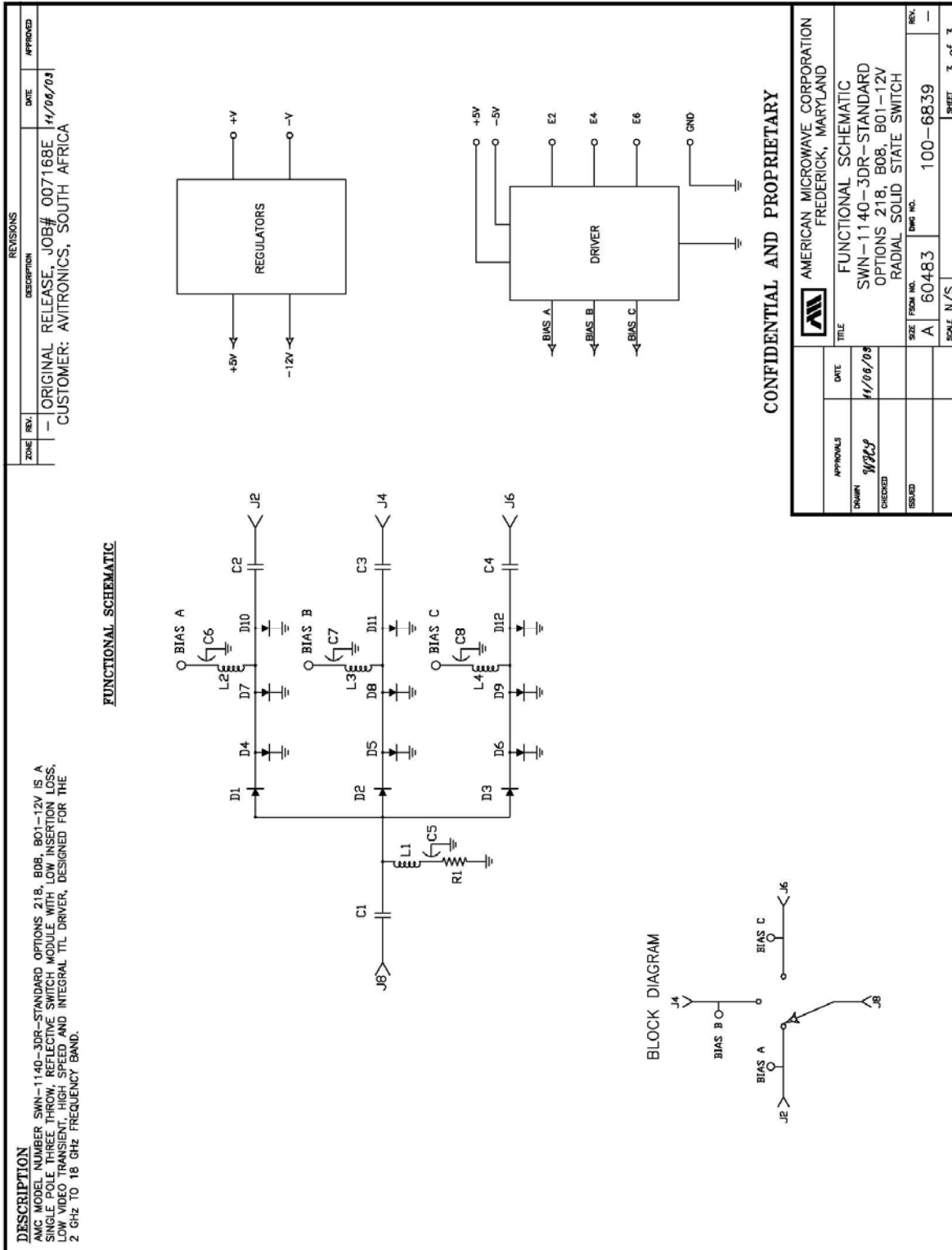
ALL DIMENSIONS ARE IN INCHES

TOLERANCES: X.XX ±0.020
 X.XXX ±0.010

OUTLINE DRAWING



FUNCTIONAL SCHEMATIC



FINAL TEST DATA

FINAL TEST DATA SHEETS

FOR

AMC MODEL NUMBER

SWN-1140-3DR-STANDARD
OPTION 218, B08, B01-12V

Serial Numbers:

3MS007170 THRU 3MS007177



FINAL TEST DATA

AMC MODEL NO: SWN-1140-3DR-STANDARD OPTIONS 218, B08, B01-12V
 SERIAL NUMBER: 3MS007172

AMERICAN MICROWAVE CORPORATION
 7311-G GROVE RD., FREDERICK, MD 21704
 TEL: 301-662-4700 FAX: 301-662-4938

FINAL TEST DATA
 ON
 MICROWAVE SWITCH

DATE: 9/19/00

CUSTOMER: AVITRONICS
 JOB NO: 007168E
 MODEL NO: SWN-1140-3DR-STD
 SERIAL NO: 3MS007172
 CURRENT DRAW: ± 5 VDC @ 60 mA; -12 VDC @ 30 mA
 TECHNICIAN: K. SHERIDAN
 OPTION NO: 218, B08, B01-12V
 SPECIFICATION:
 FREQUENCY RANGE: 2 - 18 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
J8-J2 <u>2.57</u> dB	<u>12.95</u> dB	<u>1.58</u> : 1	<u>16.57</u> dB	<u>1.35</u> : 1	dB	1. : 1
J8-J4 <u>2.22</u> dB	<u>13.13</u> dB	<u>1.57</u> : 1	<u>15.72</u> dB	<u>1.39</u> : 1	dB	1. : 1
J8-J6 <u>2.57</u> dB	<u>13.08</u> dB	<u>1.57</u> : 1	<u>16.97</u> dB	<u>1.53</u> : 1	dB	1. : 1
	dB	1. : 1	dB	1. : 1	dB	1. : 1
	dB	1. : 1	dB	1. : 1	dB	1. : 1
	dB	1. : 1	dB	1. : 1	dB	1. : 1
	dB	1. : 1	dB	1. : 1	dB	1. : 1
	dB	1. : 1	dB	1. : 1	dB	1. : 1
	dB	1. : 1	dB	1. : 1	dB	1. : 1

ISOLATION	SWITCHING SPEED			
	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
J8-J2 <u>760</u> dB	≤ 70 nS	≤ 20 nS	≤ 70 nS	≤ 20 nS
J8-J4 <u>760</u> dB	≤ 70 nS	≤ 20 nS	≤ 70 nS	≤ 20 nS
J8-J6 <u>760</u> dB	≤ 70 nS	≤ 20 nS	≤ 70 nS	≤ 20 nS
	nS	nS	nS	nS
	nS	nS	nS	nS
	nS	nS	nS	nS
	nS	nS	nS	nS
	nS	nS	nS	nS

NOTE: Any additional test data on back

TESTED ON: HP8720C

QA/QC APPROVAL:

Q4 Donald Harman

DATED: 9-27-00

