Universal Microwave Components Corp.
5702-D General Washington Drive Alexandria, VA 22312 <> Web: www.umcc111.com
E-mail: sales@umcc111.com <> Tel: (703) 642-6332 <> Fax: (703) 642-2568

Model: AG-P000-60D

Description: ..... Digital Controlled PIN Attenuator
Operating Frequency: ..... 2 – 20 GHz
Insertion Loss (0dB Attn. Ref.): ..... 7.8 dB Max
Attenuation Range: ..... 0 - 60 dB Nominal
Attenuation Flatness:

Attenuation (dB):	≤ 10	≤ 20	≤ 30	≤ 40	≤ 50	≤ 60
Flatness(dB): Peak-Peak Max	1.8	1.8	2.8	3.6	4.4	5.2

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): ..... 2:1 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/ºC
Power Supply (internally regulated): ..... +12 to +15Vdc @ 150 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
- **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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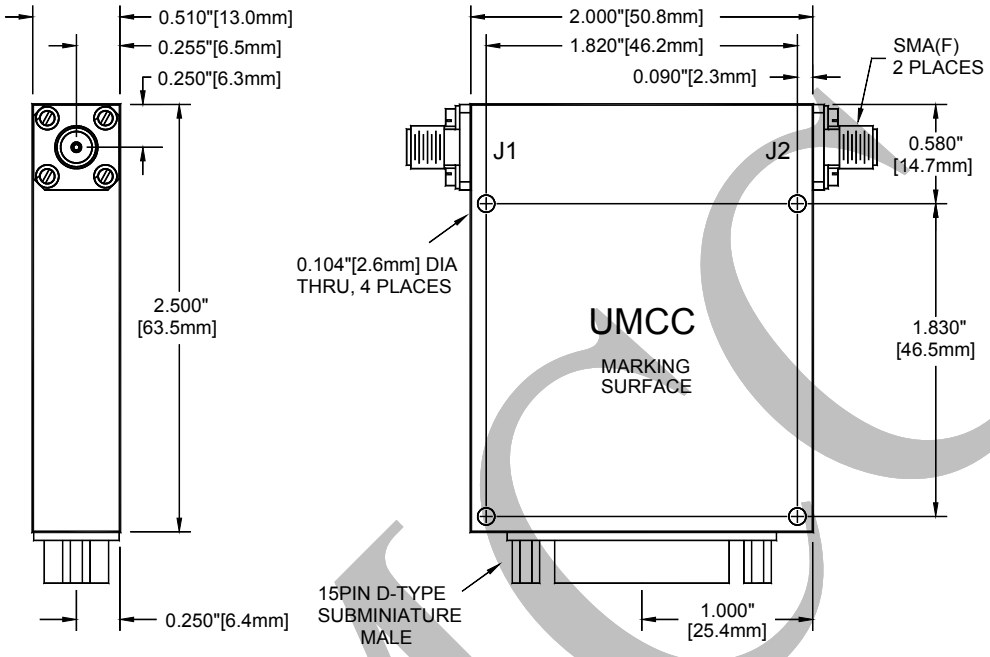
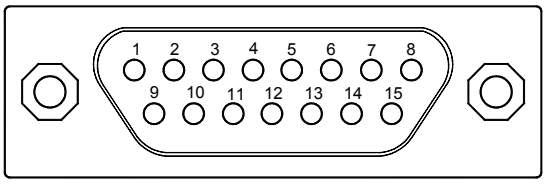
Outline



Weight	Tolerances
3.2 oz [90.7g]	±0.015" [±0.38mm]

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)



- Specifications are subject to change without notice