

**DESCRIPTION:**

AMC MODEL AGH-6012D-D1956 IS AN OCTAVE BAND VOLTAGE CONTROLLED, LINEARIZED ATTENUATOR/MODULATOR THAT CONSISTS OF AN AGH SERIES MODULATOR AND AN INTEGRATED HYBRID LINEARIZER THAT PROVIDES 10dB/VOLT TRANSFER FUNCTION, DESIGNED FOR HIGH DYNAMIC RANGE AND HIGH ACCURACY APPLICATIONS.

**SPECIFICATIONS**

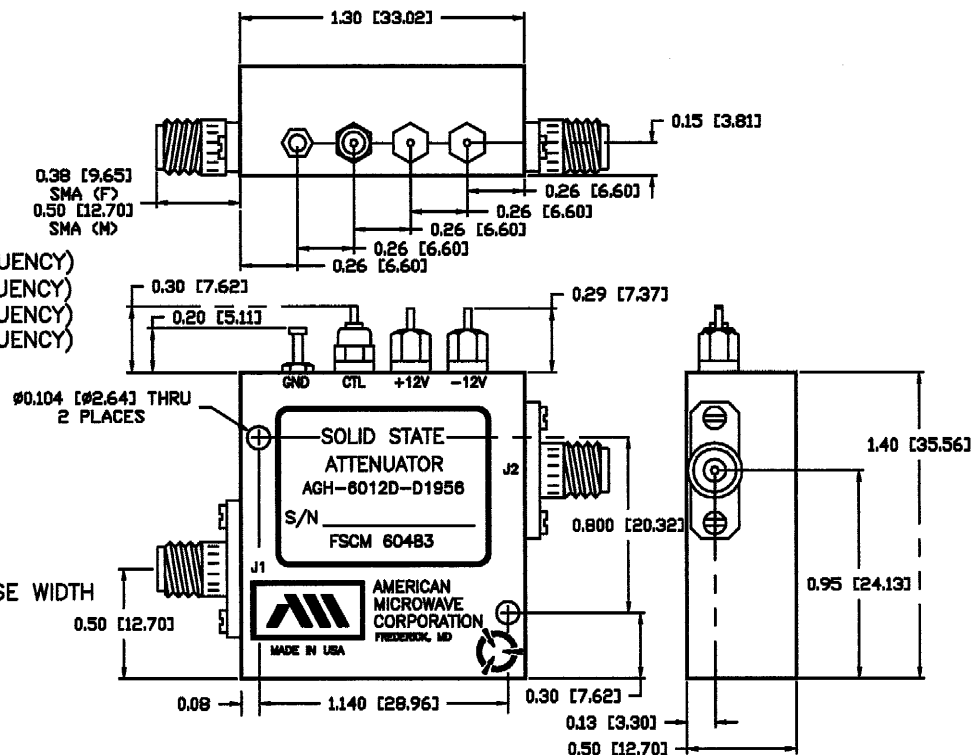
- **FREQUENCY RANGE:** ..... 6.0 GHz TO 12.0 GHz  
(4.5 GHz TO 13.5 GHz  
EXTENDED FREQUENCY RANGE AVAILABLE)
- **INSERTION LOSS:** ..... 2.7 dB (2.8 dB FOR EXTENDED FREQUENCY)
- **VSWR:** ..... 1.8:1 (2.2:1 FOR EXTENDED FREQUENCY)
- **FLATNESS:** ..... 10 dB ±0.7 dB (±0.9 dB FOR EXTENDED FREQUENCY)  
20 dB ±1.0 dB (±1.5 dB FOR EXTENDED FREQUENCY)  
40 dB ±1.5 dB (±3.0 dB FOR EXTENDED FREQUENCY)  
60 dB ±1.6 dB (±3.5 dB FOR EXTENDED FREQUENCY)
- **ATTENUATION RANGE:** ..... 60 dB
- **ATTENUATION ACCURACY:** ..... 0-30 dB ±0.5 dB  
30-50 dB ±1.0 dB  
50-60 dB ±1.5 dB
- **MONOTONICITY:** ..... GUARANTEED
- **TEMPERATURE COEFFICIENT:** ..... ±0.025 dB/°C MAXIMUM
- **POWER HANDLING:**  
(WITHOUT DEGRADATION) ..... 100 mW CW OR PEAK (WITHOUT DEGRADATION)  
(SURVIVAL -65°C TO +25°C) ..... 1W AVERAGE, 25 W PEAK 1 μsec MAXIMUM PULSE WIDTH
- **SWITCHING TIME:**  
ON ..... 1.6 μsec MAXIMUM  
OFF ..... 100 nsec MAXIMUM  
RISE ..... 1.6 μsec MAXIMUM  
FALL ..... 20 nsec MAXIMUM
- **CONTROL:** ..... VOLTAGE CONTROLLED (0 TO +6V)  
10 dB/VOLT TRANSFER FUNCTION
- **MODULATION BANDWIDTH:**  
SMALL SIGNAL: ..... 500 KHz  
LARGE SIGNAL: ..... 50 KHz
- **POWER SUPPLY:** ..... +12VDC ±5% @100 mA MAXIMUM  
-12VDC ±5% @ 25 mA MAXIMUM
- **CONNECTORS:**  
RF INPUT/OUTPUT: ..... SMA FEMALE  
POWER: ..... SOLDER PIN  
CONTROL: ..... SOLDER PIN
- **INPUT IMPEDANCE:** ..... 10 K OHMS
- **POWER SUPPLY REJECTION:** ..... LESS THAN 0.1 dB/VOLT CHANGE IN EITHER SUPPLY
- **SIZE:** ..... 1.30" x 1.40" x 0.50"
- **WEIGHT:** ..... 1 OUNCE

