



**TEST REPORT**  
**ON**  
**3.1 TO 4.3 GHz**  
**SINGLE POLE TWO THROW**  
**ABSORPTIVE / NON-REFLECTIVE SWITCH MODULE**

**AMC MODEL No:**  
**SKL-35-2DT-AA908**

**Serial Numbers: 2MS001914, 2MS001915, AND 2MS001917 THRU 2MS001919**

**DESIGNED  
BY  
R. Afable**

**TESTED  
BY  
K. Mason**

**REPORTED  
BY  
E. Elder**

**August 9, 2004**

**AMERICAN MICROWAVE CORPORATION., 7311-G Grove Road, Frederick, MD 21704**  
**Tel: 301-662-4700 • Fax: 301-662-4938 • Email: [sales@americanmicrowavecorp.com](mailto:sales@americanmicrowavecorp.com)**  
**Website: <http://www.americanmicrowavecorp.com>**

**ISO9001 : 1994 CERTIFIED**

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PA SKM PD JH  
JDT MGB LC  
DRH WMS

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## SINGLE POLE TWO THROW, ABSORPTIVE / NON-REFLECTIVE SWITCH MODULE AMC MODEL No: SKL-35-2DT-AA908

### FEATURES:

- **3.1 TO 4.3 GHz RANGE**
- **2.0 dB LOW INSERTION LOSS**
- **90 dB HIGH ISOLATION**
- **ABSORPTIVE / NON-REFLECTIVE**

### SPECIFICATIONS:

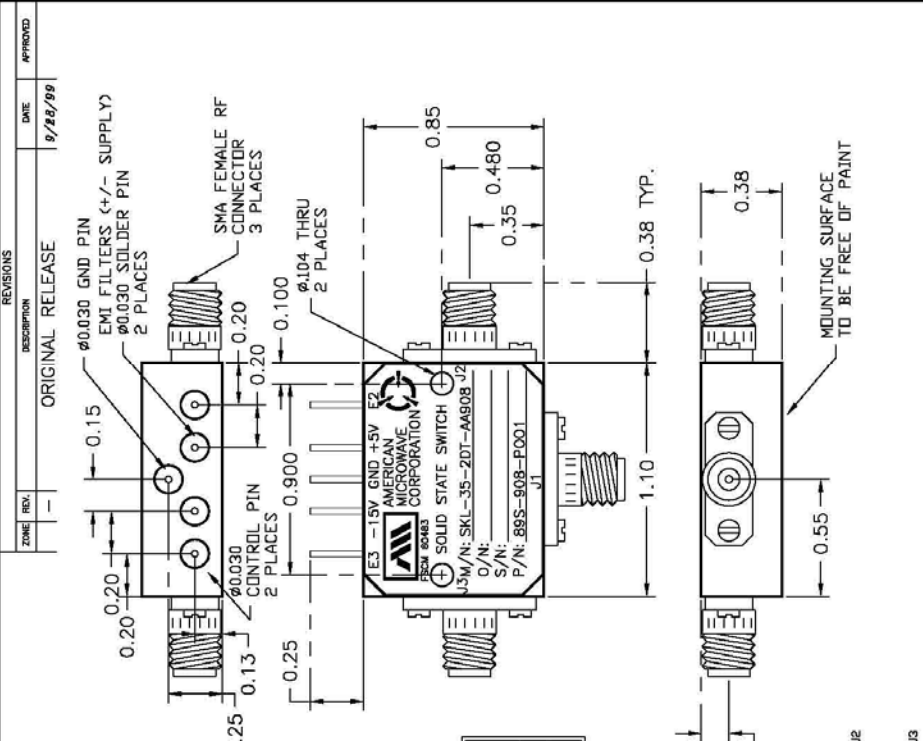
- **FREQUENCY** : 3.1 GHz TO 4.3 GHz
- **RF PORTS IMPEDENCE** : 50 OHMS
- **VSWR** :  $\leq 1.8:1$
- **INSERTION LOSS** :  $\leq 2.0$  dB
- **ISOLATION (RF PORTS)** :  $\geq 90$  dB
- **SWITCHING TIME**
  - 10% TO 90% RF :  $\leq 100$  nSEC RISE
  - 90% TO 10% RF :  $\leq 100$  nSEC FALL
- **POWER SUPPLY** : +5 VDC @ 150 mA MAXIMUM  
: -15 VDC @ 150 mA MAXIMUM
- **TTL LOGIC**
  - "1" A) HIGH : 2.4 VDC TO 5.0 VDC PORT ON
  - "0" B) OFF : 0 TO 0.8 VDC PORT OFF
- **RF POWER CAPABILITY** : 0.5 WATT MAXIMUM
- **ELECTRICAL INTERFACE** : SINGLE ENDED TTL LOGIC
- **CONNECTORS (RF)** : SMA FEMALE
- **CONNECTORS (LOGIC)** : SOLDER PINS

## PRODUCT FEATURE

**DESCRIPTION:**  
 AMC MODEL SKL-35-2DT-AA908 IS A SINGLE POLE TWO THROW, ABSORPTIVE/NON-REFLECTIVE SWITCH MODULE WITH LOW INSERTION LOSS, HIGH ISOLATION, WITH INTEGRAL TTL DRIVER DESIGNED TO OPERATE OVER THE 3.1 GHz TO 4.3 GHz BANDWIDTH.

