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: AE-A000-40D

Description:		Digital Controlled PIN Attenuator
Operating Frequency:		160 - 500 MHz
Phase-Invariant Frequency Region (<±10 Deg)..		260 - 500 MHz
Insertion Loss (0dB Attn. Ref.):		1.8 dB Max
Attenuation Range:		0 – 40 dB Nominal Min
Attenuation Flatness:	0.9 dB Peak-Peak	up to 10 dB
	1.3 dB Peak-Peak	up to 20 dB
	1.5 dB Peak-Peak	up to 40 dB
Control Function:		8 Bit Positive Binary TTL
		(LSB=0.25 dB, MSB=32 dB)
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 - 40 dB	±0.90 dB Max
VSWR (all settings):		1.6:1 Max
Settling Time ("±1dB of Target Setting"):		1µs Max, (10µs<PW<0.1s)
Power Handling:	Operating	+10 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/°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)]

■ 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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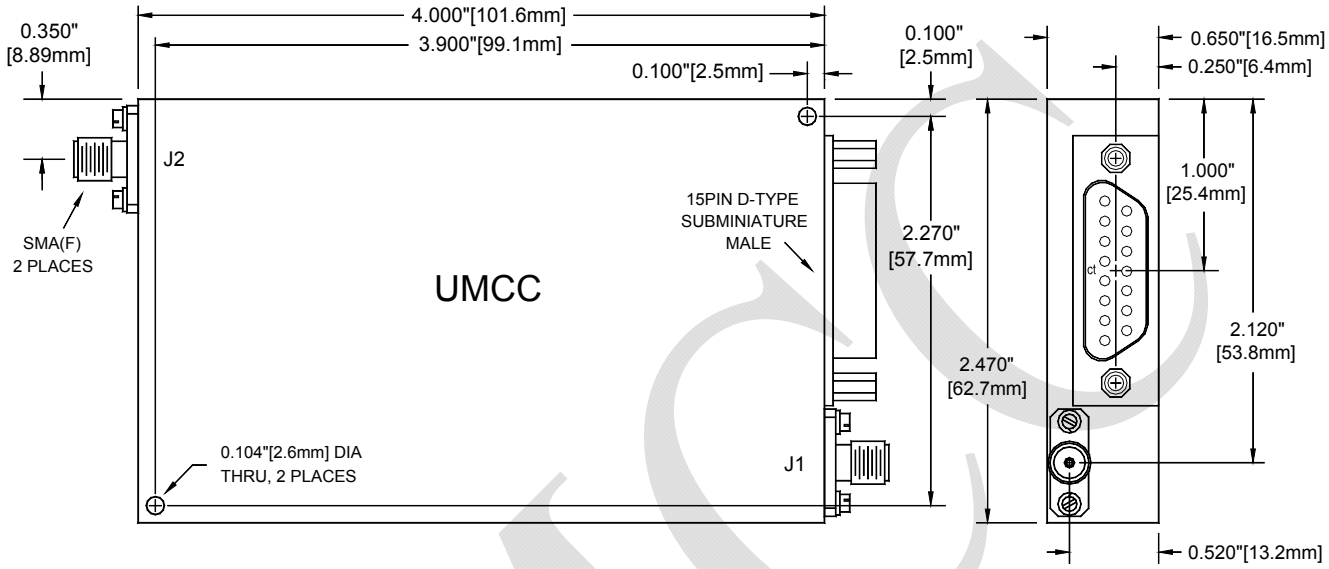
Outline

(Tolerances: ±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	-VDC
15	GND (Chassis & Digital)