



**Model: AT-L000-60D**

Description:	.....	Digital Controlled PIN Attenuator
Operating Frequency:	.....	1 – 8 GHz
Insertion Loss (0dB Attn. Ref.):	.....	3.8 dB Max
Attenuation Range:	.....	0 – 60 dB Nominal Min
Attenuation Flatness:	..... 0 – 20 dB.....	0.8 dB Peak-Peak Max
	..... >20 – 30 dB.....	1.0 dB Peak-Peak Max
	..... >30 – 40 dB.....	1.2 dB Peak-Peak Max
	..... >40 – 60 dB.....	1.4 dB Peak-Peak Max
Control Function:	.....	8 Bit Positive Binary TTL
	.....	(LSB = 0.25dB, MSB = 32dB)
Transfer Function Accuracy:	..... 0 – 30 dB.....	±0.5 dB Max
	..... >30 – 60 dB.....	±1.0 dB Max
VSWR (all settings):	.....	1.8:1 Max
Settling Time ("±1dB of Target Setting"):	.....	3µs Max (10µs<PW<0.1S)
Power Handling:	..... Operating.....	+20 dBm CW/Peak Max
	..... Survival.....	+30 dBm CW/Avg Max
Temperature Coefficient (Over Operating Range):	.....	±0.025 dB/°C
Power Supply (internally regulated):	.....	+12 to +15Vdc @ 150 mA
	.....	-12 to -15Vdc @ 60 mA
Connectors (RF):	.....	SMA (female), Removable
Connector (Supply & Controls):	.....	15-Pin D-Type Male
Impedance (Nominal):	.....	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) ]

■ Transfer Functions

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

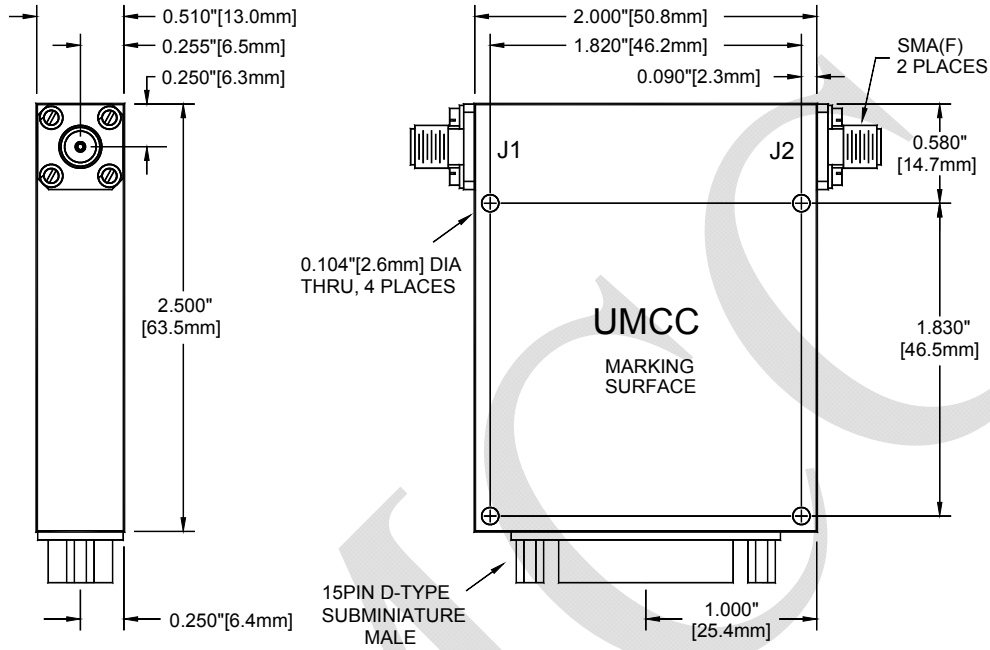
■ Control Function Resolution

- 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" ]



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**Outline**



(Tolerances:  $\pm 0.015$ " [0.38mm] <> Weight = 3.2oz [90.7g])

**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	-VDC
15	GND (Chassis & Digital)