**SPECIFICATIONS:**

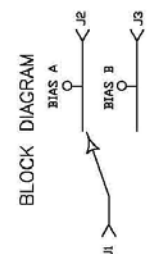
- FREQUENCY: 3.1 GHz TO 4.3 GHz
- RF PORTS IMPEDANCE: 50 OHMS
- VSWR: ≤ 1.8:1
- INSERTION LOSS: ≤ 2.0 dB
- ISOLATION (RF PORTS): ≥ 80 dB
- SWITCHING TIME:
  - 10% TO 90% RF: ≤ 100 nsec
  - 90% TO 10% RF: ≤ 100 nsec
- BIAS SUPPLY:
  - +5 VDC @ 150 mA MAXIMUM
  - 15 VDC @ 150 mA MAXIMUM
- TTL LOGIC:
  - "1" A) HIGH: 2.4 VDC TO 5 VDC PORT ON
  - "0" B) LOW: 0 TO 0.8 VDC PORT OFF
- BIAS SUPPLY INDICATOR: SEE TABLE 1
- RF POWER CAPABILITY: 0.5 WATT MAXIMUM
- ELECTRICAL INTERFACE: SINGLE ENDED TTL LOGIC
- CONNECTORS (RF): SMA FEMALE
- CONNECTORS (LOGIC): SOLDER PINS
- MATERIAL: STAINLESS STEEL
- BODY: ALUMINUM
- FINISH:
  - CONNECTORS: PASSIVATED
  - BODY: SILVER PLATED
- PAINTING: BLACK EPOXY PAINTED AND CLEAR COATED WITH DEXTER HTSOL
- WEIGHT: ≤ 150 GRAMS
- SIZE: 1.10 (L) X 0.85 (W) X 0.38 (H)



**TABLE 1**

TTL LOGIC	PINS	OUTPUT PORTS
	E2	E3
LEVEL 1	0	J1/J2
LEVEL 0	1	J1/J3

**BLOCK DIAGRAM**



**ENVIRONMENTAL RATINGS:**

- TEMPERATURE:
  - OPERATING: -32°C TO +68°C (OPERATING)
  - STORAGE: -40°C TO +68°C (STORAGE)
- HUMIDITY INCLUDING CONDENSATION:
  - OPERATING: UP TO 95% RH FROM 0 TO 50°C
  - STORAGE: UP TO 100% RH
- ALTITUDE:
  - OPERATING: UP TO 4570 m
  - STORAGE: UP TO 12190 m
- SHOCK:
  - (NOT OPERATING): 30 G (11 ms, HALF SINE PULSE, 3 AXES, 2 DIRECTIONS)
  - (OPERATING): 2 TO 200 Hz (3.5 G, SINUSOIDAL, 3 AXES)
- VIBRATION:
  - (NOT OPERATING): UP TO 5% NaCl (FOR 48 HOURS) AT 35°C
  - (OPERATING): 5 G'S, 3 AXES
- ACCELERATION:
  - (NOT OPERATING): ACCORDING TO MIL-STD-810C, METHOD 508.2
- FUNGUS:
  - ACCORDING TO MIL-STD-810C, METHOD 508.2

