

## DESCRIPTION

PMI MODEL: DTA-6380M7440M-60-9BDIFF-SFF IS A VOLTAGE VARIABLE ATTENUATOR WITH A CONTROL INTERFACE WHICH ALLOWS FOR NINE DIFFERENTIAL INPUTS TO CONTROL THE ATTENUATOR SETTINGS WITH A LSB OF 0.25 dB AND A MINIMUM ATTENUATION OF 50 dB. THIS ATTENUATOR OPERATES OVER THE FREQUENCY RANGE OF 6380 TO 7440 MHz.

## SPECIFICATIONS

- FREQUENCY: \_\_\_\_\_ 6380 TO 7440 MHz
- FREQUENCY CHANGE:  
TO BE SWITCHED AT A 20 kHz RATE OVER THE FREQUENCY RANGE SPECIFIED ABOVE
- INSERTION LOSS: \_\_\_\_\_ 6.5 dB MAXIMUM
- INPUT VSWR: \_\_\_\_\_ 1.5:1 MAXIMUM
- POWER RATING: \_\_\_\_\_ +22 dBm CW MINIMUM
- ATTENUATION RANGE: \_\_\_\_\_ 50 dB MINIMUM
- LSB: \_\_\_\_\_ 0.25 dB
- ATTENUATION STEPS:  
AT A GIVEN FREQUENCY, A COMMANDED INCREASE IN ATTENUATION OF ONE LSB SHALL RESULT IN AN ATTENUATION INCREASE OF  $0.25 \pm 0.2$  dB. A COMMANDED DECREASE OF ONE LSB SHALL RESULT IN AN ATTENUATION DECREASE OF  $0.25 \pm 0.2$  dB. THIS SHALL APPLY FROM A COMMANDED ATTENUATION SETTING OF 0 dB UP TO THE MAXIMUM ATTENUATION.
- ATTENUATION FLATNESS:  
0.1DB MAXIMUM OVER ANY 33.125 MHz BAND WITHIN THE OPERATING FREQUENCY AND AT ANY ATTENUATION STATE.
- POWER SUPPLY: \_\_\_\_\_ +5 VDC  $\pm 0.5$  VDC @ 500 mA MAXIMUM  
+15 VDC  $\pm 1$  VDC @ 150 mA MAXIMUM  
-15 VDC  $\pm 1$  VDC @ 100 mA MAXIMUM  
(REVERSE VOLTAGE PROTECTION INCLUDED, OVERVOLTAGE PROTECTION TO 30% OF VOLTAGE RATING INCLUDED)
- POWER DISSIPATION: \_\_\_\_\_ 3 WATTS MAXIMUM
- CONTROL & POWER CONNECTOR: \_\_\_\_\_ PER TABLE 1 & FIGURE 2
- CONTROL:  
NINE DIFFERENTIAL DIGITAL INPUTS (CONTROL 0 THROUGH CONTROL 8) SHALL SELECT ATTENUATION SETTINGS. CONTROL 0 BEING LOGIC 1 SHALL SELECT THE MAXIMUM ATTENUATION SETTING. CONTROL 1 THROUGH CONTROL 8 SHALL SELECT ATTENUATION VALUES FROM 0 TO THE MAXIMUM IN 0.25 dB STEPS. FOR EXAMPLE, WITH AN INPUT OF 000000001, THE ATTENUATION SHALL BE 0.25 dB. WHEN THE CONTROL 0 THROUGH CONTROL 8 INPUTS ARE LEFT UNCONNECTED, THE ATTENUATION LEVEL MUST DEFAULT TO THE MAXIMUM ATTENUATION CONDITION.
- SWITCHING TIME:  
THE CONTROL 0 INPUT SHALL APPLY OR REMOVE THE MAXIMUM ATTENUATION SETTING WITHIN 0.8  $\mu$ s. THE MAXIMUM SWITCHING RATE OF THE CONTROL 0 INPUT SHALL BE 20 kHz. ALL OTHER ATTENUATION SETTINGS PROGRAMMED BY CONTROL 1 THROUGH CONTROL 8 SWITCH IN EITHER DIRECTION WITHIN 0.8  $\mu$ s TO 1 dB OF FINAL VALUE.
- CONTROL INTERFACE:  
EACH OF THE 8 CONTROL INPUTS SHALL BE DIFFERENTIAL TTL ORIGINATING FROM 26LS31 LINE DRIVERS IAW THE DESC DRAWING 78023, OR EQUIVALENT. THE CONTROL INPUTS SHALL ENTER THE ASSEMBLY VIA CONNECTOR J3. THE CONTROL INPUT LINE RECEIVER SHALL BE 26LS33 IAW DESC DRAWING 78020 OR EQUIVALENT WITH TERMINATION RESISTORS AS SHOWN IN FIGURE 1.
- FINISH:  
GRAY EPOXY POLIMIDE COATING IAW MIL-C-22750 TYPE I OVER EPOXY POLIMIDE PRIMER IAW MIL-P-23377, TYPE I, CLASS 1 OR 3.

