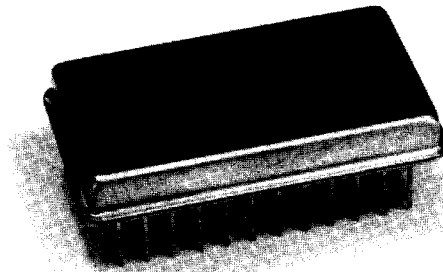
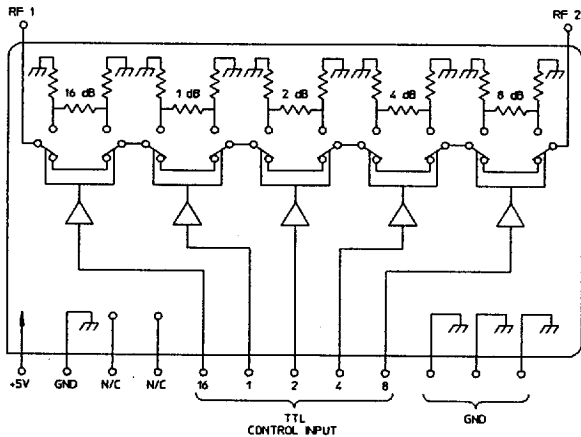




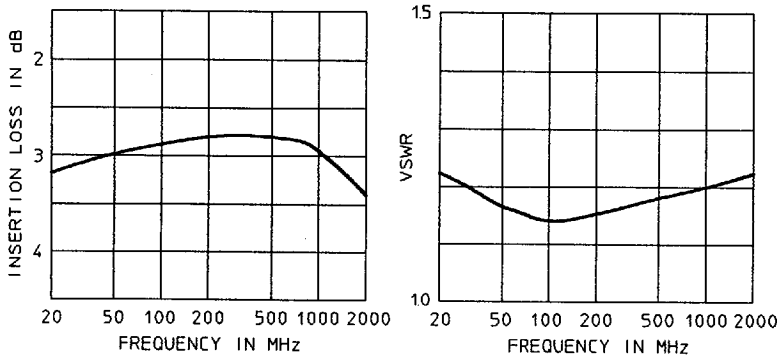
# ADS-51V-1000

31 dB DIGITAL ATTENUATOR  
5 Bit Direct TTL Logic Control



- 20 to 2000 MHz Usable Frequency Range
- 0 to 31 dB Attenuation in 1 dB Steps
- Guaranteed Monotonic Operation
- Low Profile (0.2"), Hermetic Packaging
- Single +5V Supply Required

### Typical Performance Data

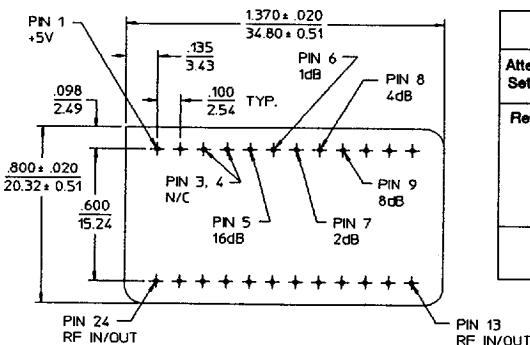
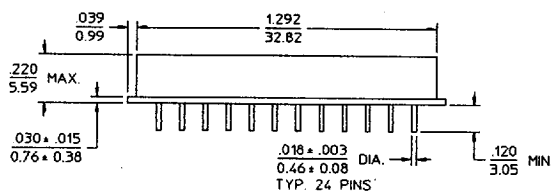


The ADS-51V-1000 is a 100 to 1,500 MHz constant impedance 5-bit digital attenuator designed to be driven directly from TTL logic. PIN diode switched attenuator pads are activated by Advanced Fact™ C-MOS, TTL compatible logic drivers, allowing high speed operation without need of a negative supply.

Careful design of thick film resistive pads and detailed selection of suitable PIN diodes provide a wide bandwidth with minimal phase shift.

Screened versions with extended reliability components are available for hi-rel programs.

### V Package Outline - 24 pin Dual In Line



TRUTH TABLE					
Attenuation Setting, dB	Control Input				
	'6'	'7'	'8'	'9'	'5'
Reference	0	0	0	0	0
1	1	0	0	0	0
2	0	1	0	0	0
4	0	0	1	0	0
8	0	0	0	1	0
16	0	0	0	0	1

\*'1' = Logic High TTL  
\*'0' = Logic Low TTL

- NOTES:
1. Tolerance on 3 place decimals ±.010(.25) except as noted.
  2. Dimensions in inches over millimeters.
  3. Lead dimensions apply only at body.
  4. All unmarked terminals are ground.

Model Number	Frequency Range, MHz	Usable Band, MHz
ADS-51V-1000	100 to 1500	20 to 2,000

- Attenuation Range: 0 - 31 dB
- Minimum Step Size: 1 dB
- Attenuation Flatness: ± 0.5 dB
- Attenuation Accuracy: ± 0.35 dB
- Insertion Loss: 6 dB max.
- Phase Variation: ± 2° typ.
- VSWR: 1.5:1 max.
- Impedance: 50 Ω nom.
- Switching Delay Time: 2 μs typ. (50% control transition to 10/90% RF)
- Switching Transients: 20 mV typ. (50% control transition to 10/90% RF)
- Bias Requirement: +5 VDC @ 100 mA nom.
- Input Intercept Point: +32 dBm max.
- Weight, nominal: 0.4 oz (11 g)
- Operating Temperature: -55° to +85°C

Contact MERRIMAC for further details. (1/92)

41 Fairfield Place, West Caldwell, N.J. 07006 • (201) 575-1300 • FAX: (201) 575-0531