



Model: AT-D000-HD

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|---|-------|--|
| 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 |
|  | ..... | -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)

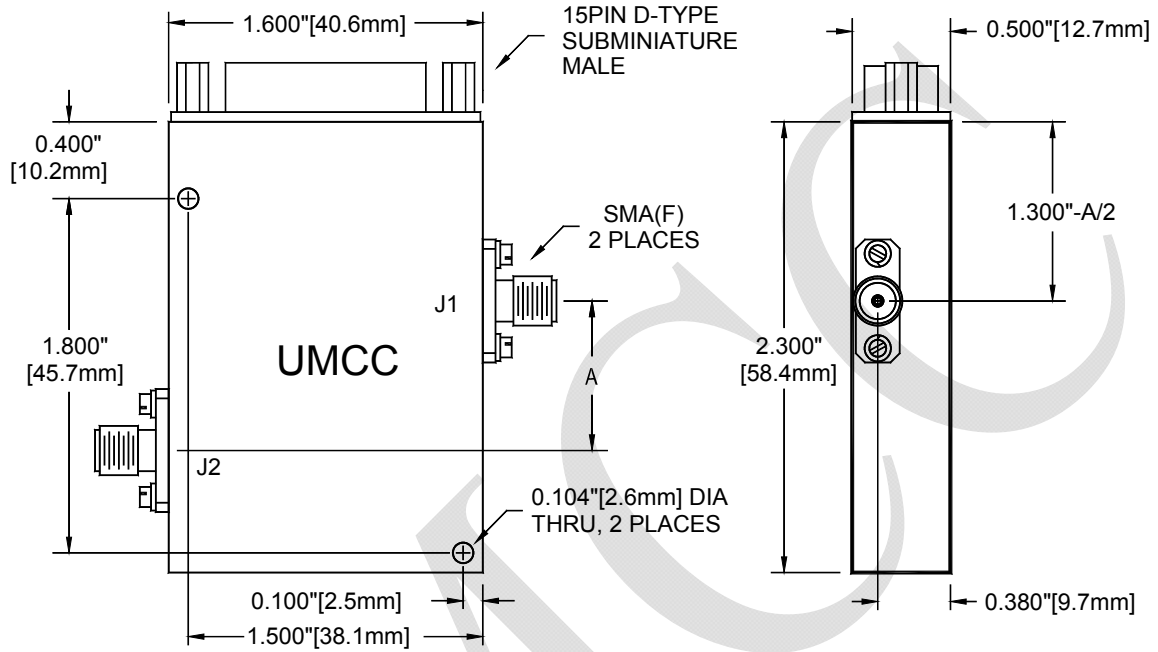
- RF Connectors
 - B1 [J1 SMA (male)]
 - B2 [All SMA (male)]
- Control Function Resolution
 - E1 [LSB = 1/8 dB <> 9-Bits <> “fractional steps”]
 - R1 [LSB = 0.1 dB <> 10-Bits <> “decimal steps”]
 - E2 [LSB = 1/16 dB <> 10-Bits <> “fractional steps”]
 - R2 [LSB = 0.05 dB <> 11-Bits <> “decimal steps”]
 - 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 | -VDC |
| 15 | GND (Chassis & Digital) |

