



**TEST REPORT**  
**ON**  
**40 MHz TO 500 MHz**  
**SINGLE POLE SINGLE THROW**  
**REFLECTIVE PIN DIODE SWITCH**

**AMC MODEL No:**  
**SW-2184-1**  
**OPTION 40M05, CPI**

**Serial Numbers: 1MS906190 THRU 1MS906199**

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**TESTED**  
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**REPORTED**  
**BY**  
**W. Steinhaus**

*DRH*  
*MD*  
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*JST*  
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*ESC*  
*MXN*  
*JK*

**October 7, 2004**

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**ISO9001 : 1994 CERTIFIED**

## TABLE OF CONTENTS

● PRODUCT DESCRIPTION AND ELECTRICAL SPECIFICATIONS	PAGE 3
● PRODUCT FEATURE AND ENVIRONMENTAL SPECIFICATIONS	PAGE 4
● MECHANICAL OUTLINE	PAGE 5
● FUNCTIONAL SCHEMATIC	PAGE 6
● TEST DATA ON SW-2184-1 OPTIONS 40M05, CPI, SERIAL NUMBERS 1MS906190 THRU 1MS906199	PAGE 7
● TEST DATA FOR SW-2184-1 OPTIONS 40M05, CPI, SERIAL NUMBER 1MS906190	PAGE 8
● TEST DATA FOR SW-2184-1 OPTIONS 40M05, CPI, SERIAL NUMBER 1MS906191	PAGE 9
● TEST DATA FOR SW-2184-1 OPTIONS 40M05, CPI, SERIAL NUMBER 1MS906192	PAGE 10
● TEST DATA FOR SW-2184-1 OPTIONS 40M05, CPI, SERIAL NUMBER 1MS906193	PAGE 11
● TEST DATA FOR SW-2184-1 OPTIONS 40M05, CPI, SERIAL NUMBER 1MS906194	PAGE 12
● TEST DATA FOR SW-2184-1 OPTIONS 40M05, CPI, SERIAL NUMBER 1MS906195	PAGE 13
● TEST DATA FOR SW-2184-1 OPTIONS 40M05, CPI, SERIAL NUMBER 1MS906196	PAGE 14
● TEST DATA FOR SW-2184-1 OPTIONS 40M05, CPI, SERIAL NUMBER 1MS906197	PAGE 15
● TEST DATA FOR SW-2184-1 OPTIONS 40M05, CPI, SERIAL NUMBER 1MS906198	PAGE 16
● TEST DATA FOR SW-2184-1 OPTIONS 40M05, CPI, SERIAL NUMBER 1MS906199	PAGE 17

## SINGLE POLE SINGLE THROW REFLECTIVE PIN DIODE SWITCH AMC MODEL No: SW-2184-1 OPTIONS 40M05, CPI

### FEATURES:

- **40 TO 500 MHz FREQUENCY RANGE**
- **2.5 dB LOW INSERTION LOSS**
- **60 dB HIGH ISOLATION**

### SPECIFICATIONS:

- |                  |   |  |
|------------------|---|--|
| ● FREQUENCY      | : | 40 TO 500 MHz                                    |
| ● INSERTION LOSS | : | 2.5 dB MAXIMUM                                   |
| ● ISOLATION      | : | 60 dB MINIMUM                                    |
| ● VSWR           | : | 1.4:1  |
| ● SPEED          | : | RISE: 300 nSEC MAXIMUM<br>FALL: 300 nSEC MAXIMUM |
| ● POWER INPUT    | : | +20 dBm CW MAXIMUM @ 40 TO 500 MHz               |
| ● RF CONNECTORS  | : | SMA FEMALE                                       |
| ● DRIVER CONTROL | : | -5V = "ON"<br>40 mA FOR BIAS CURRENT = "OFF"     |
| ● WEIGHT         | : | 1.5 OUNCES TYPICAL                               |
| ● SIZE           | : | 0.95" x 0.79" x 0.51"                            |

**PRODUCT FEATURE**

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	—	ORIGINAL RELEASE, JOB# 905095E	10/19/03	

