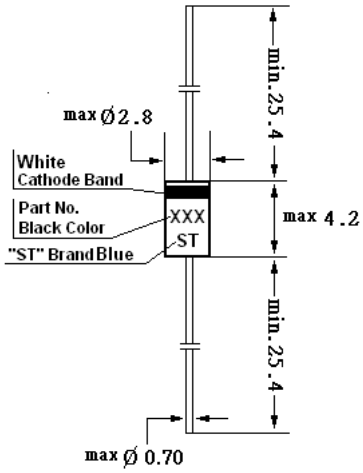
3 WATT ZENER DIODES



Glass Case JEDEC DO-41

Dimensions in mm

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Max. Steady State Power Dissipation @ T_L = 75 °C, Lead Length = 3/8" Derate above 75 °C	P_{tot}	 3 24	 W mW/°C
Steady State Power Dissipation T_a = 50 °C Derate above 50 °C	P_{tot}	 1 6.67	 W mW/°C
Junction Temperature	T_j	200	°C
Storage Temperature Range	T_S	-65 to +200	°C

Characteristics (T_a = 25 °C unless otherwise noted, V_F = 1.5V Max @ I_F = 200 mA for all types)

Type [1]	Zener Voltage [2]				Zener Impedance [3]			Leakage Current		I_{ZM}
	V_Z			@ I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}		I_R @ V_R		
	Min	Nom	Max	mA	Ω(Max)	Ω(Max)	mA	μA(Max)	V	mA
1N5913B	3.14	3.3	3.47	113.6	10	500	1	100	1	454
1N5917B	4.47	4.7	4.94	79.8	5	500	1	5	1.5	319
1N5919B	5.32	5.6	5.88	66.9	2	250	1	5	3	267
1N5920B	5.89	6.2	6.51	60.5	2	200	1	5	4	241
1N5921B	6.46	6.8	7.14	55.1	2.5	200	1	5	5.2	220
1N5923B	7.79	8.2	8.61	45.7	3.5	400	0.5	5	6.5	182
1N5924B	8.65	9.1	9.56	41.2	4	500	0.5	5	7	164
1N5925B	9.5	10	10.5	37.5	4.5	500	0.25	5	8	150
1N5926B	10.45	11	11.55	34.1	5.5	550	0.25	1	8.4	136
1N5927B	11.4	12	12.6	31.2	6.5	550	0.25	1	9.1	125
1N5929B	14.25	15	15.75	25	9	600	0.25	1	11.4	100
1N5930B	15.2	16	16.8	23.4	10	600	0.25	1	12.2	93
1N5931B	17.1	18	18.9	20.8	12	650	0.25	1	13.7	83
1N5932B	19	20	21	18.7	14	650	0.25	1	15.2	75
1N5933B	20.9	22	23.1	17	17.5	650	0.25	1	16.7	68
1N5934B	22.8	24	25.2	15.6	19	700	0.25	1	18.2	62
1N5935B	25.65	27	28.35	13.9	23	700	0.25	1	20.6	55
1N5936B	28.5	30	31.5	12.5	28	750	0.25	1	22.8	50
1N5937B	31.35	33	34.65	11.4	33	800	0.25	1	25.1	45
1N5938B	34.2	36	37.8	10.4	38	850	0.25	1	27.4	41
1N5940B	40.85	43	45.15	8.7	53	950	0.25	1	32.7	34
1N5941B	44.65	47	49.35	8	67	1000	0.25	1	35.8	31
1N5942B	48.45	51	53.55	7.3	70	1100	0.25	1	38.8	29
1N5943B	53.2	56	58.8	6.7	86	1300	0.25	1	42.6	26
1N5944B	58.9	62	65.1	6	100	1500	0.25	1	47.1	24
1N5945B	64.6	68	71.4	5.5	120	1700	0.25	1	51.7	22
1N5946B	71.25	75	78.75	5	140	2000	0.25	1	56	20
1N5947B	77.9	82	86.1	4.6	160	2500	0.25	1	62.2	18
1N5948B	86.45	91	95.55	4.1	200	3000	0.25	1	69.2	16
1N5950B	104.5	110	115.5	3.4	300	4000	0.25	1	83.6	13
1N5951B	114	120	126	3.1	380	4500	0.25	1	91.2	12
1N5952B	123.5	130	136.5	2.9	450	5000	0.25	1	98.8	11
1N5953B	142.5	150	157.5	2.5	600	6000	0.25	1	114	10
1N5954B	152	160	168	2.3	700	6500	0.25	1	121.6	9
1N5955B	171	180	189	2.1	900	7000	0.25	1	136.8	8
1N5956B	190	200	210	1.9	1200	8000	0.25	1	152	7

[1] TOLERANCE AND TYPE NUMBER DESIGNATION

Tolerance designation-device tolerance of ±5% are indicated by a “B” suffix.

