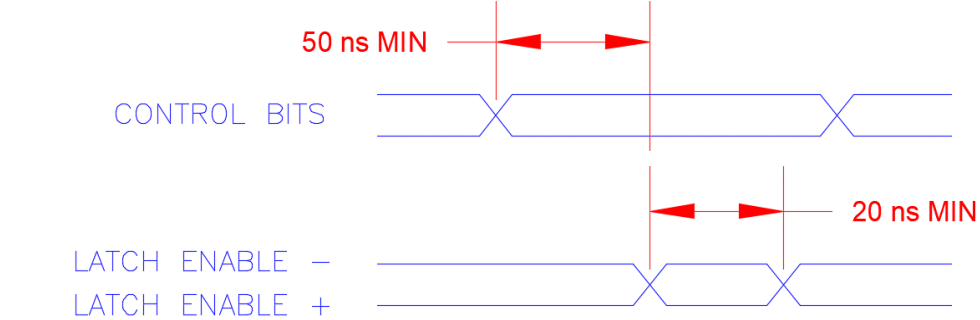


DESCRIPTION:
PLANAR MONOLITHICS INDUSTRIES MODEL NUMBER DTA-812-BA-80-14B-SFF OPT10D27 IS A DIGITALLY TUNED ATTENUATOR COVERING THE 8 TO 12 GHz FREQUENCY RANGE AND OPTIMIZED FOR 9.25-11.25 GHz. THIS UNIT IS TUNED USING FOURTEEN +3.3V RS-422 CONTROL BITS.

SPECIFICATIONS:

- FREQUENCY:..... 8-12 GHz, OPTIMIZED FOR 9.25-11.25 GHz
- VSWR (J1 AND J2):..... 2:1 MAX (8-12 GHz),
1.5:1 MAX (9.25-11.25 GHz)
- INPUT P1dB POWER LEVEL:..... +20 dBm MIN
- SURVIVAL INPUT POWER LEVEL:..... +30 dBm MAX
- INSERTION LOSS:..... 6.5 dB MAX
6 dB TYP
- INSERTION LOSS FLATNESS:..... 1 dB MAX (8-12 GHz)
0.5 dB MAX (9.25-11.25 GHz)
- SPURIOUS SIGNALS:..... -100 dBc GOAL
- AMPLITUDE NOISE @ ≥ 1 MHz OFFSET:.... -160 dBc/Hz GOAL
- PHASE NOISE @ ≥ 1 MHz OFFSET:..... -160 dBc/Hz GOAL
- SWITCHING SPEED:..... 2000 ns MAX
- ATTENUATION RANGE:..... 80 dB NOMINAL (0 TO (80 dB - 1 LSB))
- ATTENUATION ACCURACY:..... ± 1.5 dB MAX (9.25-11.25 GHz)
- DIGITAL CONTROL BITS:..... 14 BITS
- CONTROL LOGIC:..... +3.3V RS-422 (+5V TOLERANT), ALL BITS - > + FOR INSERTION LOSS SETTING
- LATCH CONTROL LOGIC:..... +3.3V RS-422 (+5V TOLERANT), LATCH + > LATCH - TO ENABLE ON RISING EDGE

LATCH TIMING DIAGRAM:



- POWER SUPPLY:..... +12 V @ 250 mA MAX
-12 V @ 100 mA MAX
- RF CONNECTORS:..... SMA (F)
- POWER / CONTROL CONNECTOR:..... 44 PIN HIGH DENSITY D-SUB (M)
- FINISH:..... PAINTED BLUE, MOUNTING SURFACE GOLD PLATED

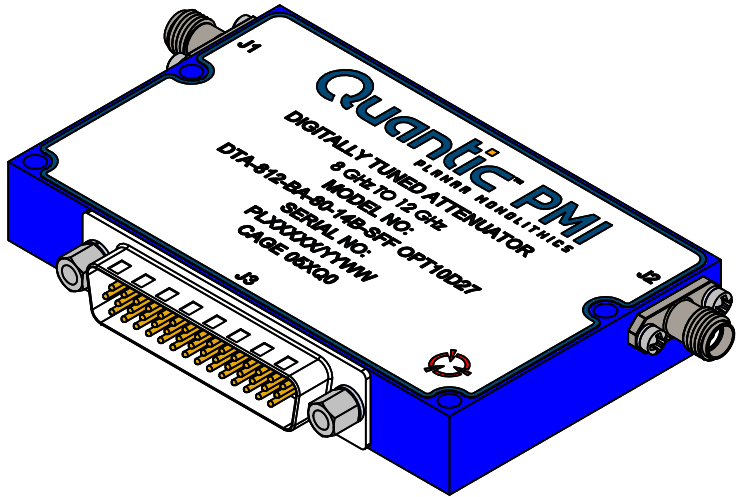
ENVIRONMENTAL RATINGS:

