



TEST REPORT

ON

0.5 TO 18 GHz

SINGLE POLE FOUR THROW

REFLECTIVE SWITCH

AMC MODEL No:

SWN-1140-4DR-STANDARD

OPTION 0518, B02, HPR2W

Serial Numbers: 4MS405050 AND 4MS405051

DESIGNED

BY

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TESTED

BY

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REPORTED

BY

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November 10, 2004

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ISO9001 : 2000 CERTIFIED

TABLE OF CONTENTS

●	PRODUCT DESCRIPTION AND ELECTRICAL SPECIFICATIONS	PAGE 3
●	PRODUCT FEATURE AND ENVIRONMENTAL SPECIFICATIONS	PAGE 4
●	OUTLINE DRAWING	PAGE 5
●	FUNCTIONAL SCHEMATIC	PAGE 6
●	TEST DATA ON SWN-1140-4DR-STANDARD OPTION 0518, B02, HPR2W SERIAL NUMBERS 4MS405050 AND 4MS405051	PAGE 7
●	TEST DATA FOR SWN-1140-4DR-STANDARD OPTION 0518, B02, HPR2W SERIAL NUMBERS 4MS405050	PAGE 8
●	TEST DATA FOR SWN-1140-4DR-STANDARD OPTION 0518, B02, HPR2W SERIAL NUMBERS 4MS405051	PAGE 9

**SINGLE POLE FOUR THROW
REFLECTIVE SWITCH
AMC MODEL No:
SWN-1140-4DR-STANDARD OPTION 0518, B02, HPR2W**

FEATURES:

- **0.5 TO 18 GHz FREQUENCY RANGE**
- **LOW INSERTION LOSS**
- **HIGH ISOLATION**
- **INTEGRAL TTL DRIVER**

SPECIFICATIONS:

- FREQUENCY : 0.5 TO 18 GHz
- INSERTION LOSS : 3.0 dB
- ISOLATION : 0.5 TO 2 GHz: 60 dB
2 TO 18 GHz: 70 dB
- VSWR : 2.0:1
- SPEED : RISE: 10 ns TYPICAL, 15 ns MAXIMUM
FALL: 10 ns TYPICAL, 15 ns MAXIMUM
DELAY ON: 75 ns TYPICAL, 100 ns MAXIMUM
DELAY OFF: 75 ns TYPICAL, 100 ns MAXIMUM
- POWER INPUT : (CW) +20 dBm (STANDARD)
+10 dBm HIGH SPEED
- SURVIVAL POWER : 1 WATT CW, 10 WATTS PEAK 1 us
- CONTROL : TTL LOGIC "0"=ON, "1"=OFF
- POWER SUPPLY : +5V @ 200 mA MAXIMUM
-15V @ 75 mA MAXIMUM

PRODUCT FEATURE

ZONE	REV	DESCRIPTION	DATE	APPROVED
—	—	ORIGINAL RELEASE JOB# 402026PE-3	9/30/04	

DESCRIPTION

AMC MODEL SWN-1140-4DR-STANDARD OPTION: 0518, HPR2W, B02 IS A 0.5 TO 18 GHz, SINGLE POLE FOUR THROW, REFLECTIVE SWITCH HAVING AN ISOLATION OF 60 dB MINIMUM BETWEEN 0.5 TO 2 GHz, 70 dB MINIMUM BETWEEN 2 TO 18 GHz, AN INSERTION LOSS OF 3.0 dB MAXIMUM AND A VSWR OF 2.0:1.

SPECIFICATIONS:

- FREQUENCY: 0.5 GHz TO 18 GHz
- INSERTION LOSS: 3.0db
- ISOLATION: 0.5 GHz TO 2 GHz: 60db
2 GHz TO 18 GHz: 70db
- VSWR: 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 @ 200 mA MAX
-15V @ 75mA MAX

