



TEST REPORT
ON
0.5 TO 18 GHz
SINGLE POLE EIGHT THROW
ABSORPTIVE / NON-REFLECTIVE SWITCH MODULE

AMC MODEL No:
MSR-8DT-04T-STANDARD
OPTION ME, 0518

Serial Number: 8MS91091

DESIGNED
BY
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TESTED
BY
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REPORTED
BY
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October 22, 2004

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ISO9001 : 2000 CERTIFIED

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SINGLE POLE EIGHT THROW ABSORPTIVE / NON-REFLECTIVE PIN DIODE SWITCH AMC MODEL No: MSR-8DT-04T-STANDARD OPTION ME, 0518

FEATURES:

- **0.5 TO 18 GHz FREQUENCY RANGE**
- **4.5 dB MAXIMUM LOW INSERTION LOSS**
- **HIGH SPEED**
- **INTEGRAL TTL DRIVER**

SPECIFICATIONS:

- | | | |
|------------------|---|--|
| ● FREQUENCY | : | 0.5 TO 18 GHz |
| ● INSERTION LOSS | : | 4.5 dB MAXIMUM |
| ● ISOLATION | : | 70 dB MINIMUM |
| ● VSWR | : | 2.0:1 |
| ● SPEED | : | RISE: 15 ns MAXIMUM |
| | : | FALL: 15 ns MAXIMUM |
| | : | DELAY ON: 500 ns MAXIMUM |
| | : | DELAY OFF: 500 ns MAXIMUM |
| ● POWER INPUT | : | +17 dBm CW MAXIMUM @ 0.5 GHz TO 18 GHz |
| ● SURVIVAL POWER | : | 1 WATT CW, 10 WATTS PEAK 1 usec |
| ● CONTROL | : | TTL LOGIC "0"=ON, "1"=OFF |
| ● POWER SUPPLY | : | +5V @ 400 mA MAXIMUM |
| | : | -5V @ 100 mA MAXIMUM |
| ● SIZE | : | Ø 1.500 CIRCLE POINT TO POINT x 0.400" (H) |
| ● WEIGHT | : | 2.5 OUNCES TYPICAL |

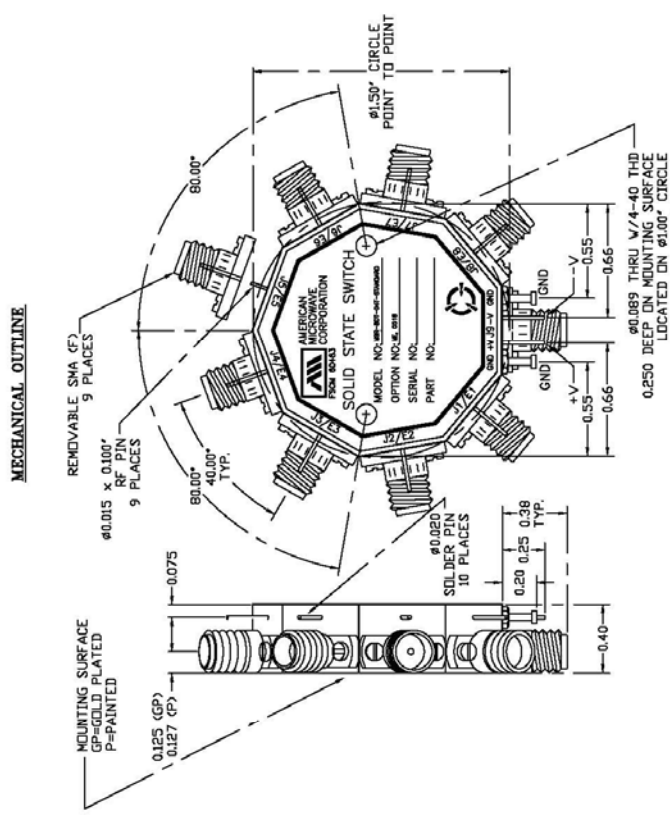
PRODUCT FEATURE

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	—	ORIGINAL RELEASE, JOB# 910190E	11/06/08	

DESCRIPTION
 AMC MODEL NUMBER MSR-8DT-04T-STANDARD OPTIONS ME, 0518 IS A RADIAL, SINGLE POLE EIGHT THROW NON-REFLECTIVE/ABSORPTIVE SWITCH MODULE WITH LOW LOSS, HIGH SPEED AND INTEGRAL TTL DRIVER, DESIGNED FOR BROAD BAND OPERATIONS.

