

DESCRIPTION

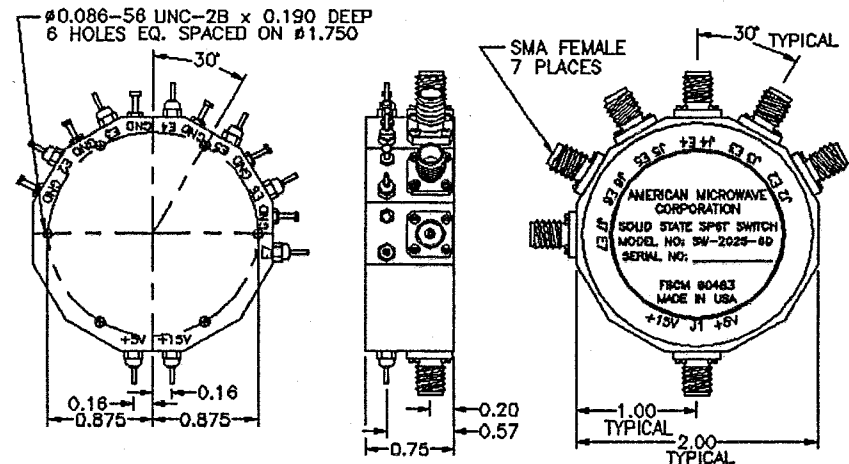
AMC MODEL SW-2025-6D IS A REFLECTIVE SP6T SWITCH MODULE WITH INTEGRAL TTL DRIVER, DESIGNED FOR HIGH RELIABILITY APPLICATIONS SUCH AS SHIPBOARD RADARS WHERE SWITCHING SPEED, ISOLATION AND SPECTRAL PURITY ARE OF EXTREME IMPORTANCE.

SPECIFICATIONS

- FREQUENCY RANGE 2.0-2.5 GHz MINIMUM
- INSERTION LOSS 1.5 dB MAXIMUM
- INSERTION LOSS BALANCE 0.4 dB MAXIMUM
- INSERTION LOSS VARIATION OVER TEMPERATURE: ±0.1 dB MAXIMUM OVER OPERATING TEMPERATURE RANGE
- INSERTION LOSS VARIATION OVER FREQUENCY: ±0.1 dB MAXIMUM
- ISOLATION 40 dB MINIMUM
- VSWR (ON) 1.4:1 MAXIMUM
- RF POWER +30 dBm CW MAXIMUM
- SWITCHING TIME
 - RISE (10% RF TO 90% RF) 40 ns MAXIMUM
 - FALL (90% RF TO 10% RF) 40 ns MAXIMUM
 - ON (50% TTL TO 90% RF) 400 ns MAXIMUM
 - OFF (50% TTL TO 10% RF) 400 ns MAXIMUM
- SETTling TIME
 - ON (90% TO WITHIN ±0.25 dB OF INSERTION LOSS) 0.7 μs MAXIMUM
 - OFF (10% TO MINIMUM ISOLATION REQUIREMENT) 1.0 μs MAXIMUM
- VOLTAGE TRANSIENTS 1 Vpp MAXIMUM ACROSS 50Ω LOAD
- CONTROLS STANDARD TTL COMPATIBLE
6 INDIVIDUAL CONTROLS
LOGIC "0" = INSERTION LOSS
LOGIC "1" = ISOLATION
(SEE TRUTH TABLE, ON SHEET 2 OF 2)
- HARMONIC DISTORTION PRODUCTS 65 dBc MINIMUM
- SPURIOUS SIGNALS/SPECTRAL PURITY
(AM/PM SIDEBANDS IN OPERATING BAND 2-2.5 GHz) 100 dB BELOW THE OUTPUT SIGNAL LEVEL
IN NON OPERATING BAND
(100 MHz-2 GHz & 2.5 TO 10 GHz) 65 dB BELOW THE OUTPUT SIGNAL LEVEL
- RF LEAKAGE
 - RADIATIVE -90 dBm/SQUARE FOOT,
1 FOOT DISTANCE APPROXIMATELY
 - CONDUCTIVE -90 dBm ON SUPPLY AND CONTROL LINES.
- RADIATION SUSCEPTIBILITY ≥ -76 dBm FOR RF INTERFERENCE FIELD OF
-20 dBm/SQUARE FOOT
- CONDUCTED SUSCEPTIBILITY ≥ -76 dBm FOR RF INTERFERENCE LEVEL
OF -20 dBm ON DC POWER LINES
- CONDUCTED SUSCEPTIBILITY (INTERMODULATION) ≥ -85 dBm FOR -20 dBm RF
INTERFERENCE LEVEL ON DC POWER LINES
- POWER SUPPLY +5VDC ±5% @ 120 mA MAXIMUM
+15VDC ±5% @ 40 mA MAXIMUM
(OVER VOLTAGE PROTECTED)
- CONNECTORS
 - RF INPUT/OUTPUT SMA FEMALE
 - POWER SOLDER PIN
 - CONTROL SOLDER PIN
- SIZE 2" DIAMETER x 0.75" THICK

