

# 5 BIT DIGITAL ATTENUATOR *TAD2104*

**Available in:**  
 DP-5, 24 Pin DIP Package  
 and Connectorized Housings

## Features

- 10 - 2000 MHz; 31 dB Attenuation Range
- Fast Switching Speed: 15 ns Typical (GaAs)
- Integral TTL Driver
- OperatingTemp. -55 °C to + 85 °C
- Environmental Screening available

## Maximum Ratings

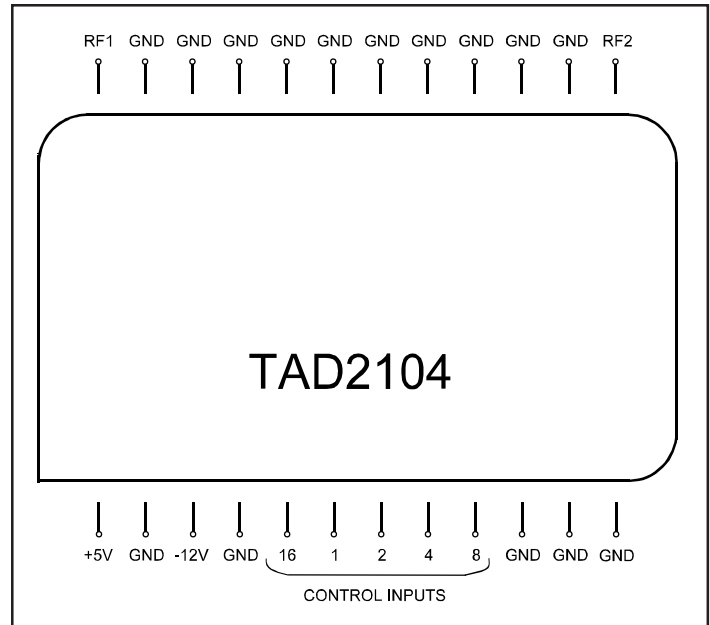
Ambient Operating Temperature ..... -55°C to + 100 °C  
 Storage Temperature ..... -65°C to + 125 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 6.0, -16 Volts  
 Continuous RF Input Power ..... +30 dBm

## Specifications

CHARACTERISTIC	TYPICAL Ta = 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10 - 2000 MHz	10 - 2000 MHz
Insertion Loss (dB)	<6.5	8.5 Max.
Attenuation Range (dB)	1 - 31	1 - 31 Min.
Steps (dB)	1,2,4,8,16	1,2,4,8,16
Accuracy	+/-0.5 dB +/-2%	+/-0.5 dB Max. +/-4% Max.
VSWR	1.5:1	1.75:1 Max.
Switching Speed (nsec)	<20	30 Max.
Transients (mV)	<25	35 Max.
DC Bias (Vdc)	-12	-12
Bias (mA)	4.5	8.0 Max.
DC Bias (Vdc)	+5	+5
Bias (mA)	3.0	5.0 Max.

Note: Care should always be taken to effectively ground the case of each unit.

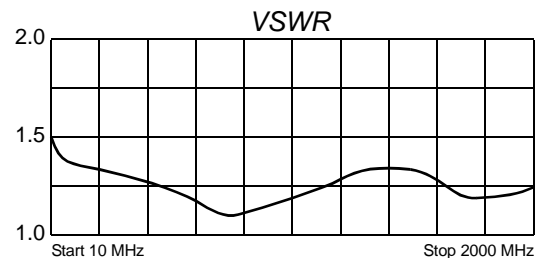
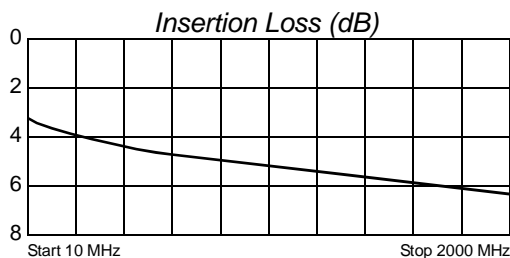
## Pin Layout



