CDAT-DC13G-64-10 is a single channel programmable attenuator designed for adjusting the amplitude of radio and microwave signals of bandwidths from DC to 13 GHz.

Features:

- DC to 13 GHz bandwidth
- Precise repeatability
- 10 Bit (1024 step) range

Specifications:

Frequency Range:	DC-13.0 GHz	
Attenuation Range:	64 dB	
Least Significant Bit (LSB):	0.0625 dB	
Attenuation Accuracy:	0 to 8 GHz	8 to 13 GHz
0-8 dB	1/8 dB	1/4 dB
8-48 dB	1/4 dB	1 dB
48-64 dB	3 dB	8 dB
Insertion loss:	5.5 dB Typ, 7 dB Max	
VSWR:	1.35:1 max	
Phase deviation consecutive step:	+/-2 ps max.	
Insertion delay:	0.3 to 0.6 ns	
Control data latch setup time:	3.5 ns	
Control data latch hold time:	1.5 ns	
Control propagation delay max.:	9 ns Max	
Attenuation switch time (10/90%):	35 ns Max	
Input power:	18 dBm Max	
Supply voltage requirement:	+5 (<10 mV noise)	
Supply current:	< 0.2 Amps	

Environmental Ratings:

Temperature:	-25°C to +85 °C Operating
	-55 °C to +125 °C Non-Operating
Vibration:	MIL-STD-202F, Method 204D Cond. B
Altitude:	MIL-STD-202F, Method 105C Cond. B
Temperature Cycle:	MIL-STD-202F, Method 107D Cond. A

Mechanical Specifications:

Parameter	Specification
Dimensions WxHxD	3.80X2.75X0.60 inches
RF Connectors In/Out	SMA-Female
DC Connector	D-SUB 15Pin
Material	Aluminum

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Digital Control PIN Attenuators
CDAT-DC13G-64-10

DRAWN:	DWG NO.:	REV CODE: Rev.1.0	CONNPHY Microwave Inc. www.connphy.com sales@qiidao.com
CHECKRD:	DATE: 08/07/15	SHEET : 1 OF 3	
ISSUED:	SIZE: A	SCALE : N / A	Notes: SPEC ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Programming:

The attenuation is equal to the 0.0625 dB step size times the 10 bit control word number. Each of the 10 bits corresponds to a separate attenuator element. These 10 elements are connected in a series configuration to give 1024 combinations 0 to 63.9375dB. The latch enable line (LE) is active (low) to latch the control word. The control word need not be latched if the user wishes to operate the latch transparently. Simply keep the latch line high and the attenuation state will follow the applied data.

Absolute Maximum Ratings:

Power into RF I/O Port A (top):	18 dBm
Power into RF I/O Port B (bottom):	25 dBm
DC voltage at RF I/O Port A (top):	+/- 1.8
DC voltage at RF I/O Port B (bottom):	+/-4.0 (+/-3.1V during power-down)
Voltage at TTL inputs:	-0.5 to 7.0
Supply voltage:	-0.5 to 7.0

Inputs and outputs are static sensitive. No warranty will be extended to damaged inputs or output drivers.

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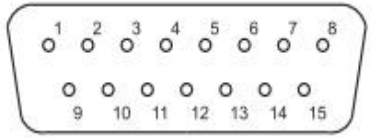
Altitude:	MIL-STD-202F, Method 105C Cond. B
Temperature Cycle:	MIL-STD-202F, Method 107D Cond. A

DC Connector PIN Assignment:

Pin	Function	Description
1	GND	
2		Latch enable active low
3-7		1/8dB, 1/2dB ,2dB,8dB,,32dB
8	+5V	
9	GND	
10-14		1/16dB,1/4dB,1dB,4dB,16dB
15	+5V	



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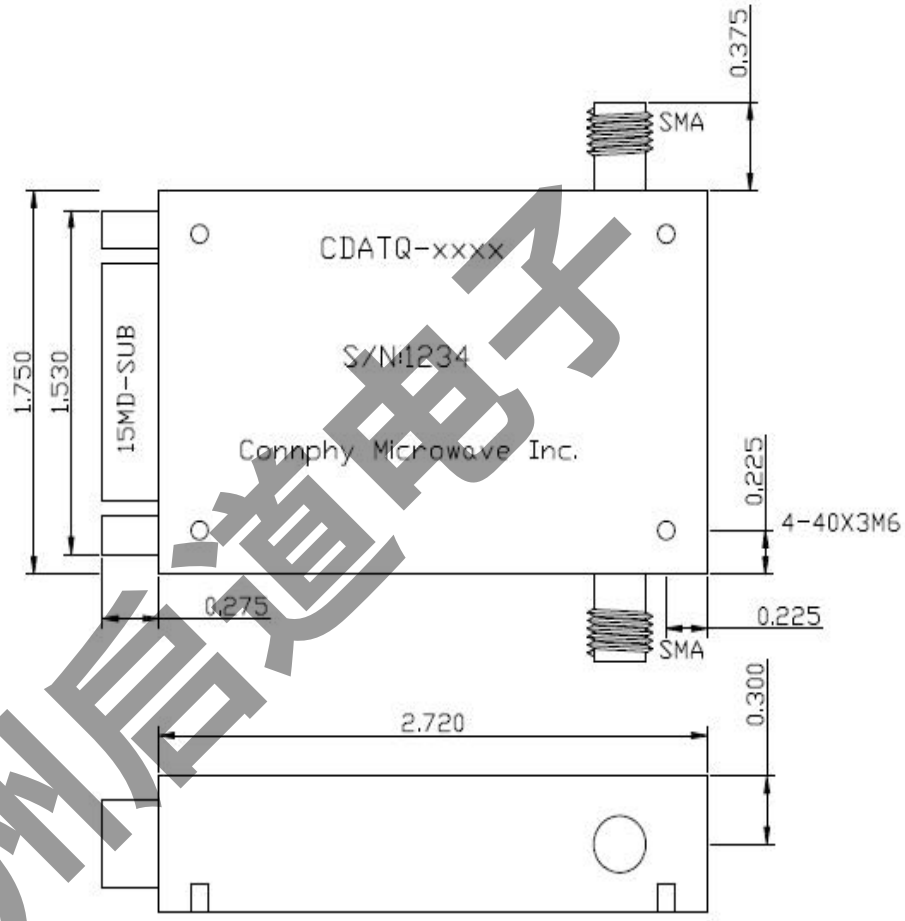
Digital Control PIN Attenuators CDAT-DC13G-64-10			
DRAWN:	DWG NO.:	REV CODE: Rev.1.0	CONNPHY Microwave Inc. www.connphy.com sales@qiidao.com
CHECKRD:	DATE: 08/07/15	SHEET : 2 OF 3	
ISSUED:	SIZE: A	SCALE : N / A	Notes: SPEC ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Mechanical Outline (Inches) :



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Environmental Ratings:

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CHECKRD:	DATE: 08/07/15	SHEET : 3 OF 3	
ISSUED:	SIZE: A	SCALE : N / A	Notes: SPEC ARE SUBJECT TO CHANGE WITHOUT NOTICE.