CODI SEMICONDUCTOR
Division of COMPUTER DIODE CORPORATION

LD-3029, A, B
LOGARITHMIC
DIODES

LOG DIODES

7 DECADES

CODI's Log Diodes, LD-3029 series, exhibit an accurate semi-logarthmic relationship between current and voltage over a 7 DECADES current range. They are very useful in such circuit applications as analog computation, singal compression, network shaping, attenuation and generally, whenever the logarthmic phenomenon is employed.

These abrupt junction silicon devices are produced by a precision alloying process. Their diode parameters are so strictly controlled that they practically obey the theoretical diode equation:

$$I_f = I_s\left(e^{\frac{qV}{KT}-1}\right)$$

APPLICATIONS

- **Analog Computation**
- **Network Shaping**
- **Function Generation**
- **Compression-Expansion**
- **Attenuation**

MAXIMUM RATINGS:

Power Dissipation	400 mv
Storage Temperature	–55 to 200°C
Operating Temperature	–55 to 175°C

ELECTRICAL CHARACTERISTICS (TA = 20°C unless otherwise specified)

TYPES	ΔV_F/DECADE	TOLERANCE	OPERATING RANGE	TYPICAL ΔV_F/ DECADE	
				@ 0°C	@ 85°C
LD 3029	77 mv	± 10 mv	7 Decades 10^{-9} to 10^{-2} amp	70 mv	95 mv
LD 3029A		± 5 mv			
LD 3029B		± 2 mv			

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