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

**REVISIONS**

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE	9/28/99	

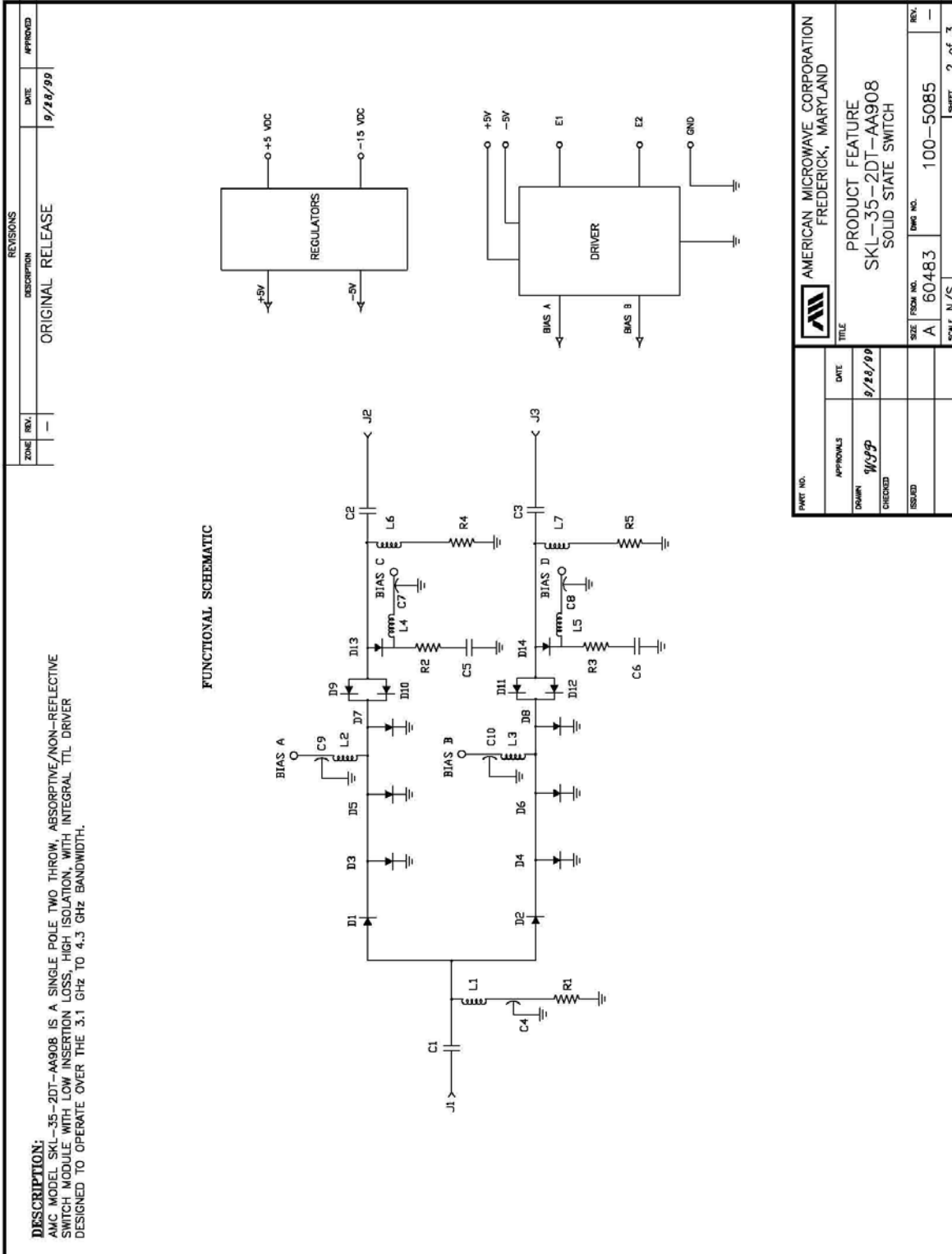
**AMERICAN MICROWAVE CORPORATION**  
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**AMERICAN MICROWAVE CORPORATION**  
 FREDERICK, MARYLAND

