



**Model: AG-P000-30D**

Description:..... Digital Controlled PIN Attenuator  
Operating Frequency:..... 2 – 20 GHz  
Insertion Loss (0dB Attn. Ref.): ..... 4.0 dB Max  
Attenuation Range:..... 0 – 30 dB Nominal Min  
Attenuation Flatness:

|                                |      |      |      |
|--------------------------------|------|------|------|
| Attenuation (dB):              | ≤ 10 | ≤ 20 | ≤ 30 |
| Flatness(dB):<br>Peak-Peak Max | 1.4  | 2.5  | 3.7  |

Control Function: ..... 8 Bit Positive Binary TTL  
..... (LSB = 0.125dB, MSB = 16dB)  
Transfer Function Accuracy:..... 0 – 30 dB..... ±0.5 dB Max  
VSWR (all settings): ..... 1.9:1 Max  
Settling Time (“±1dB of Target Setting”):..... 1µs 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 @ 120 mA Max  
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:**

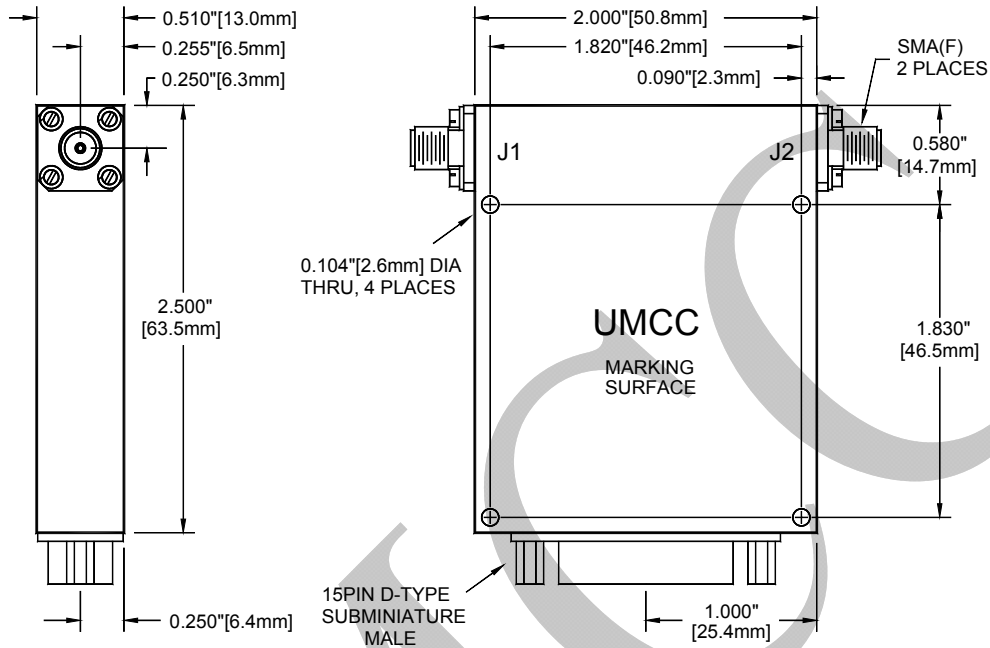
(Units with listed options here may be subject to some specification tradeoffs from the standard, consult factory)

- RF Connectors
  - B1** [ J1 SMA (male) ]
  - B2** [ All SMA (male) ]
- Transfer Functions
  - F3** [ Inverse Logic (“00...00” = Max Attenuation) ]
- Control Function Resolution
  - R1** [ LSB = 0.1 dB <> 9-Bits <> “decimal steps” ]
  - E2** [ LSB = 1/16 dB <> 9-Bits <> “fractional steps” ]
  - R2** [ LSB = 0.05 dB <> 10-Bits <> “decimal steps” ]
  - E3** [ LSB = 1/32 dB <> 10-Bits <> “fractional steps” ]
  - E4** [ LSB = 1/64 dB <> 11-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   | 0.125 dB                |
| 6   | 0.25 dB                 |
| 7   | 0.5 dB                  |
| 8   | 1.0 dB                  |
| 9   | 2.0 dB                  |
| 10  | 4.0 dB                  |
| 11  | 8.0 dB                  |
| 12  | 16.0 dB                 |
| 13  | +V                      |
| 14  | N/C                     |
| 15  | GND (Chassis & Digital) |

