REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	ORIGINAL RELEASE, NEW DEVELOPMENT	11/22/92	

DESCRIPTION

AMC MODEL SWM-DC20-2D IS A REFLECTIVE GaAs MMIC SPDT SWITCH/MODULATOR WITH INTEGRAL TTL DRIVER, DESIGNED FOR ULTRA BROAD-BAND, FAST SWITCHING TIME, AND LOW DC POWER CONSUMPTION, PACKAGED IN A LOW PROFILE HOUSING.

SPECIFICATIONS

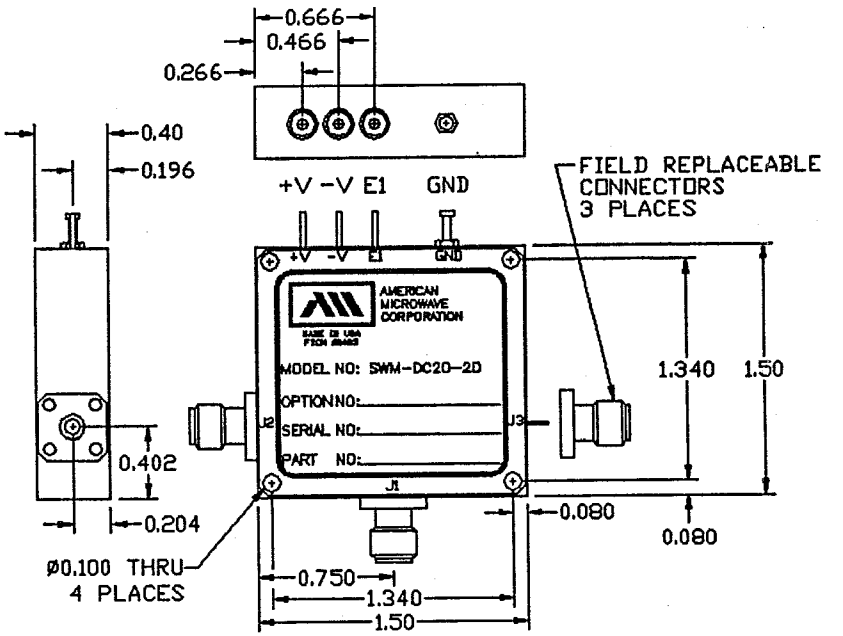
- FREQUENCY RANGE ..... DC-20 GHz
- INSERTION LOSS ..... DC-10 GHz, 2.2 dB MAXIMUM
  10-18 GHz, 2.8 dB MAXIMUM
  18-20 GHz, 3.5 dB MAXIMUM
- ISOLATION ..... DC-10 GHz, 50 dB MINIMUM
  10-18 GHz, 42 dB MINIMUM
  18-20 GHz, 40 dB MINIMUM
- VSWR (ON) ..... 2:1 MAXIMUM
- SWITCHING TIME
  - RISE (10% RF TO 90% RF) ..... 10 ns MAXIMUM
  - FALL (90% RF TO 10% RF) ..... 10 ns MAXIMUM
  - ON (50% TTL TO 90% RF) ..... 20 ns MAXIMUM
  - OFF (50% TTL TO 10% RF) ..... 20 ns MAXIMUM
- RF POWER RATINGS (IDB COMP.)
  - 0.5-20 GHz ..... +25 dBm TYPICAL
  - 0.05 GHz ..... +18 dBm TYPICAL
- CONTROL ..... TTL COMPATIBLE, UNITY LOAD
  SINGLE CONTROL (TOGGLE)
  (SEE LOGIC TABLE)
- POWER SUPPLY ..... +7VDC TO +18VDC ±5% @ 40 mA MAXIMUM
  -7VDC TO -18VDC ±5% @ 40 mA MAXIMUM
- CONNECTORS
  - RF INPUT/OUTPUT ..... FIELD REPLACEABLE SMA (FEMALE)
  - POWER ..... SOLDER PIN
  - CONTROL ..... SOLDER PIN

  NOTE: RF CONNECTORS CAN BE PLACED SIDE BY SIDE OR IN ANGLE. (CONSULT FACTORY FOR AVAILABLE MECHANICAL OPTIONS)
- SIZE ..... 1.50" x 1.50" x 0.40"

AVAILABLE OPTIONS

A01 ..... 50Ω CONTROL IMPEDANCE
A02 ..... 100Ω CONTROL IMPEDANCE
A03 ..... HERMETIC SEALING (MIL-STD-883)
A04 ..... ±5VDC POWER SUPPLY
A05 ..... INVERSE CONTROL LOGIC (LOGIC "0"= J1-J2 PATH ON)
A06 ..... SINGLE ENDED ECL CONTROL LOGIC
A07 ..... BALANCED ECL CONTROL LOGIC
A08 ..... DIFFERENTIAL TTL CONTROL LOGIC (RS-422 LOGIC FAMILY)
A09 ..... HIGH ISOLATION (CONSULT FACTORY)
A10 ..... SMC MALE CONTROL CONNECTOR
A11 ..... SMA FEMALE CONTROL CONNECTOR
A12 ..... OTHER POWER SUPPLIES (CONSULT FACTORY)

MECHANICAL OUTLINE



NOTES:
1) DIMENSIONS ARE IN INCHES
2) TOLERANCES: X.XX ±0.020
   X.XXX ±0.010
3) WEIGHT: APPROX. 1.5 OZ

LOGIC TABLE		
E1	J1-J2	J1-J3
1	ON	OFF
0	OFF	ON

ENVIRONMENTAL RATINGS

- **TEMPERATURE** ..... -55°C TO +95°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

APPROVALS	DATE
DRAWN W.S.P.	11/22/92
CHECKED	11/22/92

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PRODUCT FEATURE
SWM-DC20-2D
DC-20 GHz, GaAs MMIC, REFLECTIVE, ULTRA BROAD-BAND SPDT SWITCH/MODULATOR

SIZE A	SHEET 1 OF 2	DWG. # 100-2915