[2] ZENER IMPEDANCE (Z_Z) DERIVATION

The zener impedance is derived from 60 seconds AC voltage, which results when an AC current having an rms value equal to 10% of the DC zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}.

[3] Tested with pulses tp = 20 ms.

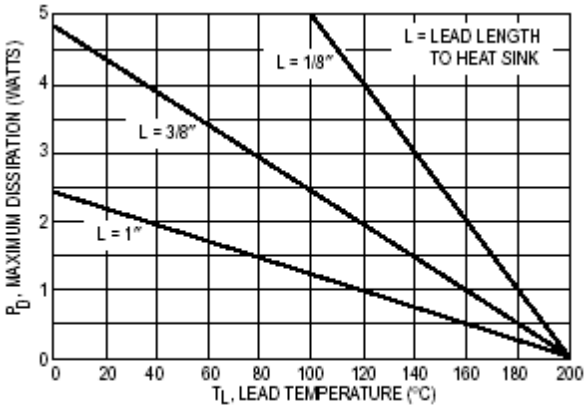


Figure 1. Power Temperature Derating Curve

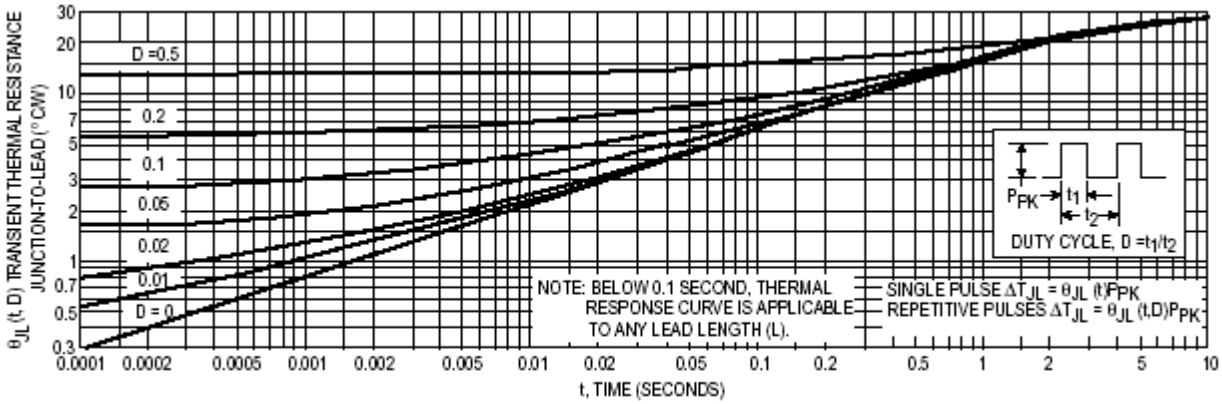


Figure 2. Typical Thermal Response L, Lead Length = 3/8 Inch

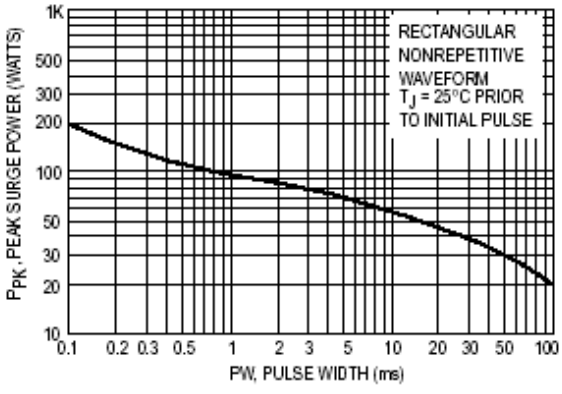


Figure 3. Maximum Surge Power