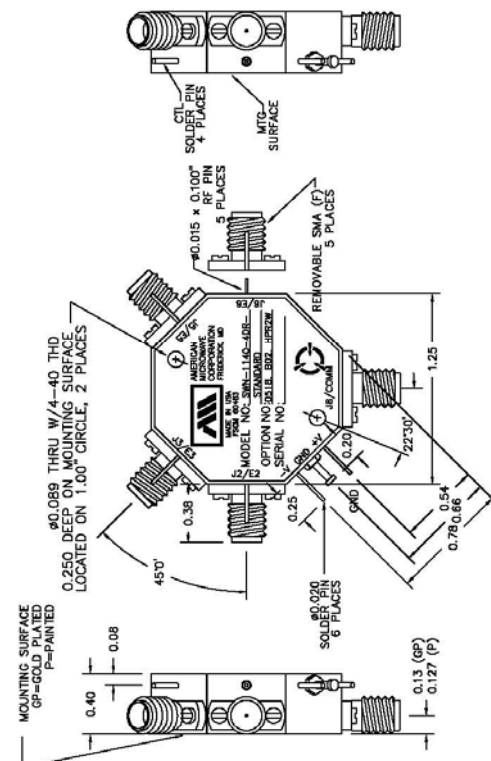
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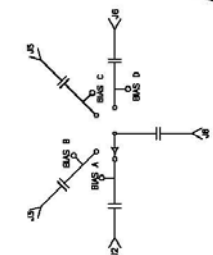
INDEPENDENT CONTROL WITH SOLDER PIN STANDARD

0518 OPTIMIZED FOR 0.5-18 GHz

HPR2W HIGH POWER OF 2 WATTS

B02 -15 V POWER SUPPLY






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: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE
 NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION



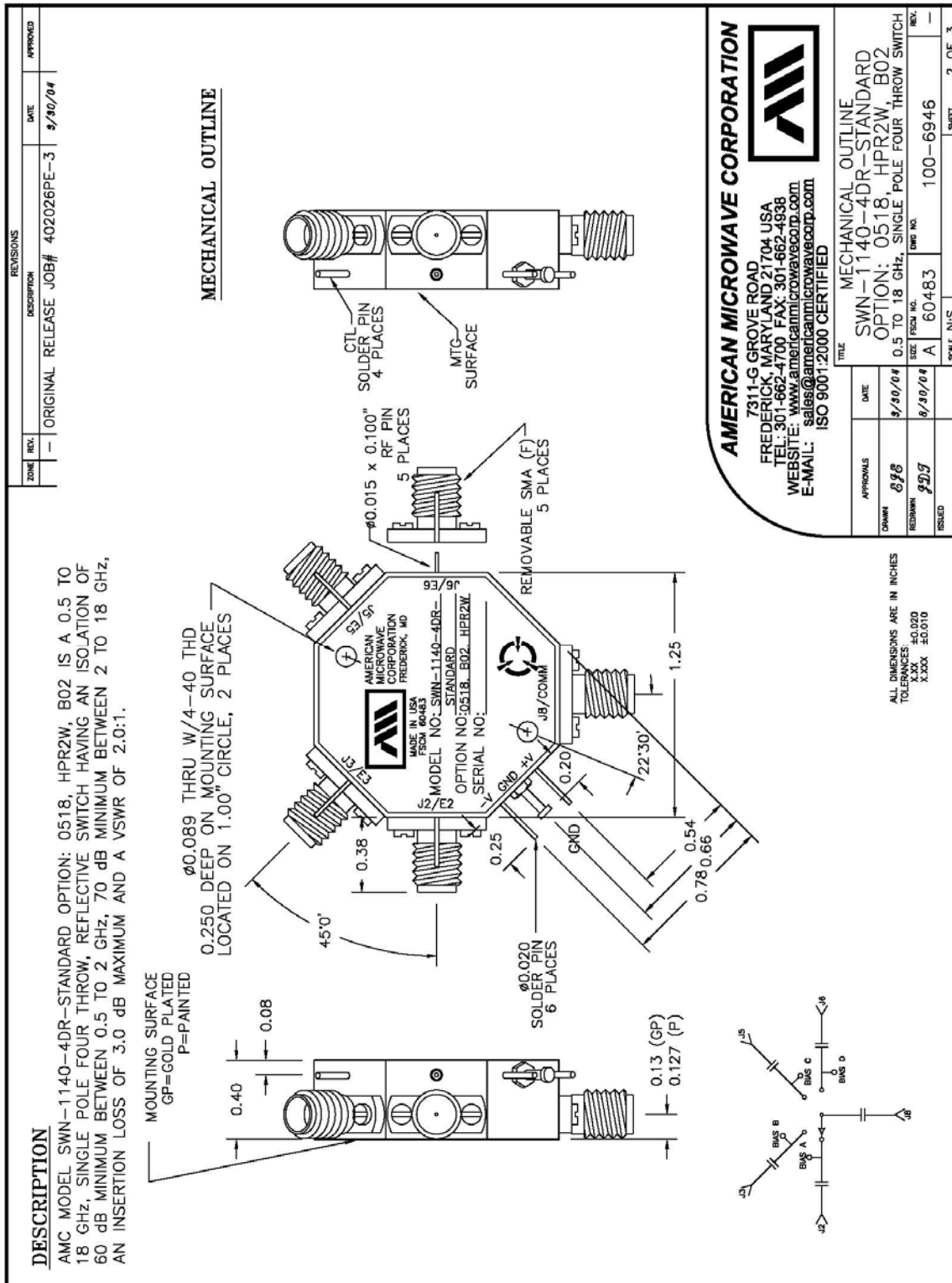
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APPROVALS		DATE		TITLE	
DESIGNED	gfg	9/30/04	9/30/04	PRODUCT FEATURE	
ISSUED	gfg	9/30/04	9/30/04	SWN-1140-4DR-STANDARD	
				OPTION: 0518, HPR2W, B02	
				SIZE FROM NO.	60483
				DWG NO.	100-6946
				SCALE	N/S
				SHEET	1 OF 3

