



TEST REPORT

ON

0.5 TO 22 GHz

LOW LOSS

MINIATURE, REFLECTIVE

SPST SOLID STATE RECTANGULAR SWITCH

AMC MODEL No:

**MSNN-1DR-CS00109-09**

Serial Numbers: 1MS303101 Thru 1MS303102

DESIGNED

BY

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**ISO9001 : 1994 CERTIFIED**

*Handwritten signatures and initials:*  
Jhu, ECC, DRH, WAS, JDT, LC, PA, JEM

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## SPST, REFLECTIVE, SOLID STATE SWITCH AMC MODEL No: MSNN-1DR-CS00109-09

### FEATURES:

- **0.1 TO 22 GHz**
- **REFLECTIVE**
- **MINIATURE**
- **LOW LOSS**

### SPECIFICATIONS:

- FREQUENCY : 0.5 TO 22 GHz
- INSERTION LOSS : 2.5 dB MAXIMUM
- ISOLATION : 45 dB MAXIMUM
- VSWR : 2.0:1
- RF POWER : 1 WATT PEAK @ 10 uSEC PULSE WIDTH
- SWITCHING TIME : 100 nS MAXIMUM
- POWER SUPPLY : +5V @ 50 mA  
-15V @ 30 mA
- CONTROL : TTL LOGIC "0" ON, "1"=OFF
- SIZE : 0.82" (L) X 0.63" (W) X 0.22" (H)

### ENVIRONMENTAL RATINGS:

ENVIRONMENTAL RATINGS	
OPERATING TEMPERATURE	- 65°C TO 110°C
NON - OPERATING TEMPERATURE	- 65°C TO 125°C
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

**PRODUCT FEATURE**

ZONE	REV	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE JOB# 301014E	08/04/03	

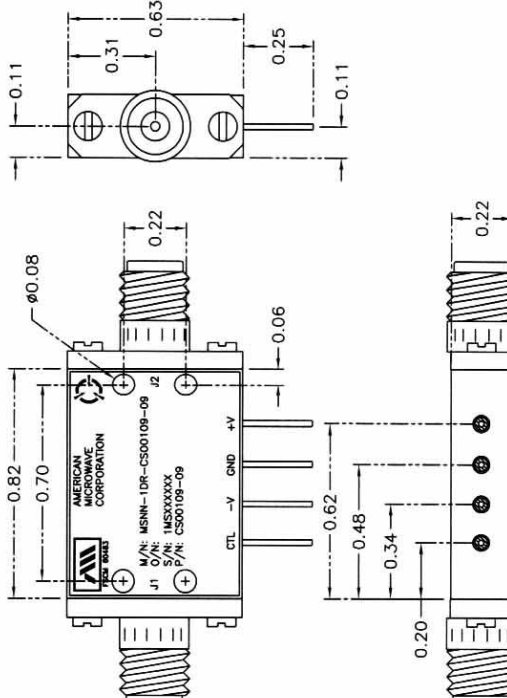
  

**DESCRIPTION:**  
 AMC MODEL MSNN-1DR-CS00109-09 IS A REFLECTIVE SPST SWITCH WITH LOW INSERTION LOSS, SLIM LINE DESIGN AND INTEGRAL TTL DRIVER THAT WORKS FROM 0.5 TO 22.0 GHz.


**SPECIFICATIONS:**

- FREQUENCY:.....0.5 TO 22 GHz
- INSERTION LOSS:.....2.5 dB MAXIMUM
- ISOLATION:.....45 dB MINIMUM
- VSWR:.....2.0:1
- RF POWER:.....1 WATT PEAK @ 10 μSEC PULSE WIDTH
- SWITCHING TIME:.....100 nS MAXIMUM
- POWER SUPPLY:.....+5V @ 50mA
- CONTROL:.....-15V @ 30mA
- TTL LOGIC "0"=ON "1"=OFF
- SIZE:.....0.82" (L) x 0.63" (W) x 0.22" (H)

M/N = MODEL NUMBER  
 O/N = OPTION NUMBER  
 S/N = SERIAL NUMBER  
 P/N = PART NUMBER



**BLOCK DIAGRAM**



ALL DIMENSIONS ARE IN INCHES  
 TOLERANCES:  
 X.XX ±0.020  
 X.XXX ±0.010

**ENVIRONMENTAL RATINGS**

- OPERATING TEMPERATURE:.....-65°C TO 110°C
- NON-OPERATING TEMPERATURE:.....-65°C TO 125°C
- 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

