



**Model: AG-D000-HD**

Description:	.....	Digital Controlled PIN Attenuator
Operating Frequency:	.....	2 - 4 GHz
Insertion Loss (0dB Attn. Ref.):	.....	1.7 dB Max
Attenuation Range:	.....	0 - 60dB Nominal Min
Attenuation Flatness:	.....	0.6 dB PK-PK ..... up to 10 dB
	.....	1.6 dB PK-PK ..... up to 20 dB
	.....	2.8 dB PK-PK ..... up to 40 dB
	.....	3.0 dB PK-PK ..... up to 50 dB
	.....	3.4 dB PK-PK ..... up to 60 dB
Control Function:	.....	8 Bit Positive Binary TTL
	.....	(LSB=0.25 dB, MSB=32dB)
Transfer Function Accuracy:	.....	0 - 0.8 dB ..... ±50% Max
	.....	> 0.8 - 10 dB ..... ±0.40 dB Max
	.....	> 10 - 30 dB ..... ±0.50 dB Max
	.....	> 30 - 50 dB ..... ±0.90 dB Max
	.....	> 50 - 60 dB ..... ±1.20 dB Max
VSWR (all settings):	.....	1.45:1 Max
Settling Time ("±1dB of Target Setting"):	.....	500 ns Max, (5µs<PW<0.1s)
Power Handling:	.....	Operating ..... +20 dBm CW/Peak Max
	.....	Survival ..... +30 dBm CW/AVG Max
Connectors (RF):	.....	SMA (f), Removable
Connector (Supply & Controls):	.....	15-Pin D-Type Male
Temperature Coefficient (Over Operating Temperature):	.....	±0.025dB/°C Max
Power Supply (internally regulated):	.....	+12 to +15vdc @ 60mA Max
Impedance:	.....	50 Ohms Nominal
Quality:	.....	Best-Commercial-Grade

**Environmental Ratings:**

Temperature:	.....	{Operating: -40°C to +85°C} & {Storage: -50°C to +100°C}
Humidity:	.....	MIL-STD-202F, Method 103B, Cond. B (96 hours at 95% R.H.)
Shock:	.....	MIL-STD-202F, Method 213B, Cond. B (75G, 6mSec)
Vibration:	.....	MIL-STD-202F, Method 204D, Cond. B (.06" double amplitude, or 15G)
Altitude:	.....	MIL-STD-202F, Method 105C, Cond. B (50,000 Feet)
Temp. Shock:	.....	MIL-STD-202F, Method 107D, Cond. A (5 cycles)

**Available Options:**

(Units with listed options here may be subject to some specification tradeoffs from the standard, consult factory)

■ RF Connectors

- B1 [ J1 SMA (male) ]
- B2 [ All SMA (male) ]

■ Control Function Resolution

- E1 [ LSB = 1/8 dB <> 9-Bits <> "fractional steps" ]
- R1 [ LSB = 0.1 dB <> 10-Bits <> "decimal steps" ]
- E2 [ LSB = 1/16 dB <> 10-Bits <> "fractional steps" ]
- R2 [ LSB = 0.05 dB <> 11-Bits <> "decimal steps" ]
- E3 [ LSB = 1/32 dB <> 11-Bits <> "fractional steps" ]
- E4 [ LSB = 1/64 dB <> 12-Bits <> "fractional steps" ]

■ Transfer Functions

- F3 [ Inverse Logic ("00...00" = Max Attenuation) ]

■ Attenuation <> Limited Range

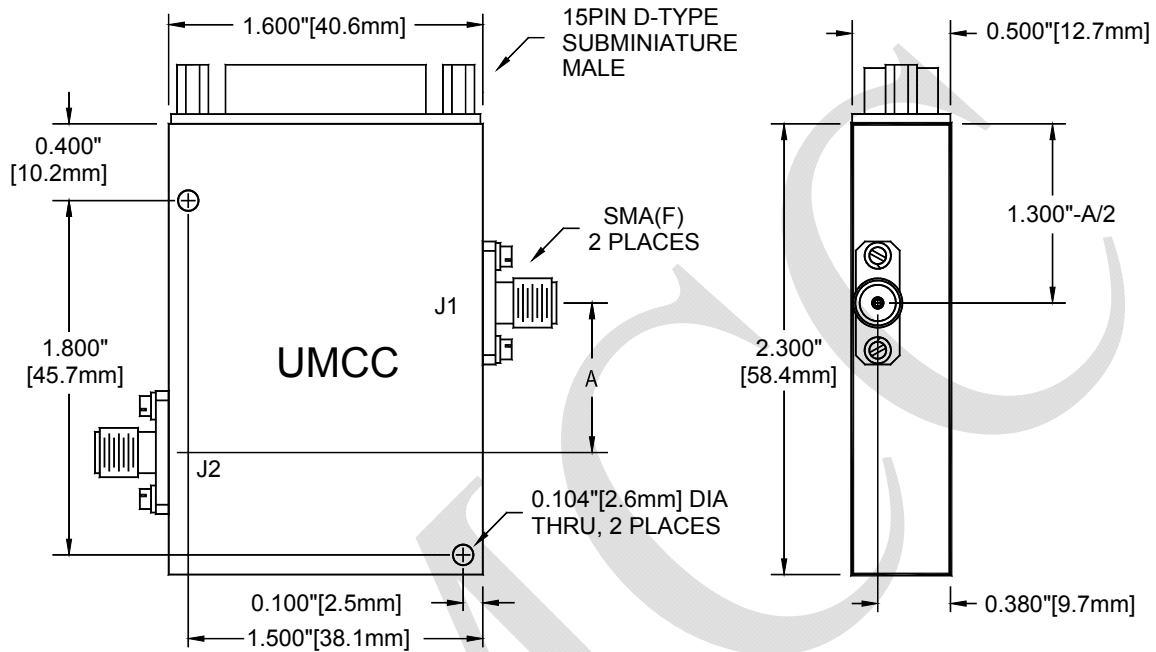
- G1 [ 31.875 dB Range <> LSB = 1/8 dB <> 8-Bits ]
- G2 [ 25.5 dB Range <> LSB = 0.1 dB <> 8-Bits ]



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**Outline**

("A" = 0.760" [19.3mm] <> Tolerances: ±0.015" [0.38mm] <> Weight = 2.4 oz [68g])



Pin-Out Function	
PIN	Function
1	N/C
2	N/C
3	N/C
4	N/C
5	0.25 dB
6	0.5 dB
7	1.0 dB
8	2.0 dB
9	4.0 dB
10	8.0 dB
11	16.0 dB
12	32.0 dB
13	+Vdc
14	N/C
15	GND (Chassis & Digital)