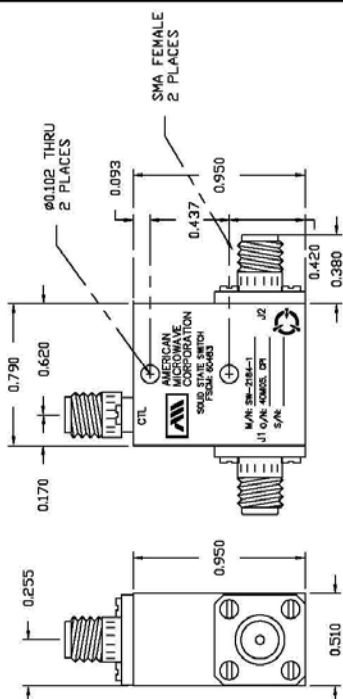
  

**DESCRIPTION:**  
 AMC MODEL NUMBER SW-2184-1 OPTIONS 40M05, CPI IS A SINGLE POLE SINGLE THROW, REFLECTIVE, PIN DIODE SWITCH DESIGNED TO OPERATE FROM 40 MHz TO 500 MHz WITH LOW INSERTION LOSS AND HIGH ISOLATION.

**SPECIFICATIONS:**

- FREQUENCY: 40 MHz TO 500 MHz
- INSERTION LOSS: 2.5 dB MAXIMUM
- ISOLATION: 40 dB MINIMUM
- VSWR: 1.4:1 MAXIMUM
- SPEED: RISE: 300 nS MAXIMUM  
FALL: 300 nS MAXIMUM
- POWER INPUT: +20 dBm CW MAXIMUM @ 40 MHz TO 500 MHz
- RF CONNECTORS: SMA FEMALE
- DRIVER CONTROL: 5V = "ON"  
40 mA FOR BIAS CURRENT = "OFF"
- WEIGHT: 1.5 OUNCES TYPICAL
- SIZE: 0.95 X 0.79 X 0.51

**MECHANICAL OUTLINE**



**ENVIRONMENTAL RATINGS:**

- TEMPERATURE: -10°C TO +55°C (OPERATING)  
-40°C TO +71°C (STORAGE)
- HUMIDITY: 95% OVER TEMPERATURE
- 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

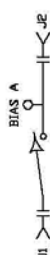
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