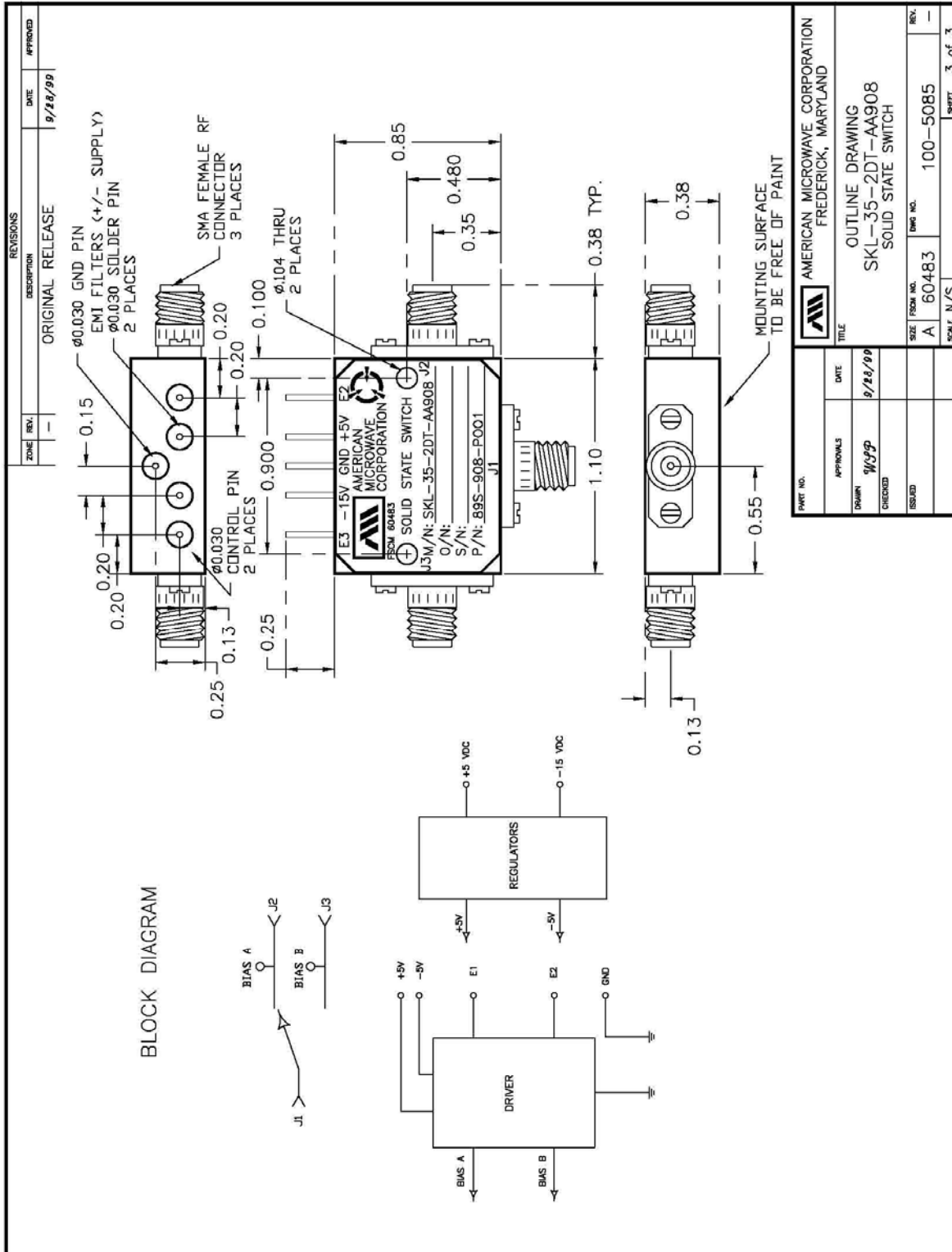
**PRODUCT FEATURE**  
 SKL-35-2DT-AA908  
 SOLID STATE SWITCH

DATE: 9/28/99  
 DRAWN: WJG  
 CHECKED: [ ]  
 SIZE: FROM NO. A 60483  
 DWG NO. 100-5085  
 SCALE: N/S  
 SHEET: 1 of 3

## FUNCTIONAL SCHEMATIC



**OUTLINE DRAWING**



## FINAL TEST DATA

FINAL TEST DATA SHEETS

FOR

AMC MODEL NUMBER

# SKL-35-2DT-AA908

Serial Numbers:

2MS001914, 2MS001915, AND 2MS001917 THRU 2MS001919











**FINAL TEST DATA**

AMC MODEL NO: SKL-35-2DT-AA908, SERIAL NUMBER: 2MS001919  
 FORM: 100-5146 28/1099



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: 3/15/00

CUSTOMER: ALENIA MARCONI      TECHNICIAN: K. Mason E #29  
 JOB NO: 906115E  
 MODEL NO: SKL-35-2DT-AA908      OPTION NO: \_\_\_\_\_  
 SERIAL NO: 2MS001919      SPECIFICATION: \_\_\_\_\_  
 CURRENT DRAW: +5VDC @ 65 mA; -15VDC @ 50mA FREQUENCY RANGE: 3.1 GHz TO 4.3 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
J1-J2 <u>1.42</u> dB	<u>20.49</u> dB	<u>1.20 : 1</u>	<u>20.25</u> dB	<u>1.21 : 1</u>	<u>18.92</u> dB	<u>1.25 : 1</u>
J1-J3 <u>1.92</u> dB	<u>19.94</u> dB	<u>1.22 : 1</u>	<u>19.82</u> dB	<u>1.22 : 1</u>	<u>15.80</u> dB	<u>1.38 : 1</u>
	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	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
J1-J2 $\geq$ <u>86.04</u> dB	<u>/</u> nS	<u>4</u> nS	<u>/</u> nS	<u>14</u> nS
J1-J3 $\geq$ <u>86.90</u> dB	<u>/</u> nS	<u>4</u> nS	<u>/</u> nS	<u>9</u> nS
	nS	nS	nS	nS
	nS	nS	nS	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: 8350B/8757A HP

PROGRAM MANAGER/SUPERVISOR APPROVAL: [Signature] DATED: 3/20/00

QA/QC APPROVAL: [Signature] DATED: 3/16/00

VICE PRESIDENT/GENERAL MANAGER APPROVAL: [Signature] DATED: 3/16/00