- TEMPERATURE:..... +19°C TO +21°C (OPERATING)
-40°C TO +85°C (STORAGE)

NOTE: SPECIFICATIONS WILL VARY OVER TEMPERATURE
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

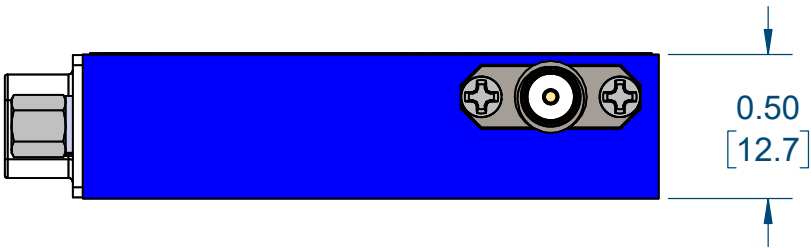
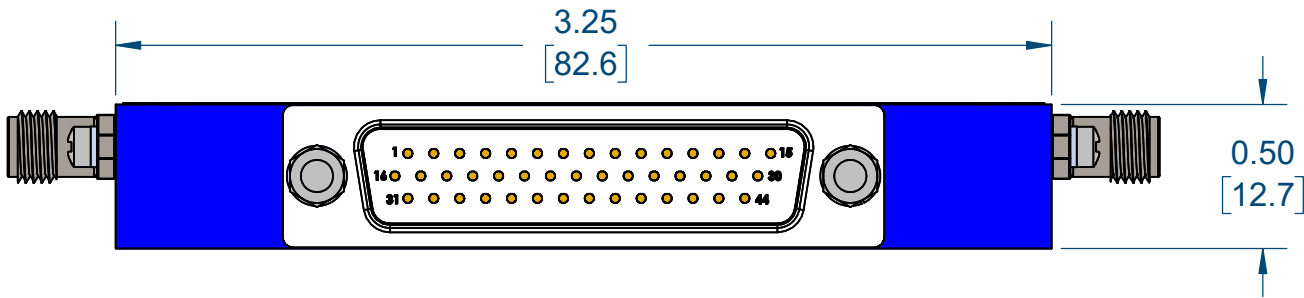
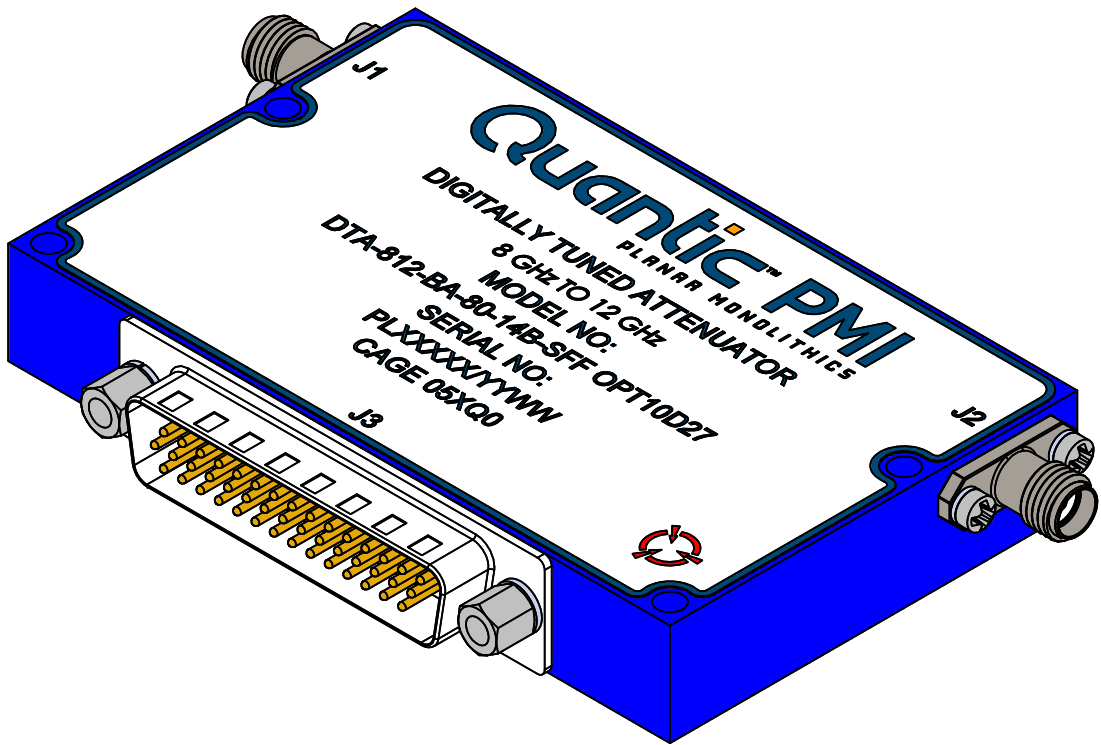
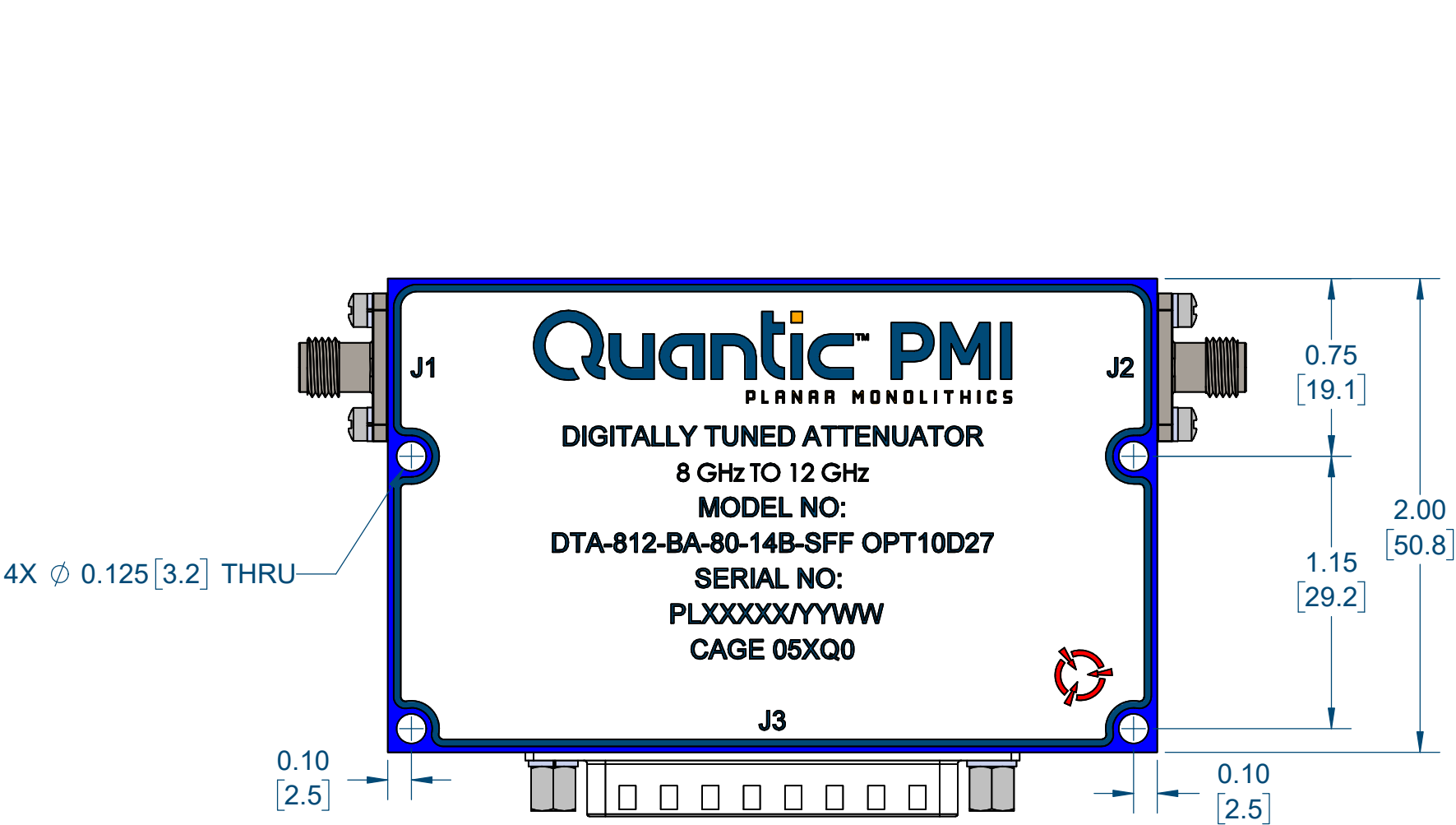
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	11/11/2021	
	B1	ECN # 25-0272	9/26/2025	
	B2	ECN # 26-0180	6/25/2026	