## Truth Table

Control Input 5 Line TTL	Attenuator Setting
1	Attenuate
0	Thru

## Typical Performance Data



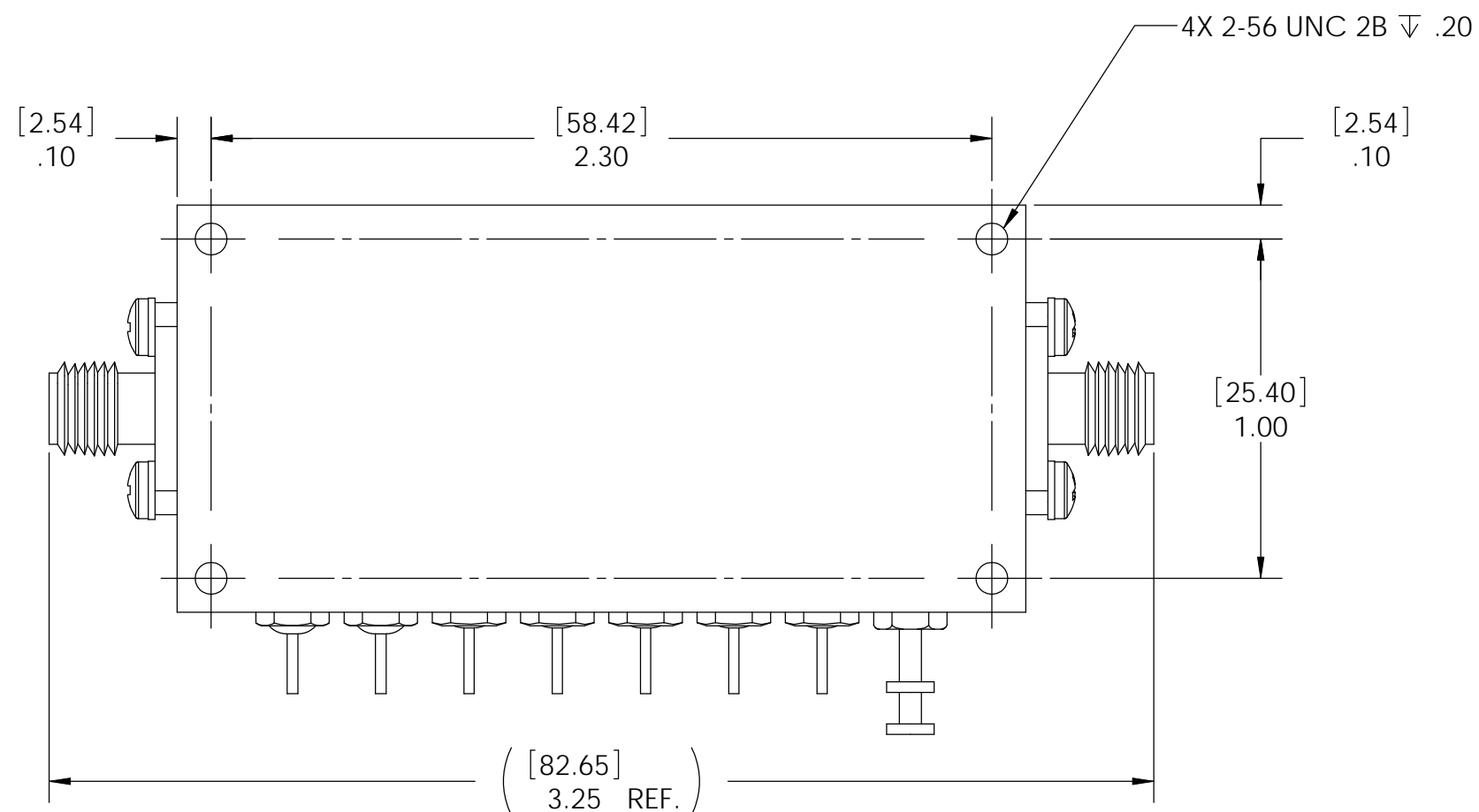
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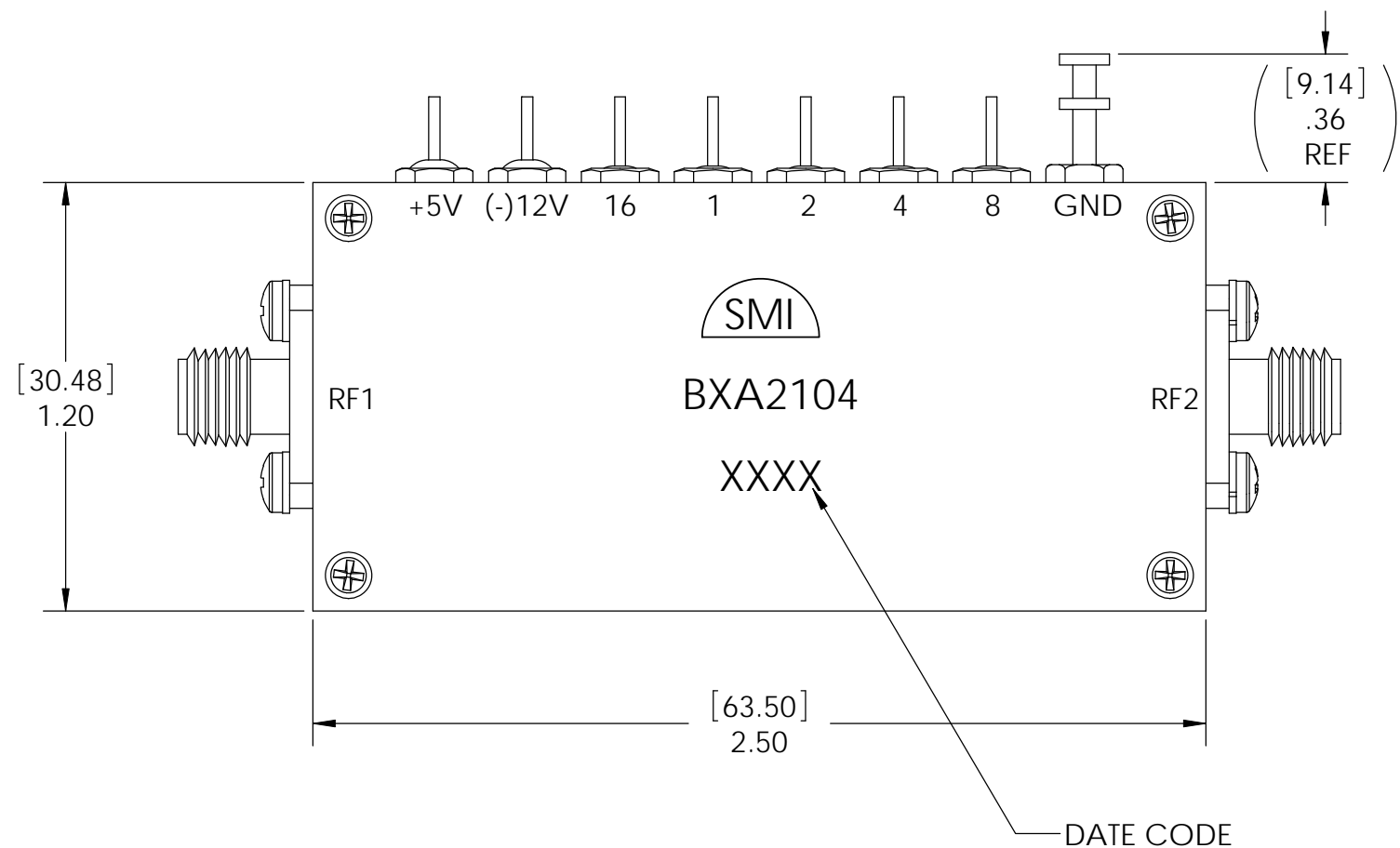
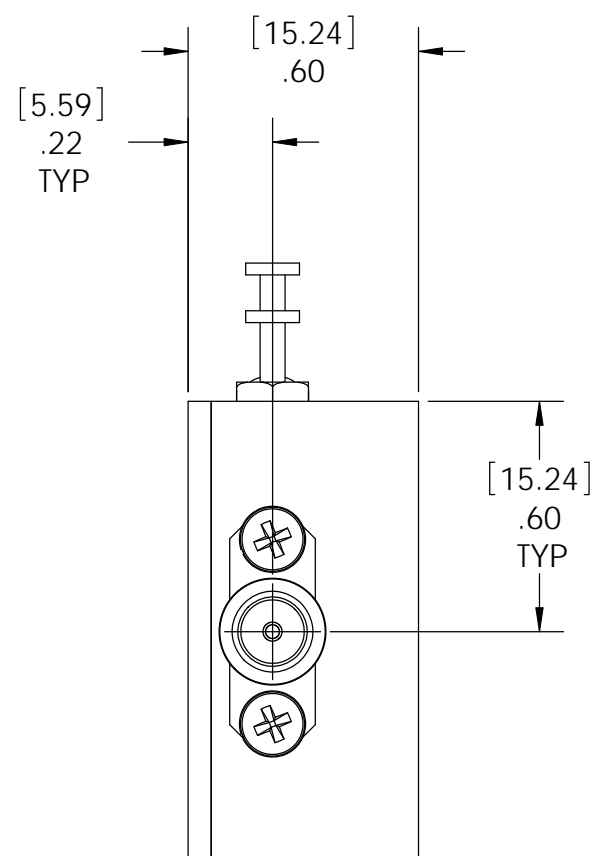
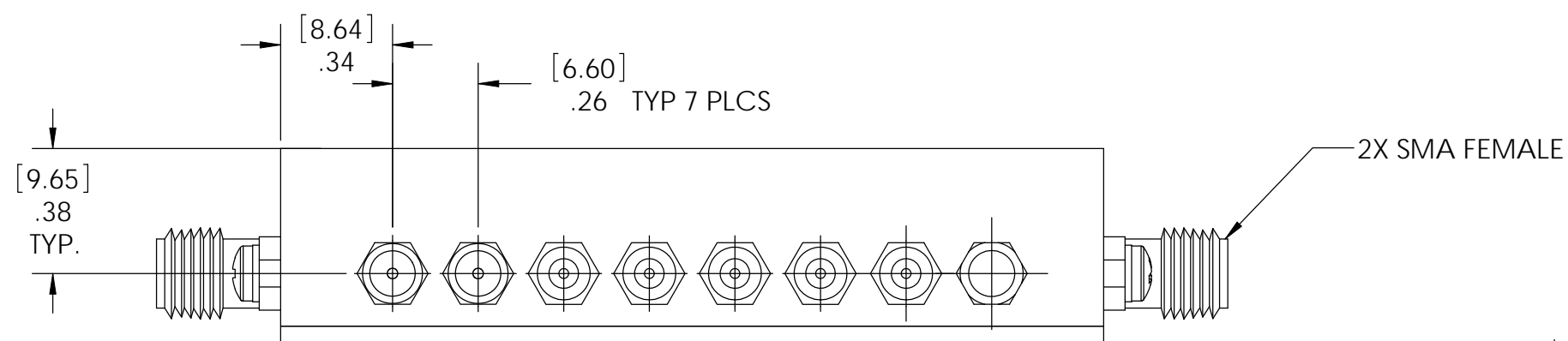
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REVISIONS				
ECN	REV.	DESCRIPTION	CHNG/DATE	APPVD/DATE
XXX	P1	PRELIMINARY RELEASE	2012-04-25	

- NOTES:  
 1. MATERIAL: HOUSING ALUMINUM, NICKEL PLATED



**CAUTION**  
 THIS ASSEMBLY CONTAINS PARTS SENSITIVE  
 TO DAMAGE BY ELECTROSTATIC DISCHARGE (ESD).  
 USE ESD PRECAUTIONARY PROCEDURES WHEN  
 TOUCHING, REMOVING OR INSERTING



PRELIMINARY

SEE SEPARATE PARTS LIST IN ELECTRONIC STORAGE

UNLESS OTHERWISE SPECIFIED		3rd ANGLE PROJECTION		SPECTRUM MICROWAVE, INC 2707 Black Lake Place Philadelphia, PA 19154-1008 (USA)	
ANSI		DATE	2012-04-25	TITLE	
DRAWN	WAR	CHECKED		OUTLINE, BXA2104	
ENGRG	VB	MFG	2012-04-25	SIZE	CAGE CODE
QA				C	60979
DO NOT SCALE DRAWING			SCALE:	DWG NO.	REV
			2:1	088-00290	P1
			SHEET	1 OF 1	