



Model: AE-D000-40D

| | | |
|---|-------|---------------------------------------|
| Description: | ..... | Digital Controlled PIN Attenuator |
| Operating Frequency: | ..... | 1.5 – 4.3 GHz |
| Phase-Invariant Frequency Region (± 10 Deg): | ..... | 1.95 – 3.8 GHz |
| Insertion Loss (0dB Attn. Ref.): | ..... | 1.8 dB Max |
| Attenuation Range: | ..... | 0 – 40 dB Nominal Min |
| Attenuation Flatness: | ..... | 0.5 dB Peak-Peak up to 10 dB |
|  | ..... | 0.9 dB Peak-Peak up to 20 dB |
|  | ..... | 1.2 dB Peak-Peak up to 30 dB |
|  | ..... | 1.5 dB Peak-Peak up to 40 dB |
| Control Function: | ..... | 8 Bit Positive Binary TTL |
|  | ..... | (LSB=0.25 dB, MSB=32dB) |
| Transfer Function Accuracy: | ..... | 0 – 0.8 dB $\pm 50\%$ Max |
|  | ..... | > 0.8 – 10 dB ± 0.40 dB Max |
|  | ..... | >10 - 30 dB ± 0.50 dB Max |
|  | ..... | > 30 - 40 dB ± 0.90 dB Max |
| VSWR (all settings): | ..... | 1.7:1 Max |
| Settling Time (“ ± 1 dB of Target Setting”): | ..... | 500 ns Max, ($5\mu s < PW < 0.1s$) |
| 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): | | ± 0.025 dB/ $^{\circ}$ 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 $^{\circ}$ C to +85 $^{\circ}$ C} & {Storage: -50 $^{\circ}$ C to +100 $^{\circ}$ 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

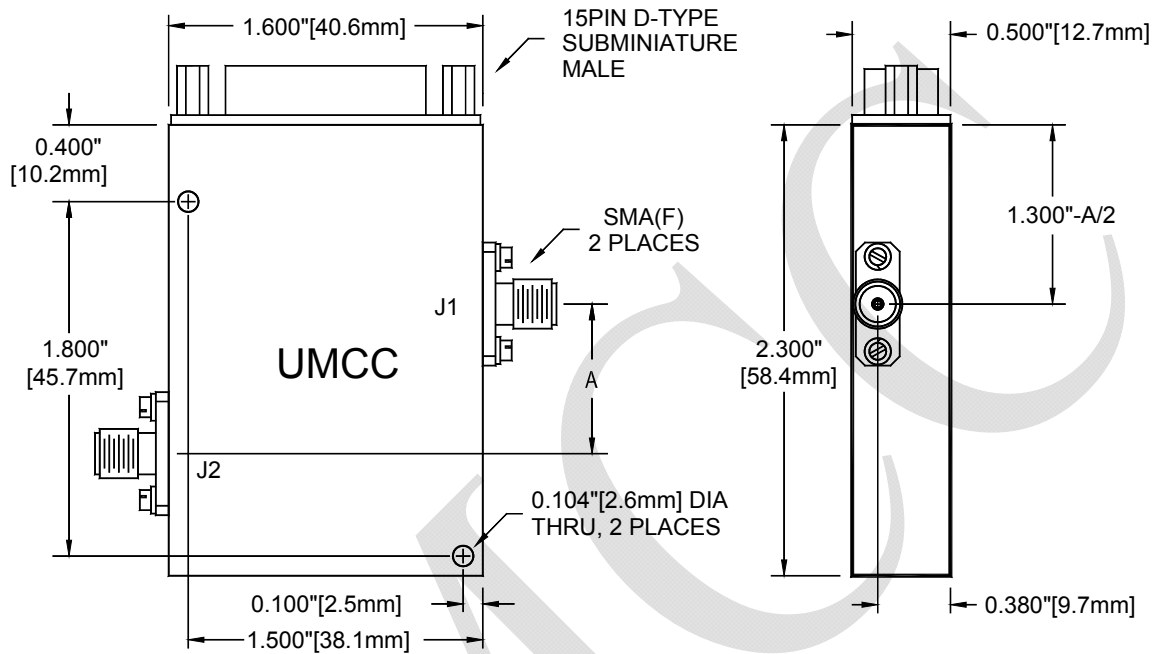
- E1 [LSB = 1/8 dB <> 9-Bits <> “fractional steps”]
- R1 [LSB = 0.1 dB <> 9-Bits <> “decimal steps”]
- E2 [LSB = 1/16 dB <> 10-Bits <> “fractional steps”]
- R2 [LSB = 0.05 dB <> 10-Bits <> “decimal steps”]
- E3 [LSB = 1/32 dB <> 11-Bits <> “fractional steps”]
- E4 [LSB = 1/64 dB <> 12-Bits <> “fractional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



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Outline

("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) |

