- 1N3016B-1 thru 1N3045B-1 AVAILABLE IN JAN, JANTX AND JANTXV PER MIL-PRF-19500/115
- 1 WATT ZENER DIODES
- METALLURGICALLY BONDED

1N3016B thru1N3045B and 1N3016B-1 thru 1N3045B-1

MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C
Storage Temperature: -65°C to +175°C
DC Power Dissipation: 1watt @ T_L = +95°C
Power Derating: 12.5 mW / °C above T_L = +95°C
Forward Voltage @ 200mA: 1.2 volts maximum

ELECTRICAL CHARACTERISTICS @ 25°C

CDI TYPE NUMBER (NOTE 1)	NOMINAL ZENER VOLTAGE V_Z @ I_{ZT} (NOTE 2)	ZENER TEST CURRENT I_{ZT}	MAXIMUM ZENER IMPEDANCE (NOTE 3)			MAX. DC ZENER CURRENT I_{ZM}	MAX. REVERSE LEAKAGE CURRENT I_R @ V_R	
			Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}				
	VOLTS	mA	OHMS	OHMS	mA	mA	μA	VOLTS
1N3016B	6.8	37	3.5	700	1.0	140	5.0	5.2
1N3017B	7.5	34	4.0	700	.5	125	5.0	5.7
1N3018B	8.2	31	4.5	700	.5	115	5.0	6.2
1N3019B	9.1	28	5	700	.5	105	5.0	6.9
1N3020B	10	25	7	700	.25	95	5.0	7.6
1N3021B	11	23	8	700	.25	85	1.0	8.4
1N3022B	12	21	9	700	.25	80	1.0	9.1
1N3023B	13	19	10	700	.25	74	0.5	9.9
1N3024B	15	17	14	700	.25	63	0.5	11.4
1N3025B	16	15.5	16	700	.25	60	0.5	12.2
1N3026B	18	14	20	750	.25	52	0.5	13.7
1N3027B	20	12.5	22	750	.25	47	0.5	15.2
1N3028B	22	11.5	23	750	.25	43	0.5	16.7
1N3029B	24	10.5	25	750	.25	40	0.5	18.2
1N3030B	27	9.5	35	750	.25	34	0.5	20.6
1N3031B	30	8.5	40	1000	.25	31	0.5	22.8
1N3032B	33	7.5	45	1000	.25	28	0.5	25.1
1N3033B	36	7.0	50	1000	.25	26	0.5	27.4
1N3034B	39	6.5	60	1000	.25	23	0.5	29.7
1N3035B	43	6.0	70	1500	.25	21	0.5	32.7
1N3036B	47	5.5	80	1500	.25	19	0.5	35.8
1N3037B	51	5.0	95	1500	.25	18	0.5	38.8
1N3038B	56	4.5	110	2000	.25	17	0.5	42.6
1N3039B	62	4.0	125	2000	.25	15	0.5	47.1
1N3040B	68	3.7	150	2000	.25	14	0.5	51.7
1N3041B	75	3.3	175	2000	.25	12	0.5	56.0
1N3042B	82	3.0	200	3000	.25	11	0.5	62.2
1N3043B	91	2.8	250	3000	.25	10	0.5	69.2
1N3044B	100	2.5	350	3000	.25	9.0	0.5	76.0
1N3045B	110	2.3	450	4000	.25	8.3	0.5	83.6

NOTE 1 No suffix signifies ± 20%. "A" Suffix signifies ± 10%, "B" Suffix signifies ± 5%, "C" suffix signifies ± 2% , "D" suffix signifies ±1%

NOTE 2 Zener voltage is measured with the device junction in thermal equilibrium at an ambient temperature of 25°C ± 3°C.

NOTE 3 Zener impedance is derived by superimposing on I_{ZT} A 60Hz rms a.c. current equal to 10% of I_{ZT}

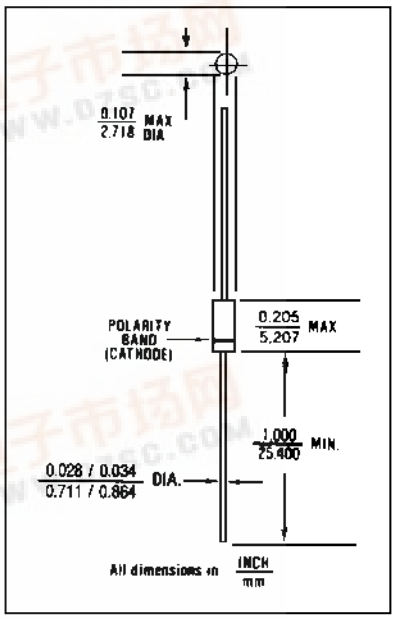


FIGURE 1

DESIGN DATA

CASE: Hermetically sealed glass case DO-41.

LEAD MATERIAL: Copper clad steel

LEAD FINISH: Tin / Lead

THERMAL RESISTANCE: ($R_{\Theta JEC}$): 80 °C/W maximum at L = .375 inch

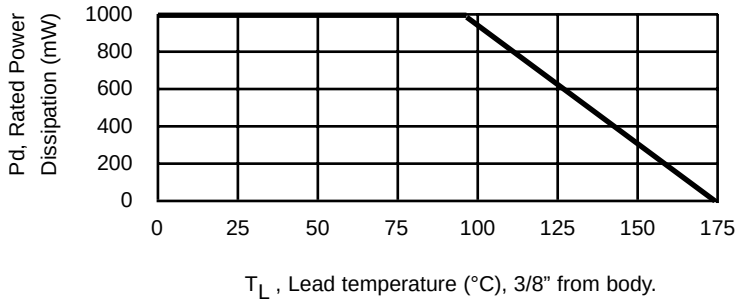
THERMAL IMPEDANCE: ($Z_{\Theta JX}$): 15 °C/W maximum

POLARITY: Diode to be operated with the banded (cathode) end positive.

MOUNTING POSITION: Any.

COMPENSATED DEVICES INCORPORATED
22 COREY STREET, MELROSE, MASSACHUSETTS 02176
PHONE (781) 665-1071 FAX (781) 665-7379
WEBSITE: http://www.cdi-diodes.com E-mail: mail@cdi-diodes.com

FIGURE 2



POWER DERATING CURVE

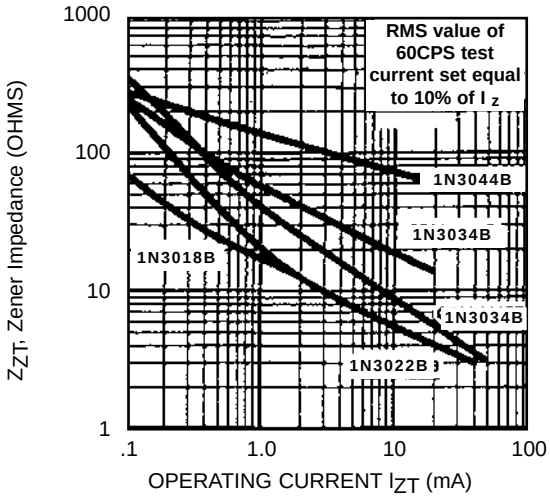


FIGURE 3

ZENER IMPEDANCE VS. OPERATING CURRENT