**CONFIDENTIAL AND PROPRIETARY**

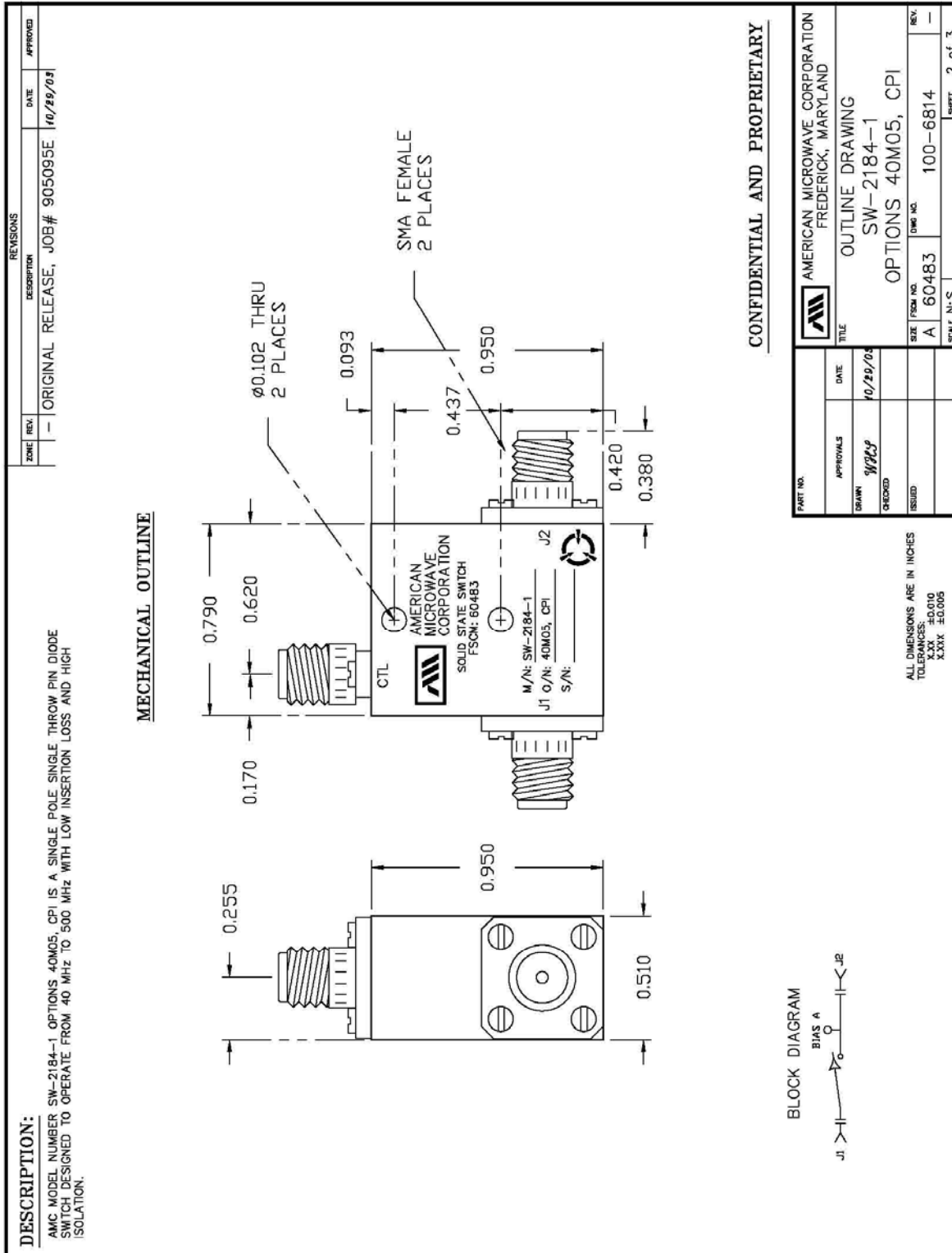
PART NO.	DATE	TITLE	REV.
	10/20/03	PRODUCT FEATURE SW-2184-1 OPTIONS 40M05, CPI	—
APPROVALS			
DRAWN	WBJ		
CHECKED			
ISSUED			
SIZE	FRSW NO. A	DWG NO. 100-6814	SCALE N:S
			SHEET 1 of 3

**BLOCK DIAGRAM**



**OUTLINE DRAWING**



## FUNCTIONAL SCHEMATIC

ZONE	REV	DESCRIPTION	DATE	APPROVED
	-	ORIGINAL RELEASE, JOB # 905095E CUSTOMER: CPI, MA	10/29/03	

**DESCRIPTION:**  
 AMC MODEL NUMBER SW-2184-1 OPTIONS 40M05, CPI IS A SINGLE POLE SINGLE THROW PIN DIODE SWITCH DESIGNED TO OPERATE FROM 40 MHz TO 500 MHz WITH LOW INSERTION LOSS AND HIGH ISOLATION.

