CDATQ-DC8G-64-10 is a 4 channel programmable attenuator designed for adjusting the amplitude of radio and microwave signals of bandwidths from DC to 8 GHz.

Features:

• Very wide band operation DC-8.0 GHz
• 10 Bit (1024 step) range
• 0.0625 dB step
• Precise repeatability
• High-speed TTL control

Mechanical Specifications:

Parameter	Specification
Dimensions WxHxD	3.80X2.75X0.60 inches
RF Connectors In/Out	SMA-Female
DC Connector	D-SUB 25Pin
Material	Aluminum

Specifications:

Frequency Range:	DC-8.0 GHz
Attenuation Range:	64 dB
Least Significant Bit (LSB):	0.0625 dB
Insertion Loss:	3.0 dB Typ, 4.0 dB Max
VSWR:	1.35:1 max
Phase deviation consecutive step:	+/-5 picoseconds max.
Repeatability error (dB):	+/- 0.02 dB max.
Impedance:	50 Ohms nominal
Input power:	to 27 dBm
Supply voltage requirement:	+5.0 to +5.2 V
Supply current:	< 1.0 Amps
Warm-up time :	1 min.

Environmental Ratings:

Temperature:	-25°C to +85 ^{o}C Operating
	-55 ^{o}C to +125 ^{o}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

Digital Control PIN Attenuators
CDATQ-DC8G-64-10

DRAWN:	DWG NO.:	REV CODE: Rev.1.0	**CONNPHY**
CHECKRD:	DATE: 08/07/15	SHEET : 1 OF3	**Microwave Inc.** www.connphy.com sales@connphy.com
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. Each of the 10 bits corresponds to a separate attenuator element. Each channel is addressed (selected) by a separate address line AO, Al, A2 and A3. This allows any combination of channels to be identically programmed simultaneously. The WE (write enable) line is activated (low) while data is valid. The DS (device select) line, active low, is useful for selecting a particular unit when more than one unit is used in conjunction. Data, address and DS should be valid for at least 4 ns, after WE goes low and should remain valid 3 ns. after WE goes high. Programming can be done without using the WE or DS line by tying them low, applying the desired control word, then selecting the channel. When the channel is de-selected the control word will be latched in that channel. The control word need not be latched if the user wishes to operate the latches transparently. Simply keep the address line high, DS and WE low and the attenuation state of the selected channel(s) will follow the applied data.
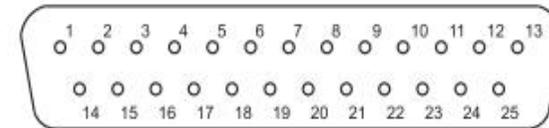
Absolute Maximum Ratings:

Power into RF I/O Port A (upper):	27 dBm
Power into RF I/O Port B (lower):	27 dBm
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.

Environmental Ratings:

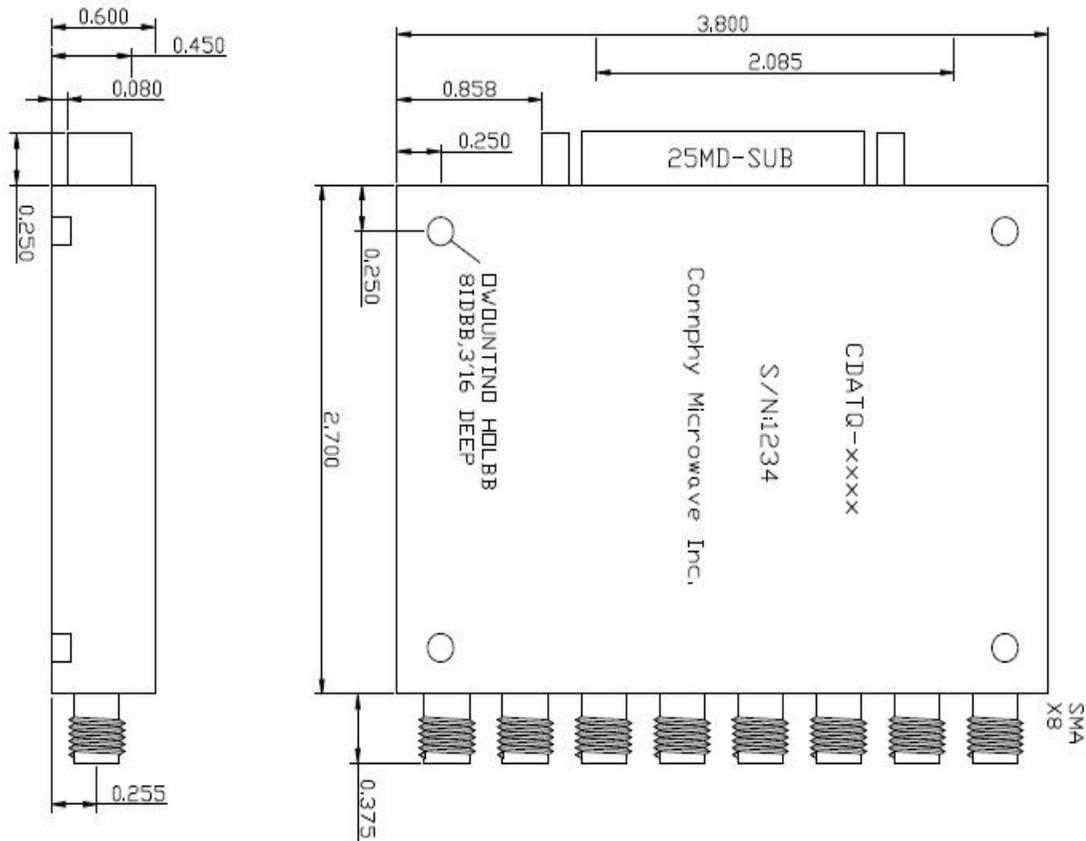|	
Temperature:	-25°C to +85 $^\circ$C Operating
	-55 $^\circ$C to +125 $^\circ$C Non-Operating
Vibration:	MIL-STD-202F, Method 204D Cond. B
Altitude:	MIL-STD-202F, Method 105C Cond. B
Temperature Cycle:	MIL-STD-202F, Method 107D Cond. A

DC Connector PIN Assignment:

Pin	Function	Description
14-17	+5V	
1-10	DO - D9	respectively, active high
22	DS	Device Select, active low
23	WE	Write Enable, active low
18-21	GND	
25	A0	"1" Channel select, active high
12	A1	"2" Channel select, active high
24	A2	"3" Channel select, active high
11	A3	"4" Channel select, active high
13	NC	

Digital Control PIN Attenuators CDATQ-DC8G-64-10			
DRAWN:	DWG NO.:	REV CODE: Rev.1.0	**CONNPHY Microwave Inc.**
CHECKRD:	DATE: 08/07/15	SHEET : 3 OF 3	www.connphy.com sales@connphy.com
ISSUED:	SIZE: A	SCALE : N / A	Notes: SPEC ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Mechanical Outline (Inches) :

0.600
0.450
0.080
0.250
0.255

3.800
2.085
0.858
0.250
25MD-SUB
0.250
2.700
MOUNTING HOLES
8/DIA,3/16 DEEP
Connphy Microwave Inc.
S/N:1234
CDATQ-xxxx
SMA X8
0.375

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

Digital Control PIN Attenuators **CDATQ-DC8G-64-10**			
DRAWN:	DWG NO.:	REV CODE: Rev.1.0	**CONNPHY Microwave Inc.** **www.connphy.com** **sales@connphy.com**
CHECKRD:	DATE: 08/07/15	SHEET : 3 OF 3	
ISSUED:	SIZE: A	SCALE : N / A	Notes: SPEC ARE SUBJECT TO CHANGE WITHOUT NOTICE.