**ENVIRONMENTAL RATINGS:**

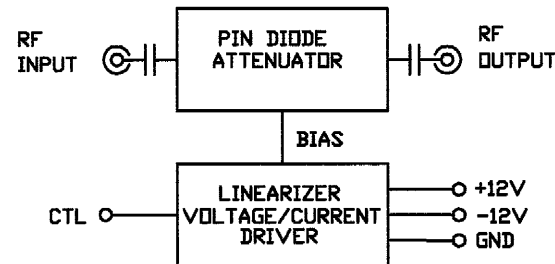
- **TEMPERATURE:** ..... -55°C TO +110°C (OPERATING)  
-65°C TO +125°C (STORAGE)
- **HUMIDITY:** ..... MIL-STD-202F, METHOD 103B COND. B (96 HRS AT 95%)
- **SHOCK:** ..... MIL-STD-202F, METHOD 213B COND. B (75G 6 msec)
- **VIBRATION:** ..... MIL-STD-202F, METHOD 204D COND. B (0.08" DOUBLE AMPLITUDE  
OR 15 G WHICHEVER IS LESS)
- **ALTITUDE:** ..... MIL-STD-202F, METHOD 105C COND. B (50,000 FEET)
- **TEMPERATURE CYCLE:** ..... MIL-STD-202F, METHOD 107D COND. A (5 CYCLES)

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

| REVISIONS |      |                  |          |          |
|-----------|------|------------------|----------|----------|
| ZONE      | REV. | DESCRIPTION      | DATE     | APPROVED |
| -         | -    | ORIGINAL RELEASE | 10/20/99 |          |



**BLOCK DIAGRAM**



ALL DIMENSIONS ARE IN INCHES  
TOLERANCES:

X.XX ±0.020  
X.XXX ±0.010

|              |          |  |          |              |
|--------------|----------|--|----------|--------------|
| PART NO.     |          | AMERICAN MICROWAVE CORPORATION<br>FREDERICK, MARYLAND        |          |              |
| APPROVALS    | DATE     | TITLE  |          |              |
| DRAWN<br>WSP | 10/20/99 | PRODUCT FEATURE<br>AGH-6012D-D1956<br>SOLID STATE ATTENUATOR |          |              |
| CHECKED      |          | SIZE   | FSCM NO. | DWG NO.      |
| ISSUED       |          | A  | 60483    | 100-5150     |
|              |          | SCALE  | N/S      | SHEET 1 of 3 |