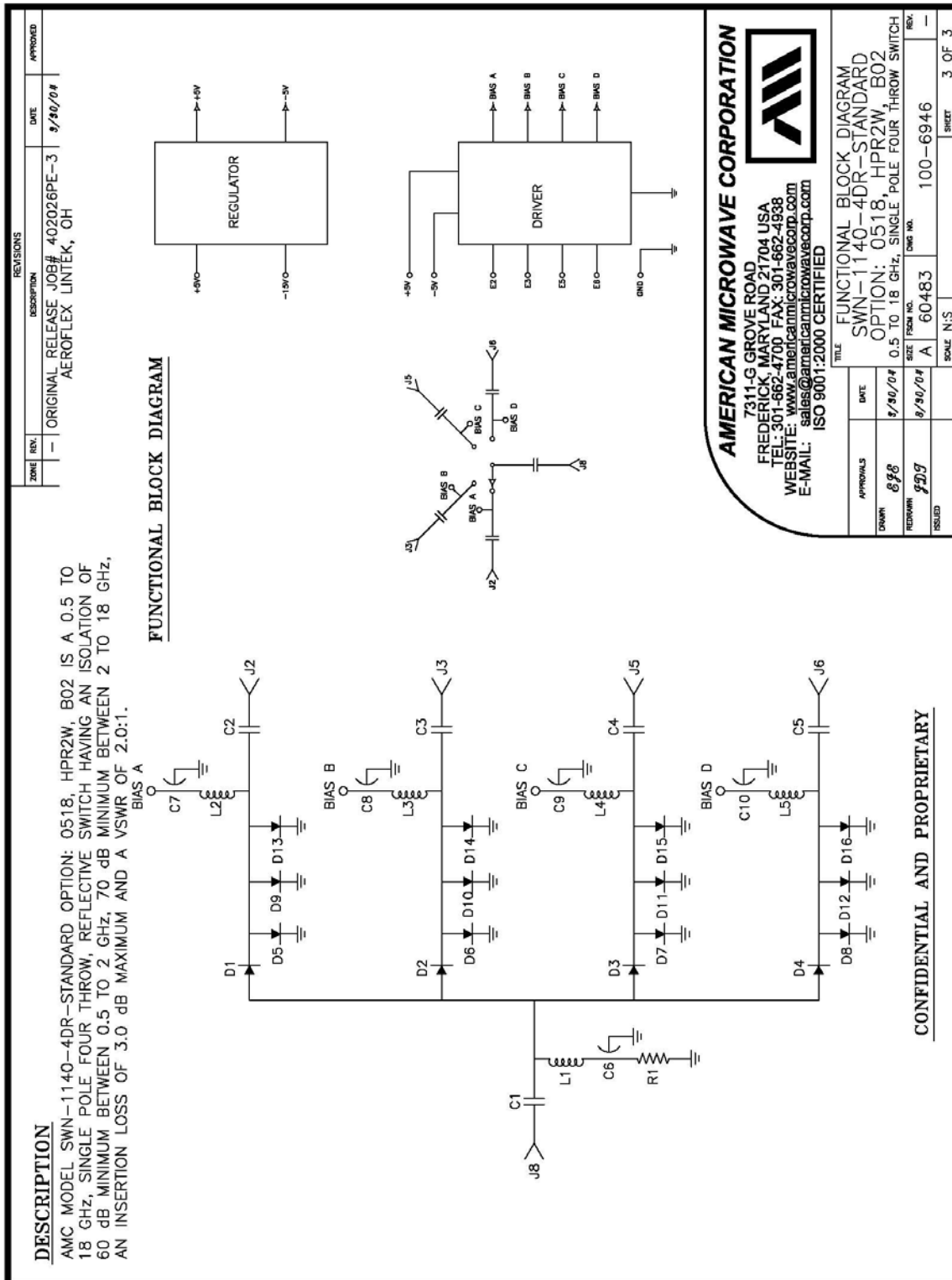
ALL DIMENSIONS ARE IN INCHES
 TOLERANCES: .50, .020
 .XXX .XXX .0010

OUTLINE DRAWING



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FUNCTIONAL SCHEMATIC



FINAL TEST DATA

FINAL TEST DATA SHEETS

FOR

AMC MODEL NUMBER

SWN-1140-4DR-STANDARD
OPTION 0518, B02, HPR2W

Serial Numbers:

4MS405050 AND 4MS405051



FINAL TEST DATA

AMC MODEL NO: SWN-1140-4DR-STANDARD OPTION 0518, B02, HPR2W
 SERIAL NUMBER: 4MS405050

FORM: SW-DTA
 DATE: June 15, 2004



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FINAL TEST DATA ON MICROWAVE SWITCH

E #29

CUSTOMER: <u>AEROFLEX</u>	TECHNICIAN: <u>T. PHUNG</u>
JOB NO: <u>402026PE-3</u>	CUSTOMER PART NO: _____
MODEL NO: <u>SWN-1170-4DR-STANDARD</u>	OPTION NO: <u>0518,HPR2W,B02</u>
SERIAL NO: <u>4MS405050</u>	SPECIFICATION: <u>MIL-STD-454</u>
CURRENT DRAW: <u>+ 5 VDC @ 141 mA; - 15 VDC @ 16 mA</u>	FREQUENCY RANGE: <u>0.5 GHz - 18 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
J8-J2	0.49 dB @ 0.5-2.0 GHz	17.97 dB	1.29 : 1	20.73 dB	1.20 : 1		
