

# DESCRIPTION

AMC MODEL AGH-1020-60DD-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 ..... 1.0-2.0 GHz
- INSERTION LOSS ..... 1.0-2.0 GHz 4.0 dB MAXIMUM  
0.75-2.25 GHz 5.0 dB MAXIMUM
- ATTENUATION FLATNESS ( $\pm$ dB MAXIMUM)

FREQUENCY RANGE	10 dB	20 dB	40 dB	60 dB	80 dB	120 dB
1.0-2.0 GHz	0.5	0.8	1.5	1.6	2.5	3.2
0.75-2.25 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 ..... 1.0-2.0 GHz 2.0:1 MAXIMUM  
0.75-2.25 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 ..... 5.81" x 3.97" x 0.80"

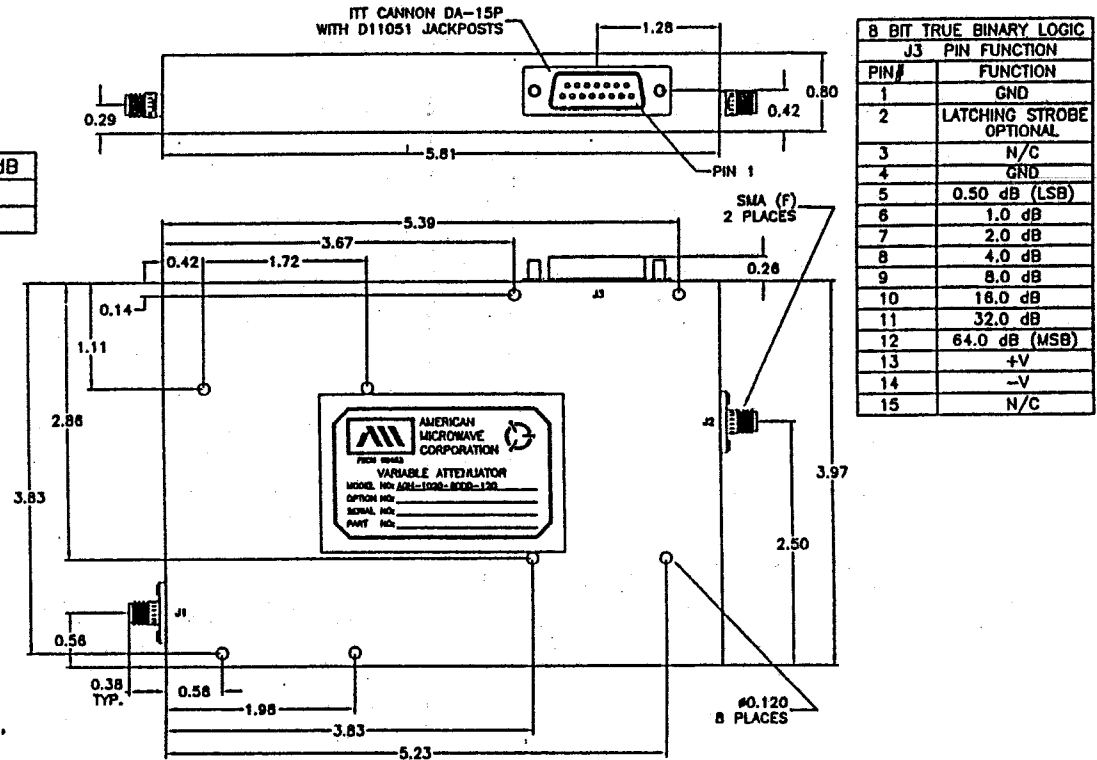
## AVAILABLE OPTIONS

- 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-1020-60D-120.
- A05 .....  $\pm$ 15VDC POWER SUPPLY
- A06 ..... 0-90 dB DYNAMIC RANGE
- A07 ..... EXTENDED BANDWIDTH (0.75-2.25 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

REVISONS		DESCRIPTION	DATE	APPROVED
ZONE	REV.			
	A	ORIGINAL RELEASE	11/17/97	

## MECHANICAL OUTLINE



8 BIT TRUE BINARY LOGIC	
J3 PIN #	PIN FUNCTION
1	GND
2	LATCHING STROBE 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

## 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

APPROVALS	DATE
DRAWN <i>B.L.G.</i>	11/20/97
CHECKED <i>L.M.</i>	11/20/97

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PRELIMINARY PRODUCT FEATURE

AGH-1020-60DD-120

1.0-2.0 GHz, PROGRAMMABLE VARIABLE ATTENUATOR

SIZE A SHEET 1 OF 2 DWG. # 100-4266

*Rev 11/20/97*  
*W.P. 11/20/97*