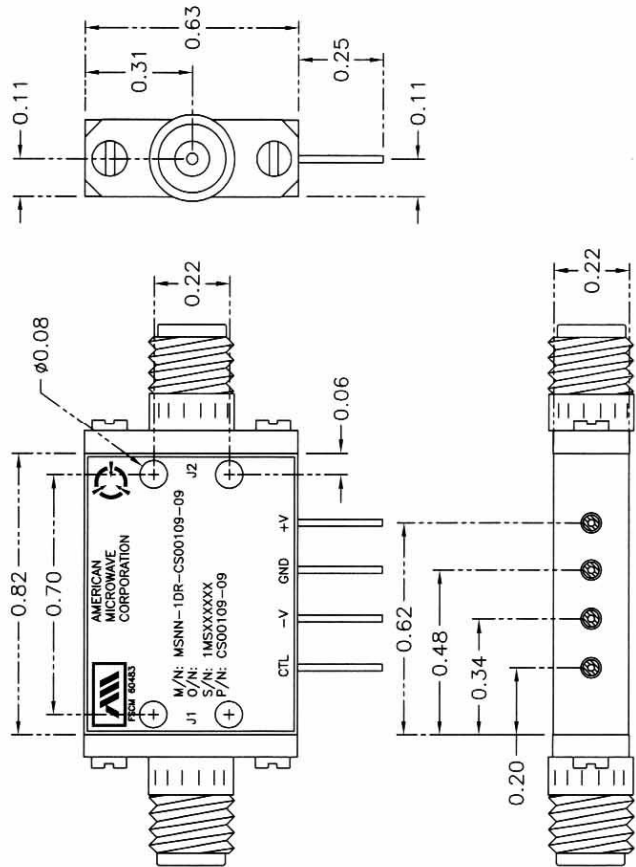
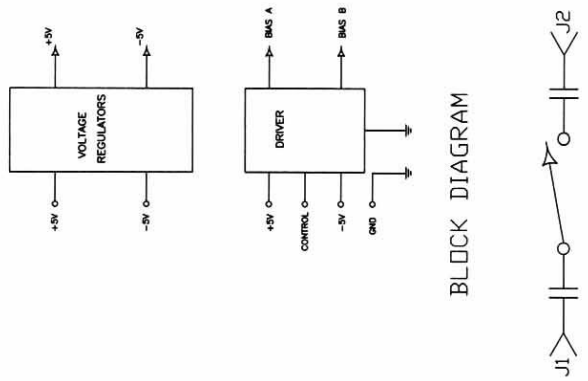
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

**CONFIDENTIAL AND PROPRIETARY**

PART NO.	AMERICAN MICROWAVE CORPORATION FREDERICK, MARYLAND	DATE	3/01/03	REV	1
APPROVALS	TITLE	PRODUCT FEATURE			
DRAWN: KLB	MSNN-1DR-CS00109-09				
CHECKED:	WIDE BAND 1-WAY SWITCH				
ISSUED:	SIZE / FROM NO.	ENG. NO.	100-6559	REV	-
	A 60483			SCALE	N:S
					SHEET 1 of 3

**OUTLINE DRAWING**

DESCRIPTION:  
 AMC MODEL MSNN-1DR-CS00109-09 IS A REFLECTIVE SPST SWITCH WITH LOW INSERTION LOSS, SLIM LINE DESIGN AND INTEGRAL TTL DRIVER THAT WORKS FROM 0.5 TO 22.0 GHZ.