J8-J2	2.09 dB @ 2.0-18.0 GHz	13.49 dB	1.54 : 1	15.53 dB	1.40 : 1		
J8-J3	0.49 dB @ 0.5-2.0 GHz	17.62 dB	1.30 : 1	20.98 dB	1.20 : 1		
J8-J3	1.83 dB @ 2.0-18.0 GHz	13.62 dB	1.53 : 1	14.34 dB	1.47 : 1		
J8-J5	0.49 dB @ 0.5-2.0 GHz	17.89 dB	1.29 : 1	21.15 dB	1.19 : 1		
J8-J5	1.83 dB @ 2.0-18.0 GHz	14.42 dB	1.47 : 1	15.08 dB	1.43 : 1		
J8-J6	0.54 dB @ 0.5-2.0 GHz	11.31 dB	1.75 : 1	12.86 dB	1.59 : 1		
J8-J6	2.11 dB @ 2.0-18.0 GHz	11.32 dB	1.74 : 1	13.27 dB	1.55 : 1		
SWITCHING SPEED							
ISOLATION		DELAY ON	RISE TIME	DELAY OFF	FALLTIME		
J8-J2	78.14dB @ 0.5-2.0 GHz	30 nS	5 nS	30 nS	5 nS		
J8-J2	73.26dB @ 2.0-18.0 GHz	30 nS	5 nS	30 nS	5 nS		
J8-J3	80.15dB @ 0.5-2.0 GHz	30 nS	5 nS	30 nS	5 nS		
J8-J3	72.55dB @ 2.0-18.0 GHz	30 nS	5 nS	30 nS	5 nS		
J8-J5	81.38dB @ 0.5-2.0 GHz	30 nS	5 nS	30 nS	5 nS		
J8-J5	72.47dB @ 2.0-18.0 GHz	30 nS	5 nS	30 nS	5 nS		
J8-J6	80.18dB @ 0.5-2.0 GHz	30 nS	5 nS	30 nS	5 nS		
J8-J6	71.53dB @ 2.0-18.0 GHz	30 nS	5 nS	30 nS	5 nS		

* DENOTES A FAILURE

TESTED ON: HEWLETT PACKARD, 8722ES, US39175265, 7.70

QA/QC APPROVAL: 6/16/04 DATED: 6/16/04