## ENVIRONMENTAL RATINGS

- TEMPERATURE: \_\_\_\_\_ 0 °C TO +55 °C (OPERATING)  
-40 °C TO +71 °C (STORAGE)
- WEIGHT: \_\_\_\_\_ 16 OUNCES MAXIMUM

ALL DIMENSIONS ARE IN INCHES  
TOLERANCES:  
X.XX  $\pm 0.020$   
X.XXX  $\pm 0.010$

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE	04/08/15	
	A1	ECN 15-0069	06/08/15	

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ISO 9001 CERTIFIED



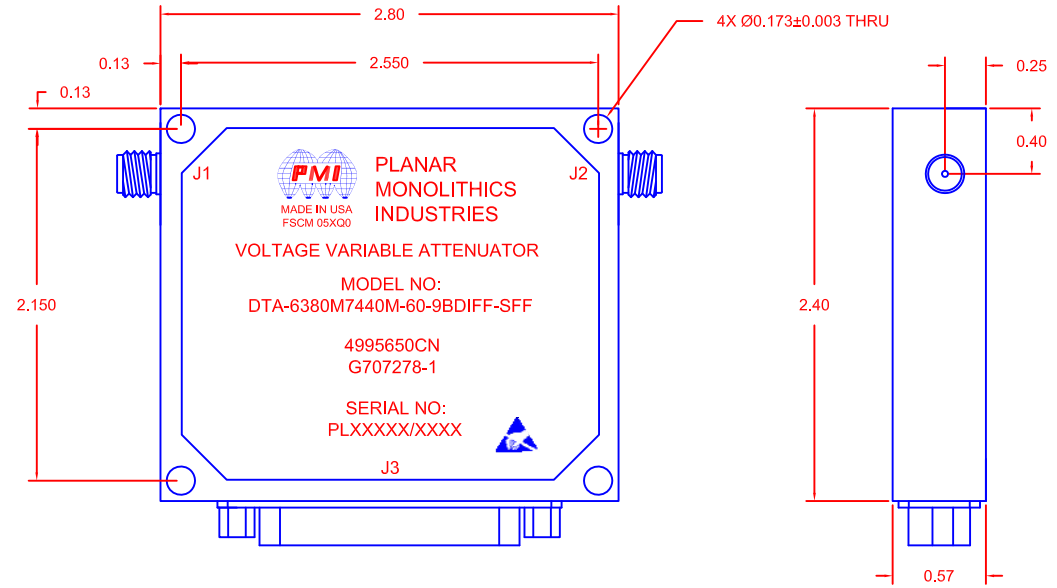
APPROVALS		DATE	TITLE		
DRAWN <i>M. Berry</i>		04/08/15	PRODUCT FEATURE DTA-6380M7440M-60-9BDIFF-SF		
CHECKED			SIZE A	FSCM NO. 05XQ0	DWG NO. 27024622
ISSUED			SCALE N:S		REV. A1
				SHEET	1 OF 2

**TABLE 1**

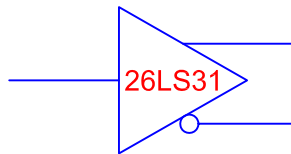
J3 PIN FUNCTIONS	
PIN NUMBER	FUNCTION
1	NO CONNECTION
2	NO CONNECTION
3	+15 VDC
4	±15 VDC RETURN
5	-15 VDC
6	+5 VDC RETURN
7	+5 VDC
8	CONTROL 0 (+)
9	CONTROL 0 (-)
10	CONTROL 1 (+)
11	CONTROL 1 (-)
12	CONTROL 2 (+)
13	CONTROL 2 (-)
14	CONTROL 3 (+)
15	CONTROL 3 (-)
16	CONTROL 4 (+)
17	CONTROL 4 (-)
18	CONTROL 5 (+)
19	CONTROL 5 (-)
20	CONTROL 6 (+)
21	CONTROL 6 (-)
22	CONTROL 7 (+)
23	CONTROL 7 (-)
24	CONTROL 8 (+)
25	CONTROL 8 (-)

REVISIONS				
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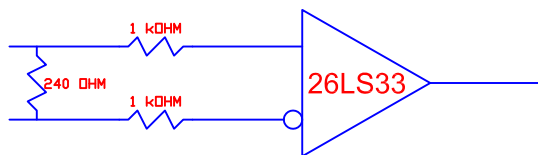
**FIGURE 2 - MECHANICAL OUTLINE**



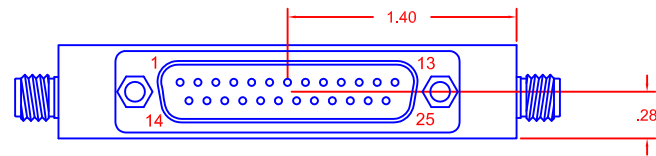
**FIGURE 1 - DIFFERENTIAL LINE DRIVER / LINE RECEIVER TERMINATION CONFIGURATION**



**LINE DRIVER CONFIGURATION**



**LINE RECEIVER CONFIGURATION**



**PMI CONFIDENTIAL AND PROPRIETARY**

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 TOLERANCES:  
 X.XX ±0.020  
 X.XXX ±0.010

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CHECKED			SIZE	FSCM NO.	DWG NO.	REV.
ISSUED			A	05XQ0	27024622	A1
			SCALE	N:S		SHEET 2 OF 2