

**DESCRIPTION:**

AMC MODEL SWN-2181-TRA OPTION AL1W IS A TRANSFER SWITCH MODULE WITH LOW INSERTION LOSS, HIGH ISOLATION AND WITH INTEGRAL TTL DRIVER IN A SMALL 1.0" x 1.0" x 0.5" PACKAGE, DESIGNED FOR 0.5 GHz TO 18 GHz OPERATION.

**SPECIFICATIONS:**

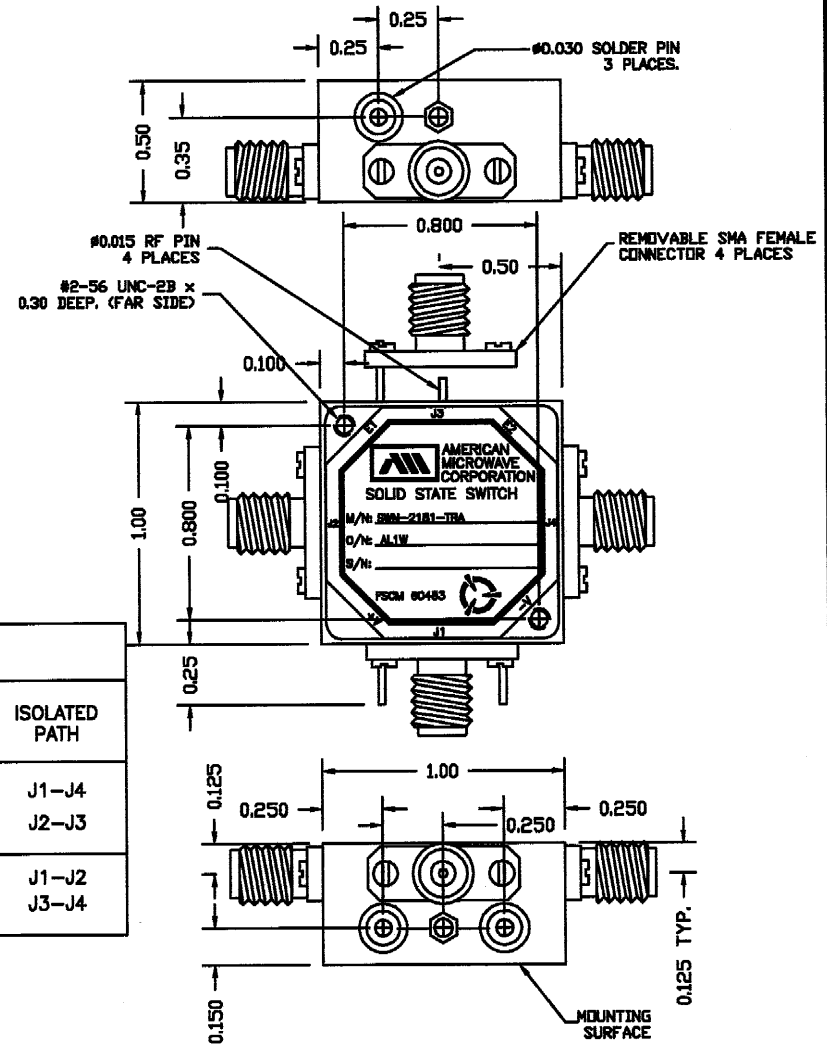
- FREQUENCY: . . . . . 0.5 GHz TO 18 GHz
- INSERTION LOSS: . . . . . 3.5 dB MAX. @ 18 GHz
- ISOLATION: . . . . . 0.5 GHz TO 18 GHz: 60 dB MINIMUM
- VSWR: . . . . . IN/OUT: 2.0:1
- SPEED: . . . . . DELAY ON: 75ns TYPICAL, 100ns MAX.  
 DELAY OFF: 75ns TYPICAL, 100ns MAX.
- OPERATING POWER INPUT: . . . . . +30 dBm (1 WATT) 75 W PEAK (1 u sec PULSE WIDTH)
- SURVIVAL POWER: . . . . . +33 dBm, 100 W PEAK (1 usec PULSE WIDTH)
- POWER SUPPLY: . . . . . +5V @ 100 mA MAXIMUM  
 -5V @ 100 mA MAXIMUM
- CONTROL: . . . . . SEE TABLE I
- SIZE: . . . . . 1.00 (L) x 1.00 (W) x 0.50 (H)
- WEIGHT: . . . . . 1.5 OUNCES TYPICAL

