

## DESCRIPTION

AMC MODEL AGH-4080-60DD-120 IS A OVER-OCTAVE BAND VARIABLE ATTENUATOR/MODULATOR, CONTROLLED BY 8 BIT POSITIVE TRUE BINARY LOGIC WITH 120 dB DYNAMIC RANGE.

## SPECIFICATIONS

- FREQUENCY RANGE.....4.0-8.0 GHz
- INSERTION LOSS.....4.0-8.0 GHz 5.0 dB MAXIMUM  
3.0-9.0 GHz 5.5 dB MAXIMUM
- ATTENUATION FLATNESS ( $\pm$ dB MAXIMUM)

| FREQUENCY RANGE | 10 dB | 20 dB | 40 dB | 60 dB | 80 dB | 120 dB |
|-----------------|-------|-------|-------|-------|-------|--------|
| 4.0-8.0 GHz     | 0.5   | 0.8   | 1.5   | 1.6   | 2.5   | 3.2    |
| 3.0-9.0 GHz     | 0.7   | 1.5   | 3.0   | 3.5   | 5.0   | 7.0    |

- ATTENUATION ACCURACY.....0-30 dB  $\pm$ 0.5 dB MAXIMUM  
(MONOTICITY IS GUARANTEED) 30-50 dB  $\pm$ 1.0 dB MAXIMUM  
50-60 dB  $\pm$ 1.5 dB MAXIMUM  
60-80 dB  $\pm$ 2.0 dB MAXIMUM  
80-120 dB  $\pm$ 2.5 dB MAXIMUM
- TEMPERATURE COEFFICIENT..... $\pm$ 0.025 dB/C MAXIMUM
- SWITCHING TIME.....3  $\mu$ S MAXIMUM
- VSWR @ 0 dB ATTENUATION.....4.0-8.0 GHz 2.0:1 MAXIMUM  
3.0-9.0 GHz 2.2:1 MAXIMUM
- RF POWER RATINGS  
OPERATING POWER.....+20 dBm CW MAXIMUM  
SURVIVAL POWER.....+30 dBm CW MAXIMUM
- CONTROL.....8 BIT TRUE BINARY LOGIC
- POWER SUPPLY.....+12VDC @ 250 mA MAXIMUM  
-12VDC @ 100 mA MAXIMUM
- CONNECTORS  
RF INPUT/OUTPUT.....SMA FEMALE  
POWER AND CONTROLS.....15 PIN D TYPE SUBMINIATURE MALE,  
MATING CONNECTOR FURNISHED
- SIZE.....4.68" x 3.45" x 0.80"