SPECIFICATIONS:

- FREQUENCY: 0.5 GHz TO 18 GHz
- INSERTION LOSS: 4.5 dB MAXIMUM
- ISOLATION: 7 dB MINIMUM
- VSWR: ABSORPTIVE (OUT); 2.0:1
- SPEED: RISE: 15 ns MAXIMUM
- FALL: 15 ns MAXIMUM
- DELAY ON: 500 ns MAXIMUM
- DELAY OFF: 500 ns MAXIMUM
- POWER INPUT: +17 dBm CW MAXIMUM @ 0.5 GHz TO 18 GHz
- SURVIVAL POWER: 1 WATT CW, 10 WATTS PEAK 1 usec
- CONTROL: TTL LOGIC "0"=ON "1"=OFF
- POWER SUPPLY: +5V @ 400 mA MAXIMUM
- -5V @ 100 mA MAXIMUM
- SIZE : Ø1.500 CIRCLE POINT TO POINT X 0.400 (H)
- WEIGHT : 2.5 OUNCES TYPICAL



MECHANICAL OUTLINE

REMOVABLE SMA (F) 9 PLACES

RF PIN 9 PLACES

Ø0.015 X 0.100"

80.00° TYP.

80.00°

40.00°

Ø1.500" CIRCLE POINT TO POINT

Ø0.089 THRU 1/4-40 THD 0.250 DEEP IN MOUNTING SURFACE LOCATED ON Ø1.000" CIRCLE 2 PLACES

0.66"

0.55"

0.53"

0.66"

0.25"

0.38"

0.20"

0.25"

0.40"

0.125 (GP)

0.127 (GP)

MOUNTING SURFACE GP=GOLD PLATED P=PAINTED

SOLDER PIN 10 PLACES

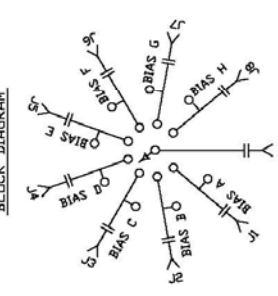
Ø0.020

Ø1.500 CIRCLE POINT TO POINT

ENVIRONMENTAL RATINGS:

- TEMPERATURE: -55°C TO +85°C (OPERATING)
- -65°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- MIL-STD-202F, METHOD 213B COND. B
- SHOCK: MIL-STD-202F, METHOD 204D COND. B
- VIBRATION: MIL-STD-202F, METHOD 105C COND. B
- MIL-STD-202F, METHOD 107D COND. A
- 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