J3 44-PIN CONNECTOR PIN-OUT					
PIN	FUNCTION	VALUE	PIN	FUNCTION	VALUE
1	CONTROL BIT 0 +	(0.0048828125 dB) - LSB	23	CONTROL BIT 7 -	(0.625 dB)
2	CONTROL BIT 1 +	(0.009765625 dB)	24	CONTROL BIT 8 -	(1.25 dB)
3	CONTROL BIT 2 +	(0.01953125 dB)	25	CONTROL BIT 9 -	(2.5 dB)
4	CONTROL BIT 3 +	(0.0390625 dB)	26	CONTROL BIT 10 -	(5 dB)
5	CONTROL BIT 4 +	(0.078125 dB)	27	CONTROL BIT 11 -	(10 dB)
6	CONTROL BIT 5 +	(0.15625 dB)	28	CONTROL BIT 12 -	(20 dB)
7	CONTROL BIT 6 +	(0.3125 dB)	29	CONTROL BIT 13 -	(40 dB) - MSB
8	CONTROL BIT 7 +	(0.625 dB)	30	LATCH ENABLE -	
9	CONTROL BIT 8 +	(1.25 dB)	31	GND	
10	CONTROL BIT 9 +	(2.5 dB)	32	GND	
11	CONTROL BIT 10 +	(5 dB)	33	GND	
12	CONTROL BIT 11 +	(10 dB)	34	N/C	
13	CONTROL BIT 12 +	(20 dB)	35	N/C	
14	CONTROL BIT 13 +	(40 dB) - MSB	36	GND	
15	LATCH ENABLE +		37	N/C	
16	CONTROL BIT 0 -	(0.0048828125 dB) - LSB	38	N/C	
17	CONTROL BIT 1 -	(0.009765625 dB)	39	+12V	
18	CONTROL BIT 2 -	(0.01953125 dB)	40	+12V	
19	CONTROL BIT 3 -	(0.0390625 dB)	41	+12V	
20	CONTROL BIT 4 -	(0.078125 dB)	42	-12V	
21	CONTROL BIT 5 -	(0.15625 dB)	43	-12V	
22	CONTROL BIT 6 -	(0.3125 dB)	44	-12V	



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			APPROVALS		DATE		TITLE OUTLINE DTA-812-BA-80-14B-SFF OPT10D27							
			DRAWN R. SIRK		11/16/2021									
			REDRAWN											
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES ± .XX ± 0.02 ± .XXX ± 0.01			ISSUED				SIZE B		FSCM NO. 05XQ0		DWG NO. 27041500		REV. B2	
									SCALE 1:1		SHEET 1 OF 2			



NOTE: SPECIFICATIONS WILL VARY OVER TEMPERATURE
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					Quantic PMI PLANAR MONOLITHICS 7309-A GROVE ROAD FREDERICK MARYLAND 21704 USA TEL: (301) 662-5019, FAX: (301) 662-1731 WEB: WWW.QUANTICPMI.COM, EMAIL: SALES@QUANTICPMI.COM ISO 9001 CERTIFIED							
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							SCALE 1:1				SHEET 2 OF 2	