ALL DIMENSIONS ARE IN INCHES  
 TOLERANCES:  
 X.XX ±0.020  
 X.XXX ±0.010

**CONFIDENTIAL AND PROPRIETARY**

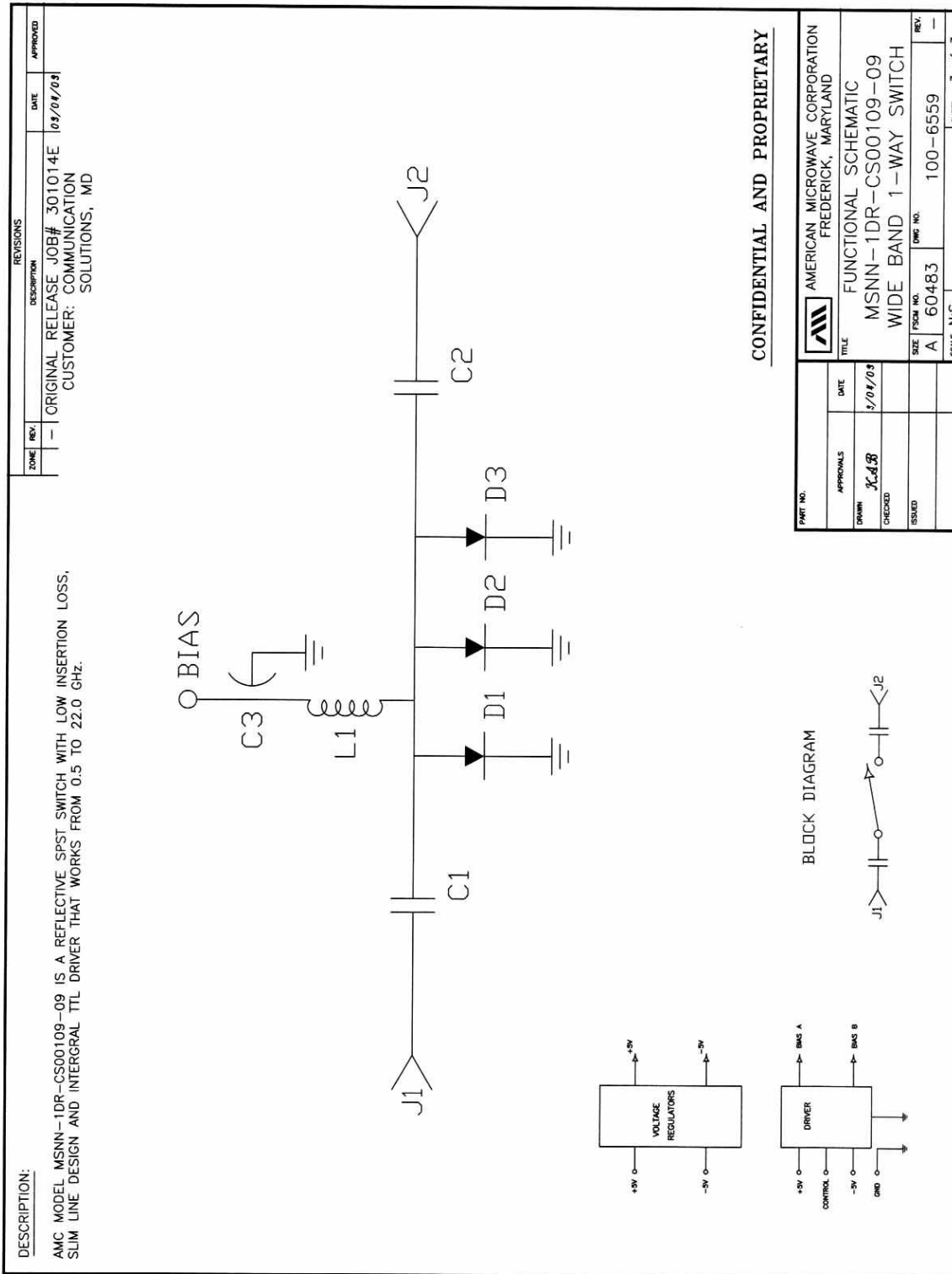
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE JOB# 301014E	03/04/03	

PART NO.		DATE
APPROVALS		1/04/03
DRAWN	XCLB	
CHECKED		
ISSUED		

AMERICAN MICROWAVE CORPORATION FREDERICK, MARYLAND	
TITLE OUTLINE DRAWING	
MSNN-1DR-CS00109-09	
WIDE BAND 1-WAY SWITCH	
SIZE	FIG. NO.
A	60483
SCALE	100-6559
N/S	2 of 3



**FUNCTIONAL SCHEMATIC**



**FINAL TEST DATA**

FINAL TEST DATA SHEETS

FOR

AMC MODEL NUMBER

**MSNN-1DR-CS00109-09**

Serial Numbers:

**1MS303101 AND 1MS303102**