ZONE		REV.	DESCRIPTION	DATE	APPROVED
A			ORIGINAL RELEASE, JOB # 10358-1E	11/22/92	<i>[Signature]</i>

MECHANICAL OUTLINE



NOTES:

- 1) DIMENSIONS ARE IN INCHES
- 2) TOLERANCES: X.XX ±0.020
X.XXX ±0.010
- 3) WEIGHT: APPROX. 8 OZ


- 4) MATERIALS PROCESS AND PARTS TO: MIL-T-19500, MIL-M-38510 CLASS B, MIL-F-18870 JANTX TYPE, ER COMPONENTS
- 5) REQUIREMENT MIL-STD-454 (5 AND 9), MIL-F-18870

ENVIRONMENTAL RATINGS

- TEMPERATURE 0°C TO +65°C (OPERATING)
-55°C TO +70°C (STORAGE)
- HUMIDITY MIL-STD-202, METHOD 103, CONDITION B
- SHOCK MIL-S-901 GRADE A, CLASS I OR II
- VIBRATION MIL-S-167, TYPE 1 VIBRATION, 0.1G SINUSOIDAL 25 Hz TO 2000 Hz
- MTBF 1 x 10⁶ HOURS, @ +50°C OPERATION

ENVIRONMENTAL STRESS SCREENING (ESS)

- TEMPERATURE CYCLES 10 CYCLES, 1/2 HOUR SOAK MINUTE, -55°C TO +85°C
- TEMPERATURE SHOCK 4 CYCLES, -55°C TO +85°C
- VIBRATION 10 G @ 60 Hz FOR 1 MINUTE, 3 AXIS
- BURN IN (OPERATING) MIL-STD-883 METHOD 1015.4 TEST CONDITION B,
160 HOURS @ 125°C JUNCTION TEMPERATURE (105°C AMBIENT)
- ESS (NEXT HIGHER ASSEMBLY)
 - THERMAL 5 CYCLES, 5°C PER MINUTE, -55°C TO +55°C.
 - RANDOM VIBRATION 20 TO 2000 Hz AND 6 G RMS, 10 MINUTES PER AXIS AT +55°C/-55°C

		AMERICAN MICROWAVE CORPORATION 7311G GROVE RD., FREDERICK, MD. 21701 TEL: (301) 662-4700 FAX: (301) 662-4938		
		PRODUCT FEATURE SW-2025-6D (E-BAND) 2.0-2.5 GHz, REFLECTIVE SOLID STATE SP6T SWITCH MODULE		
APPROVALS DRAWN: <i>WSP</i> CHECKED: <i>[Signature]</i>	DATE 11/22/92	SIZE A	SHEET 1 OF 2	DWG. # 100-2909

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