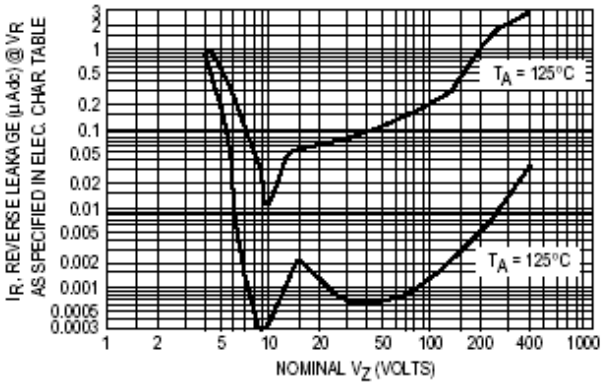


Figure 4. Typical Reverse Leakage

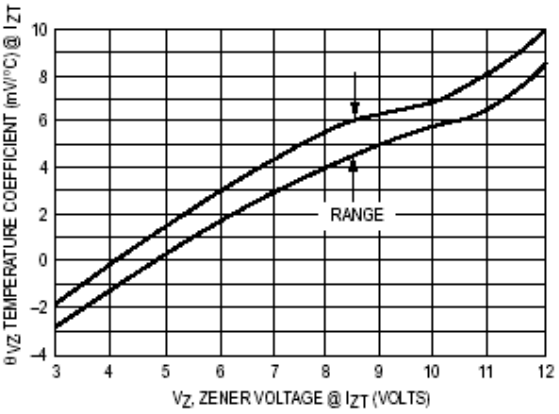


Figure 5. Units To 12 Volts

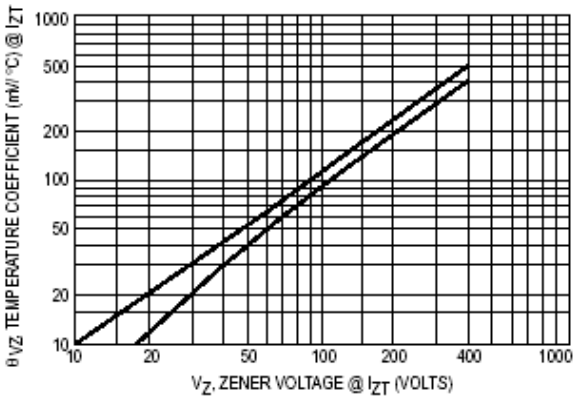


Figure 6. Units 10 To 400 Volts

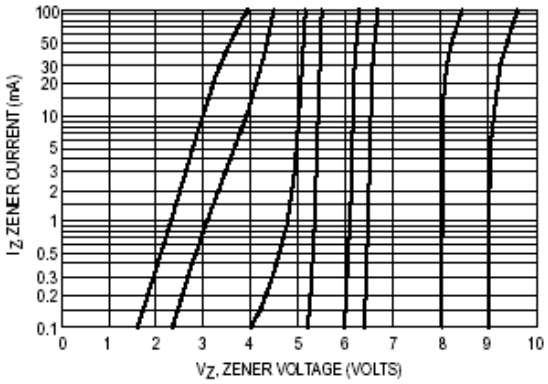


Figure 7. V_Z = 3.3 thru 10 Volts

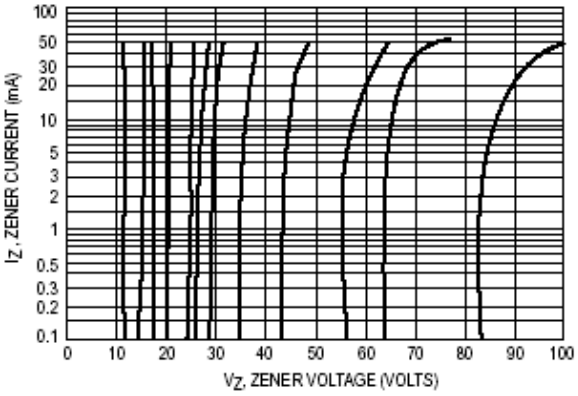


Figure 8. V_Z = 12 thru 82 Volts

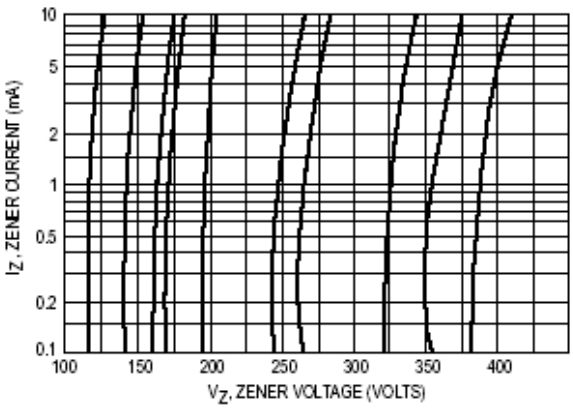


Figure 9. V_Z = 100 thru 400 Volts

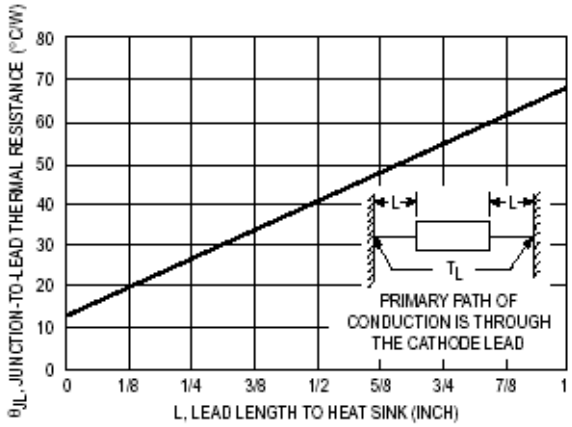


Figure 10. Typical Thermal Resistance