**OPTIONS:**

- SINGLE CONTROL WITH SOLDER PIN STANDARD
- IND-SP . . . . . INDEPENDANT CONTROL WITH SOLDER PIN
  - 10M18 . . . . . 10 MHz TO 18 GHz (INSERTION LOSS INCREASES BY 1.5db AT 10 MHz AND 0.5db AT 18 GHz)
  - 100M18 . . . . . 100 MHz TO 18 GHz (INSERTION LOSS INCREASES BY 1.5db AT 100 MHz AND 0.5db AT 18 GHz)
  - 118 . . . . . 1 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
  - 218 . . . . . 2 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
  - 412 . . . . . 4 GHz TO 12.4 GHz (NO CHANGE IN INSERTION LOSS)
  - 618 . . . . . 6 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
  - 1218 . . . . . 12 GHz TO 18 GHz (NO CHANGE IN INSERTION LOSS)
  - 100M20 . . . . . 100 MHz TO 20 GHz (INSERTION LOSS INCREASES BY 1.5db AT 100 MHz AND 1.0db AT 20 GHz)
  - 220 . . . . . 2 GHz TO 20 GHz (INSERTION LOSS INCREASES BY 1.0db AT 20 GHz)
  - 1020 . . . . . 10 GHz TO 20 GHz (INSERTION LOSS INCREASES BY 1.0db AT 20 GHz)
  - B01 . . . . . -12V POWER SUPPLIES
  - B02 . . . . . -15V POWER SUPPLIES
  - B03 . . . . . REVERSE LOGIC
  - B05 . . . . . HIGH SPEED, TURNON/TURNOFF 20 nsec MAXIMUM WHEN APPLICABLE OR OPTION HS
  - B06 . . . . . HIGH POWER - SPECIFY CW POWER, PEAK POWER, PULSE WIDTH, DUTY CYCLE, RF FREQUENCY AND BANDWIDTH
  - B07 . . . . . CUSTOM DESIGNED PRODUCT- SPECIFY INITIALS OF CUSTOMER
  - B08 . . . . . LOW VIDEO TRANSIENTS - SPECIFY VIDEO BANDWIDTH
  - B09 . . . . . LOW INSERTION LOSS VERSION
  - B10 . . . . . HIGHER ISOLATION VERSION

| TABLE I |           |                |                |
|---------|-----------|----------------|----------------|
|         | TTL LOGIC | LOW LOSS PATH  | ISOLATED PATH  |
| 0       | 0         | J1-J2<br>J3-J4 | J1-J4<br>J2-J3 |
| 1       | 1         | J1-J4<br>J2-J3 | J1-J2<br>J3-J4 |

| REVISIONS |      |                  |        |          |
|-----------|------|------------------|--------|----------|
| ZONE      | REV. | DESCRIPTION      | DATE   | APPROVED |
|           | -    | ORIGINAL RELEASE | 7/1/99 |          |



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

**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

ALL DIMENSIONS ARE IN INCHES

TOLERANCES:  
 X.XX ±0.020  
 X.XXX ±0.010

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

|              |        |  |                       |
|--------------|--------|--|-----------------------|
| CONTRACT NO. |        | AMERICAN MICROWAVE CORPORATION<br>FREDERICK, MARYLAND          |                       |
| APPROVALS    | DATE   | TITLE  |                       |
| DRAWN<br>WSP | 7/1/99 | OUTLINE DRAWING<br>SWN-2181-TRA OPTION AL1W<br>TRANSFER SWITCH |                       |
| CHECKED      |        | SIZE   | REV.                  |
| ISSUED       |        | FSCM NO.<br>A 60483  | DWG NO.<br>100-4708-5 |
| SCALE N/S    |        | SHEET 1 of 1   |                       |