BLOCK DIAGRAM

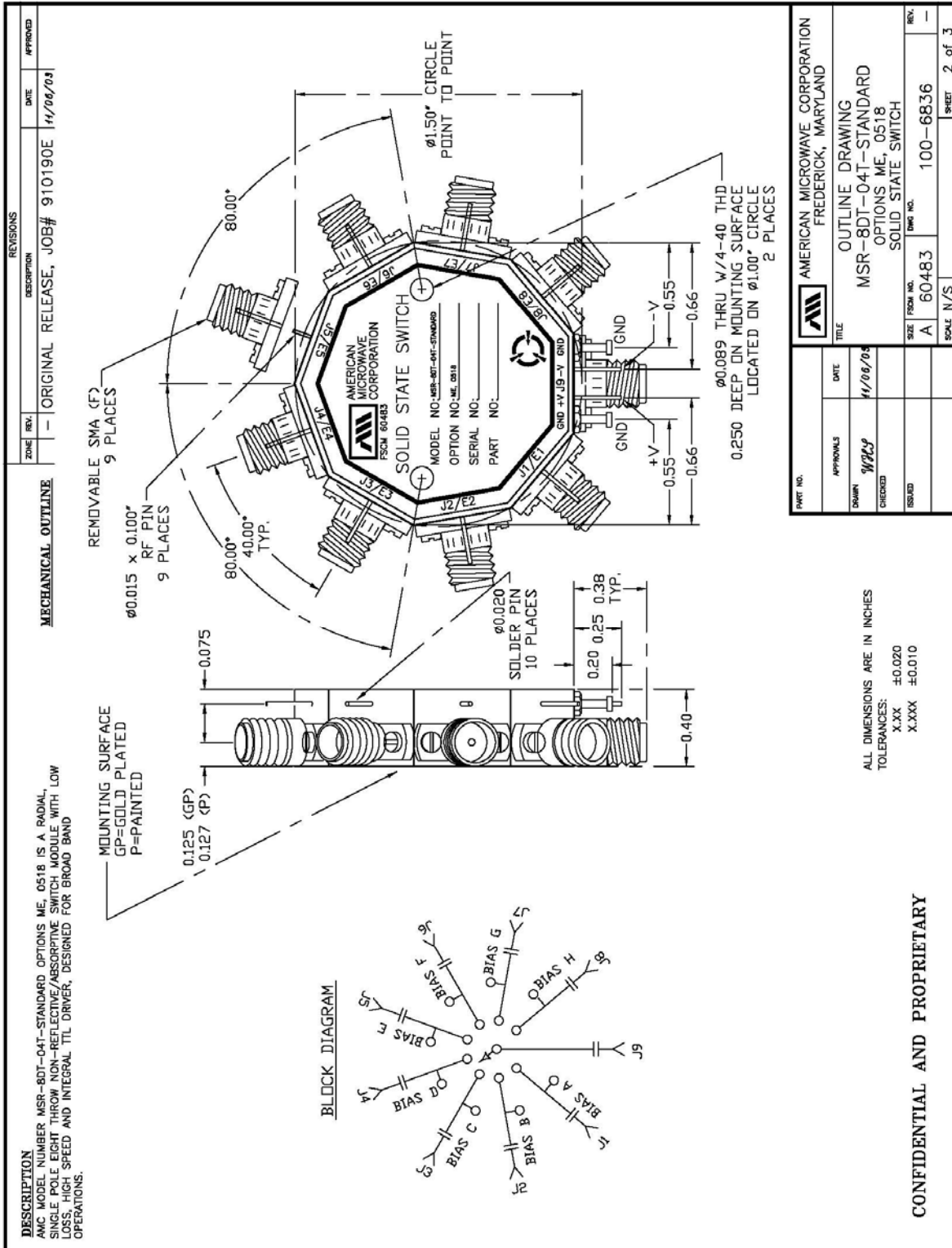
CONFIDENTIAL AND PROPRIETARY

PART NO.	DATE	TITLE	REV.
	11/06/08	PRODUCT FEATURE MSR-8DT-04T-STANDARD OPTIONS ME, 0518 SOLID STATE SWITCH	—

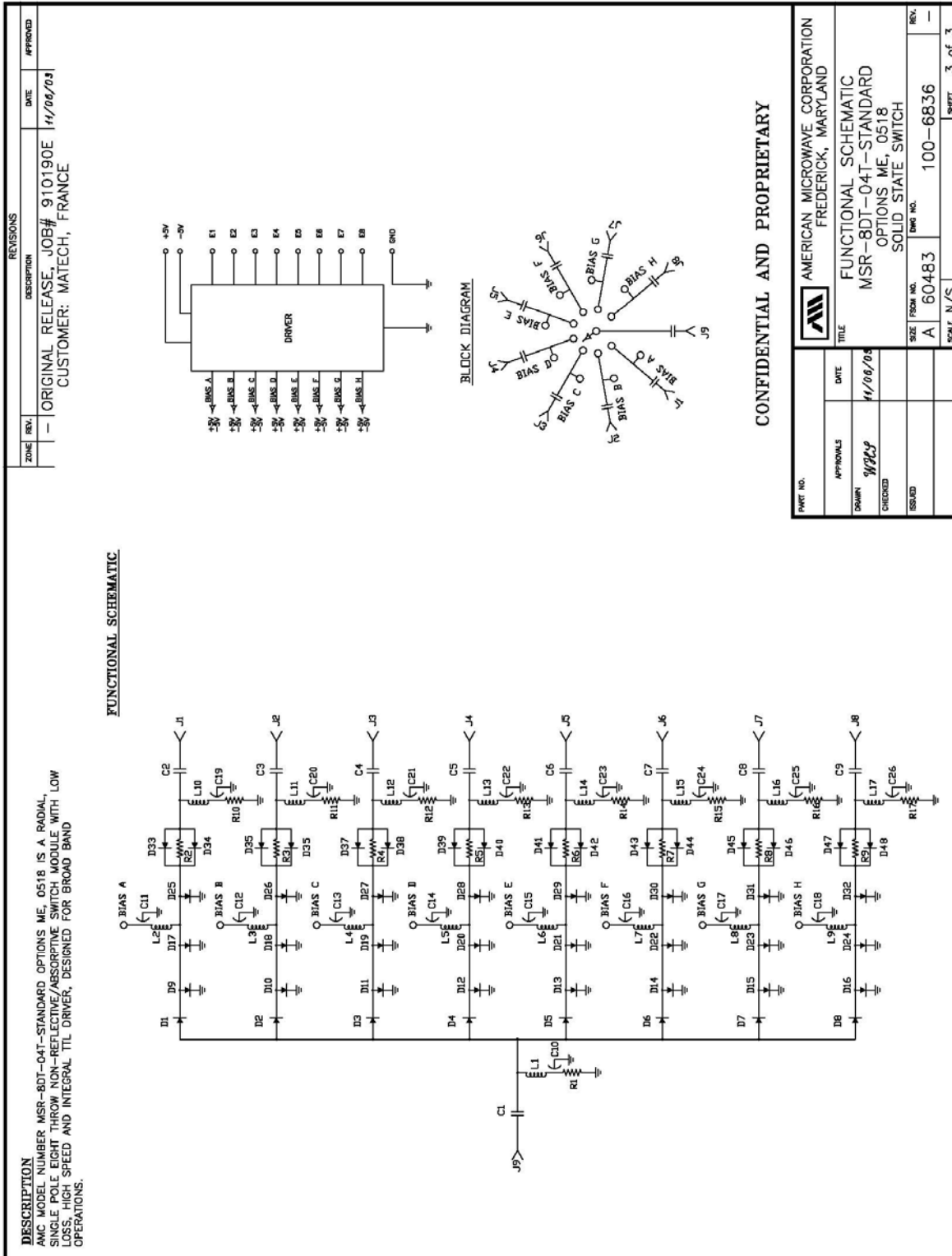
APPROVALS	DATE	TITLE	REV.
DOWN	11/06/08	PRODUCT FEATURE MSR-8DT-04T-STANDARD OPTIONS ME, 0518 SOLID STATE SWITCH	—
CHECKED			
DESIGNED			