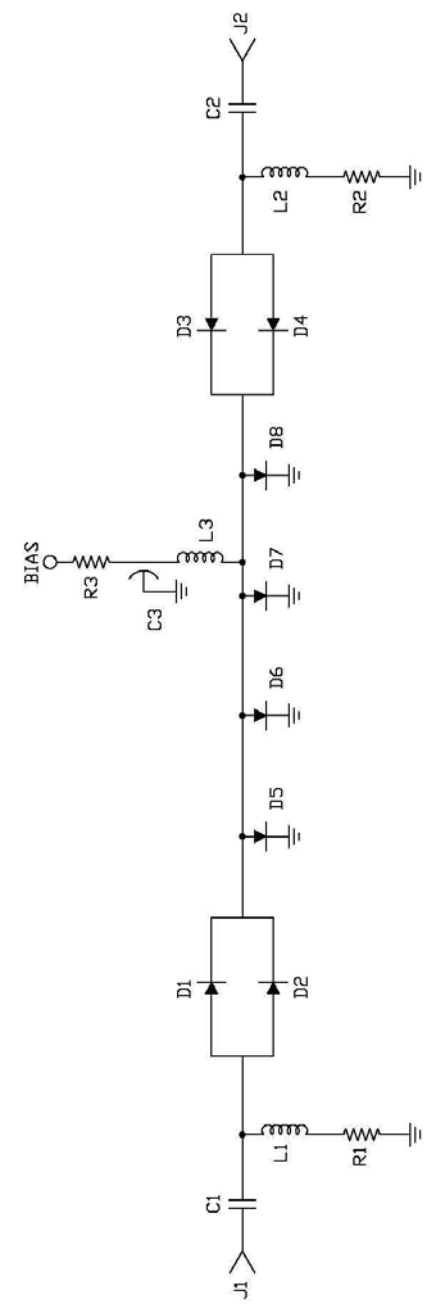
AMERICAN MICROWAVE CORPORATION  
 FREDERICK, MARYLAND

FUNCTIONAL SCHEMATIC  
 SW-2184-1  
 OPTIONS 40M05, CPI

SIZE FROM NO. A 60483 DWG NO. 100-6814  
 TOLERANCES: X.XX ±0.010 X.XXX ±0.005

**FUNCTIONAL SCHEMATIC**



**DESCRIPTION:**  
 AMC MODEL NUMBER SW-2184-1 OPTIONS 40M05, CPI IS A SINGLE POLE SINGLE THROW PIN DIODE SWITCH DESIGNED TO OPERATE FROM 40 MHz TO 500 MHz WITH LOW INSERTION LOSS AND HIGH ISOLATION.

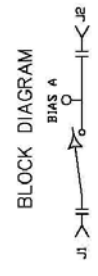
AMERICAN MICROWAVE CORPORATION  
 FREDERICK, MARYLAND

FUNCTIONAL SCHEMATIC  
 SW-2184-1  
 OPTIONS 40M05, CPI

SIZE FROM NO. A 60483 DWG NO. 100-6814  
 TOLERANCES: X.XX ±0.010 X.XXX ±0.005

**FUNCTIONAL SCHEMATIC**



**CONFIDENTIAL AND PROPRIETARY**

## FINAL TEST DATA

FINAL TEST DATA SHEETS

FOR

AMC MODEL NUMBER

**SW-2184-1**  
**OPTION 40M5, CPI**

Serial Numbers:

**1MS906190 THRU 1MS906199**























# FINAL TEST DATA

AMC MODEL NO: SW-2184-1 OPTIONS 40M05, CPI, SERIAL NUMBER: 1MS906199

FORM: SW-DATA 27/0199



AMERICAN MICROWAVE CORPORATION

DATE: 6-18-99

FINAL TEST DATA  
 ON  
 MICROWAVE SWITCH

CUSTOMER: <u>CPI</u>	TECHNICIAN: <u>H. HAHN</u>
JOB NO: <u>905095E</u>	OPTION: <u>40M05, CPI</u>
MODEL NO: <u>SW-2184-1</u>	FREQUENCY RANGE: <u>40-500 MHz</u>
SERIAL NO: <u>1MS906199</u>	SPECIFICATIONS: <u>454</u>
SUPPLY: <u>-5V = "ON", 40 mA BIAS CURRENT "OFF"</u>	

MAXIMUM INSERTION LOSS	RETURN LOSS					
	MIN. INPUT dB	INPUT VSWR	MIN. OUTPUT ON dB	OUTPUT ON VSWR	MIN. OUTPUT OFF dB	OUTPUT OFF VSWR
<u>1.16</u> dB	<u>22.24</u> dB	<u>1.17</u> : 1	<u>21.41</u> dB	<u>1.19</u> : 1	<u>N/A</u> dB	<u>N/A</u> : 1
dB	dB	: 1	dB	: 1	dB	: 1
dB	dB	: 1	dB	: 1	dB	: 1
dB	dB	: 1	dB	: 1	dB	: 1
dB	dB	: 1	dB	: 1	dB	: 1
dB	dB	: 1	dB	: 1	dB	: 1
dB	dB	: 1	dB	: 1	dB	: 1
dB	dB	: 1	dB	: 1	dB	: 1

MINIMUM ISOLATION	SWITCHING SPEED			
	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
<u>&gt; 60</u> dB	<u>N/A</u>	<u>&lt; 300 nS</u>	<u>N/A</u>	<u>&lt; 300 nS</u>
dB				
dB				
dB				
dB				
dB				
dB				
dB				

NOTE: Any additional test data on back

TESTED ON: WILTRON 37347A TEST: \_\_\_\_\_  
 QA/QC: (03) PA DATED: JUN 18 1999