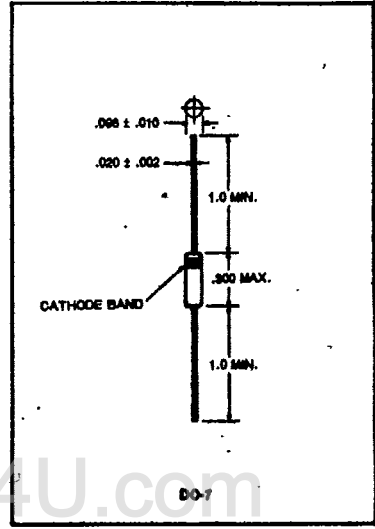




## LOW NOISE MULTI-CURRENT RANGE TEMPERATURE COMPENSATED REFERENCE DIODES

1N4611, A, B, C THROUGH 1N4613, A, B, C

High reliable voltage reference sources utilizing CODI CORPORATION'S Bi-Taxial™ processed junctions for long-term stability LOW NOISE and guaranteed low temperature coefficient over an extended current range. The junctions are encapsulated in hermetically sealed DO-7 glass package and can be provided with a guaranteed long-term stability - 10 ppm/yr..



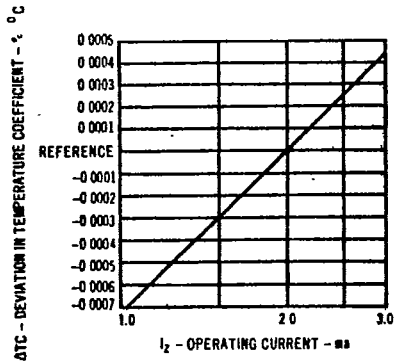
Physical Dimensions

### MAXIMUM RATINGS

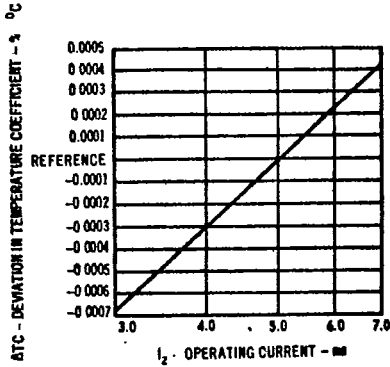
Power Dissipation	400 mw
Operating Temperature	- 65° to 175°C
Storage Temperature	- 65° to 200°C

### ELECTRICAL CHARACTERISTICS: (25°C unless otherwise specified)

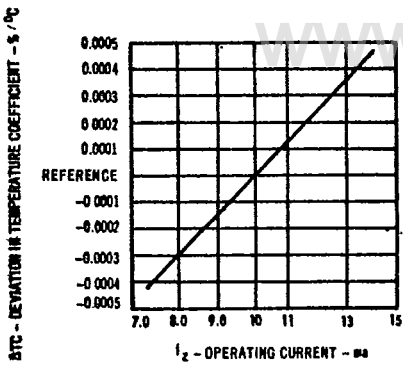
JEDEC TYPE	VOLTAGE $V_Z \pm 5\%$	OPERATING CURRENT $I_Z$	MAXIMUM TEMPERATURE COEFFICIENT, $TC_1$ $\frac{\Delta I_Z}{I_Z}$ - 50°C to 100°C	OPERATING CURRENT RANGE	MAXIMUM TEMPERATURE COEFFICIENT, $TC_2$ † OPERATING CURRENT RANGE - 50°C to 100°C	MAXIMUM DYNAMIC IMPEDANCE $Z_Z$	MAXIMUM REVERSE CURRENT, $I_R$ @ 3.0 V	TYPICAL NOISE
	volt	ma	%/°C	ma	%/°C	ohm	ua	uv
1N 4611	6.6	2.0	.005	1.0-3.0	.01	75.0	.20	1.0
1N 4611A	6.6	2.0	.002	1.0-3.0	.005	75.0	.20	1.0
1N 4611B	6.6	2.0	.001	1.0-3.0	.002	75.0	.20	1.0
1N 4611C	6.6	2.0	.0005	1.0-3.0	.001	75.0	.20	1.0
1N 4612	6.6	5.0	.005	3.0-7.0	.01	25.0	.20	1.0
1N 4612A	6.6	5.0	.002	3.0-7.0	.005	25.0	.20	1.0
1N 4612B	6.6	5.0	.001	3.0-7.0	.002	25.0	.20	1.0
1N 4612C	6.6	5.0	.0005	3.0-7.0	.001	25.0	.20	1.0
1N 4613	6.6	10.0	.005	7.0-15.0	.01	15.0	.20	1.0
1N 4613A	6.6	10.0	.002	7.0-15.0	.005	15.0	.20	1.0
1N 4613B	6.6	10.0	.001	7.0-15.0	.002	15.0	.20	1.0
1N 4613C	6.6	10.0	.0005	7.0-15.0	.001	15.0	.20	1.0



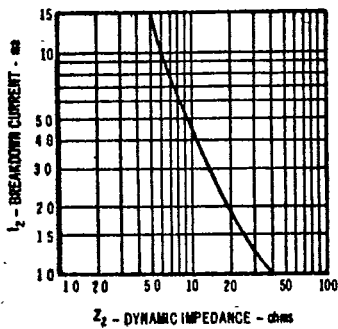
TEMPERATURE COEFFICIENT  
VS OPERATING CURRENT  
1N 4611 TYPES



TEMPERATURE COEFFICIENT  
VS OPERATING CURRENT  
1N 4612 TYPES



TEMPERATURE COEFFICIENT  
VS OPERATING CURRENT  
1N 4613 TYPES



DYNAMIC IMPEDANCE VS  
BREAKDOWN CURRENT  
ALL TYPES

All reference devices manufactured by CODI's Bi-Taxial™ process are also available with guaranteed long-time stability, low noise level. Devices with 10 ppm/year stability are available in production quantities. For further information and any special requirement, consult factory.