SCALE	N/S	DRAWING NO. 100-6836	SHEET 1 of 3
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OUTLINE DRAWING



FUNCTIONAL SCHEMATIC





FINAL TEST DATA

AMC MODEL NO: MSR-8DT-04T-STANDARD OPTIONS ME, 0518 SERIAL NUMBER: 8MS91091

FORM: SW-DATA 27/0199



AMERICAN MICROWAVE CORPORATION

DATE: 1-20-99

FINAL TEST DATA
 ON
 MICROWAVE SWITCH

CUSTOMER: Matech Electronique TECHNICIAN: R. Butler
 JOB NO: 910190 E OPTION: ME, 0518
 MODEL NO: MSR-8DT-04T-STD FREQUENCY RANGE: 0.56GHz to 18.6GHz
 SERIAL NO: 8MS91091 SPECIFICATIONS:
 CURRENT DRAW: + 5VDC @ 400mA; - 5VDC @ 400mA

MAXIMUM INSERTION LOSS	RETURN LOSS					
	MIN. INPUT dB	INPUT VSWR	MIN. OUTPUT dB	OUTPUT ON VSWR	MIN. OUTPUT OFF dB	OUTPUT OFF VSWR
J9-J1 4.50 dB	9.91 dB	1.94 : 1	13.29 dB	1.55 : 1	11.82 dB	1.69 : 1
J9-J2 4.41 dB	12.70 dB	1.60 : 1	13.84 dB	1.51 : 1	15.01 dB	1.43 : 1
J9-J3 4.46 dB	13.66 dB	1.52 : 1	13.59 dB	1.53 : 1	12.39 dB	1.65 : 1
J9-J4 4.30 dB	13.53 dB	1.53 : 1	12.67 dB	1.60 : 1	12.08 dB	1.66 : 1
J9-J5 4.43 dB	13.23 dB	1.55 : 1	11.82 dB	1.69 : 1	17.27 dB	1.31 : 1
J9-J6 4.15 dB	14.31 dB	1.47 : 1	14.30 dB	1.47 : 1	11.52 dB	1.72 : 1
J9-J7 4.40 dB	12.08 dB	1.66 : 1	13.57 dB	1.53 : 1	16.47 dB	1.35 : 1
J9-J8 4.37 dB	12.36 dB	1.63 : 1	13.58 dB	1.52 : 1	13.51 dB	1.53 : 1

MINIMUM ISOLATION	SWITCHING SPEED			
	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
J9-J1 > 70 dB	< 500 ns	< 15 ns	< 500 ns	< 15 ns
J9-J2 > 70 dB	<	<	<	<
J9-J3 > 70 dB	<	<	<	<
J9-J4 > 70 dB	<	<	<	<
J9-J5 > 70 dB	<	<	<	<
J9-J6 > 70 dB	<	<	<	<
J9-J7 > 70 dB	<	<	<	<
J9-J8 > 70 dB	<	<	<	<

NOTE: Any additional test data on back

TESTED ON: 835013/8757A HP

TEST: E#30
 QA/QC: 10 JAN 20 2000