## AVAILABLE OPTIONS

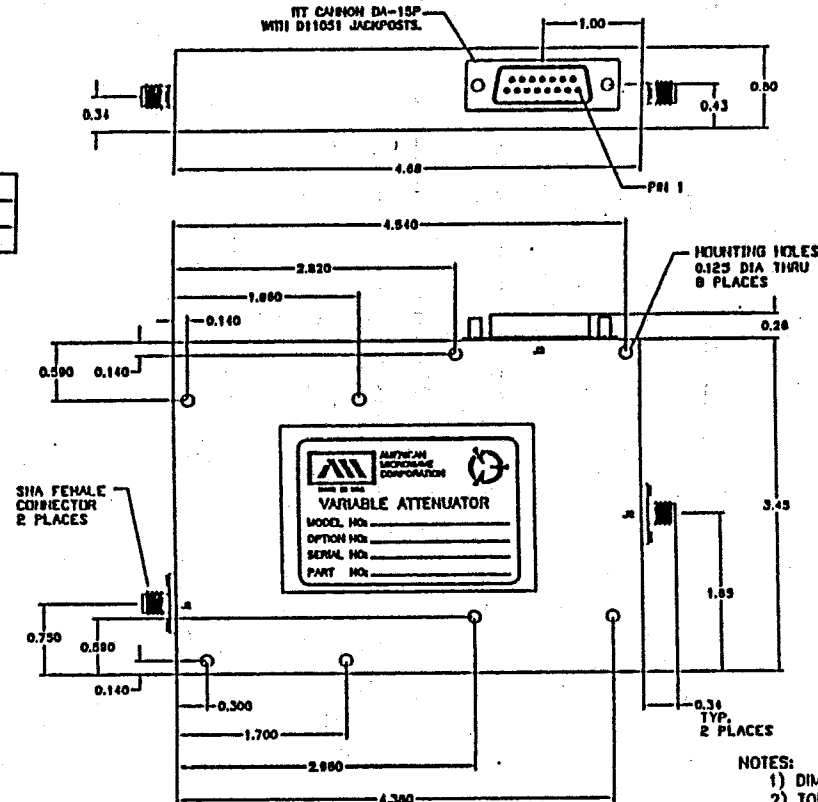
- A01.....TWO SMA MALE RF CONNECTORS
- A02.....J1 SMA MALE, J2 SMA FEMALE
- A03.....MOUNTING SURFACE UNPAINTED
- A04.....ANALOG CONTROLLED UNIT OF 20dB/VOLT. PIN 2 IS USED AS CONTROL. (OTHER CONTROL VOLTAGES AVAILABLE.) FOR SOLDER PIN UNITS REFER TO DATA SHEET AGH-4080-60DD-120.
- A05..... $\pm$ 15VDC POWER SUPPLY
- A06.....0-90 dB DYNAMIC RANGE
- A07.....EXTENDED BANDWIDTH (3.0-9.0 GHz)
- A08.....LATCHING STROBE (NOT AVAILABLE WITH OPTION A12)
- A09.....9 BIT TRUE BINARY LOGIC
- A10.....10 BIT TRUE BINARY LOGIC
- A11.....11 BIT TRUE BINARY LOGIC
- A12.....12 BIT TRUE BINARY LOGIC
- A13.....HIGH SPEED 500 ns MAXIMUM
- SCS.....SPECIAL CUSTOMER SPECIFICATIONS

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

Pw 11/2/97  
WP 11/2/97

| REVISONS |      | DATE                           | APPROVED |
|----------|------|--------------------------------|----------|
| ZONE     | REV. | DESCRIPTION                    |          |
|          | A    | JOB # 510206, HD COMMUNICATION | 11/11/97 |

## MECHANICAL OUTLINE




| 8 BIT TRUE BINARY LOGIC |                             |
|-------------------------|-----------------------------|
| J3 PIN FUNCTION         |                             |
| PIN #                   | FUNCTION                    |
| 1                       | GND                         |
| 2                       | LATCHING STROBE<br>OPTIONAL |
| 3                       | N/C                         |
| 4                       | GND                         |
| 5                       | 0.50 dB (LSB)               |
| 6                       | 1.0 dB                      |
| 7                       | 2.0 dB                      |
| 8                       | 4.0 dB                      |
| 9                       | 8.0 dB                      |
| 10                      | 16.0 dB                     |
| 11                      | 32.0 dB                     |
| 12                      | 64.0 dB (MSB)               |
| 13                      | +V                          |
| 14                      | -V                          |
| 15                      | N/C                         |

- NOTES:
- 1) DIMENSIONS ARE IN INCHES
  - 2) TOLERANCES: X.XX  $\pm$ 0.020  
X.XXX  $\pm$ 0.010  
APPROX. 7.0  $\mu$ M
  - 3) WEIGHT:

## 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

|   |                  |   |              |                 |
|---|------------------|---|--------------|-----------------|
|  |                  | <b>AMERICAN MICROWAVE CORPORATION</b><br>7311G GROVE RD., FREDERICK, MD. 21701<br>TEL: (301) 662-4700 FAX: (301) 662-4938 |              |                 |
|   |                  | PRELIMINARY PRODUCT FEATURE<br><b>AGH-4080-60DD-120</b><br>4.0-8.0 GHz, PROGRAMMABLE VARIABLE ATTENUATOR                  |              |                 |
| APPROVALS<br>DRAWN: <i>R.L.G.</i><br>CHECKED: <i>E. N. Mable</i>                      | DATE<br>11/12/97 | SIZE A  | SHEET 1 OF 2 | DWG. # 100-4263 |