1N5338B - 1N5388B

SILICON ZENER DIODES

V_Z : 5.1 - 200 Volts
P_D : 5 Watts

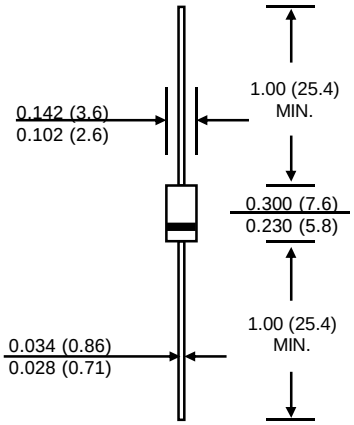
FEATURES :

* Complete Voltage Range 5.1 to 200 Volts
* High peak reverse power dissipation
* High reliability
* Low leakage current
* Pb / RoHS Free

MECHANICAL DATA :

* Case : DO-15 Molded plastic
* Epoxy : UL94V-0 rate flame retardant
* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 0.4 gram

DO-15



Dimensions in inches and (millimeters)

MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified

Rating	Symbol	Value	Unit
DC Power Dissipation at T_L = 75 °C (Note1)	P_D	5.0	W
Maximum Forward Voltage at I_F = 1 A	V_F	1.2	V
Junction Temperature Range	T_J	- 65 to + 200	°C
Storage Temperature Range	Ts	- 65 to + 200	°C

Note :

(1) T_L = Lead temperature at 3/8 " (9.5mm) from body

Fig. 1 POWER TEMPERATURE DERATING CURVE

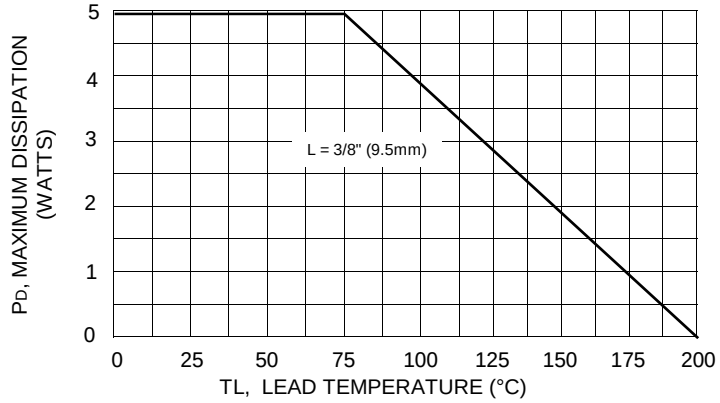
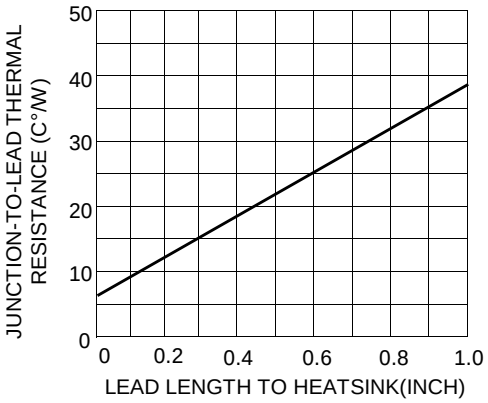


Fig. 2 TYPICAL THERMAL RESISTANCE



ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

Type No.	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
	V_Z @ I_{ZT}	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R @ V_R		I_{ZM}
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
1N5338B	5.1	240	1.5	400	1.0	1.0	1.0	930
1N5339B	5.6	220	1.0	400	1.0	1.0	2.0	865
1N5340B	6.0	200	1.0	300	1.0	1.0	3.0	790
1N5341B	6.2	200	1.0	200	1.0	1.0	3.0	765
1N5342B	6.8	175	1.0	200	1.0	10	5.2	700
1N5343B	7.5	175	1.5	200	1.0	10	5.7	630
1N5344B	8.2	150	1.5	200	1.0	10	6.2	580
1N5345B	8.7	150	2.0	200	1.0	10	6.6	545
1N5346B	9.1	150	2.0	150	1.0	7.5	6.9	520
1N5347B	10	125	2.0	125	1.0	5.0	7.6	475
1N5348B	11	125	2.5	125	1.0	5.0	8.4	430
1N5349B	12	100	2.5	125	1.0	2.0	9.1	395
1N5350B	13	100	2.5	100	1.0	1.0	9.9	365
1N5351B	14	100	2.5	75	1.0	1.0	10.6	340
1N5352B	15	75	2.5	75	1.0	1.0	11.5	315
1N5353B	16	75	2.5	75	1.0	1.0	12.2	295
1N5354B	17	70	2.5	75	1.0	0.5	12.9	280
1N5355B	18	65	2.5	75	1.0	0.5	13.7	265
1N5356B	19	65	3.0	75	1.0	0.5	14.4	250
1N5357B	20	65	3.0	75	1.0	0.5	15.2	237
1N5358B	22	50	3.5	75	1.0	0.5	16.7	216
1N5359B	24	50	3.5	100	1.0	0.5	18.2	198
1N5360B	25	50	4.0	110	1.0	0.5	19.0	190
1N5361B	27	50	5.0	120	1.0	0.5	20.6	176
1N5362B	28	50	6.0	130	1.0	0.5	21.2	170
1N5363B	30	40	8.0	140	1.0	0.5	22.8	158
1N5364B	33	40	10	150	1.0	0.5	25.1	144
1N5365B	36	30	11	160	1.0	0.5	27.4	132
1N5366B	39	30	14	170	1.0	0.5	29.7	122
1N5367B	43	30	20	190	1.0	0.5	32.7	110
1N5368B	47	25	25	210	1.0	0.5	35.8	100
1N5369B	51	25	27	230	1.0	0.5	38.8	93.0
1N5370B	56	20	35	280	1.0	0.5	42.6	86.0
1N5371B	60	20	40	350	1.0	0.5	45.5	79.0
1N5372B	62	20	42	400	1.0	0.5	47.1	76.0
1N5373B	68	20	44	500	1.0	0.5	51.7	70.0
1N5374B	75	20	45	620	1.0	0.5	56.0	63.0
1N5375B	82	15	65	720	1.0	0.5	62.2	58.0
1N5376B	87	15	75	760	1.0	0.5	66.0	54.5
1N5377B	91	15	75	760	1.0	0.5	69.2	52.5
1N5378B	100	12	90	800	1.0	0.5	76.0	47.5
1N5379B	110	12	125	1000	1.0	0.5	83.6	43.0
1N5380B	120	10	170	1150	1.0	0.5	91.2	39.5
1N5381B	130	10	190	1250	1.0	0.5	98.8	36.6
1N5382B	140	8.0	230	1500	1.0	0.5	106	34.0
1N5383B	150	8.0	330	1500	1.0	0.5	114	31.6
1N5384B	160	8.0	350	1650	1.0	0.5	122	29.4
1N5385B	170	8.0	380	1750	1.0	0.5	129	28.0
1N5386B	180	5.0	430	1750	1.0	0.5	137	26.4
1N5387B	190	5.0	450	1850	1.0	0.5	144	25.0
1N5388B	200	5.0	480	1850	1.0	0.5	152	23.6

Note : (1) Suffix " B " indicates ± 5% tolerance, suffix " A " indicates ± 10% tolerance.

RATING AND CHARACTERISTIC CURVES (1N5338B - 1N5388B)

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

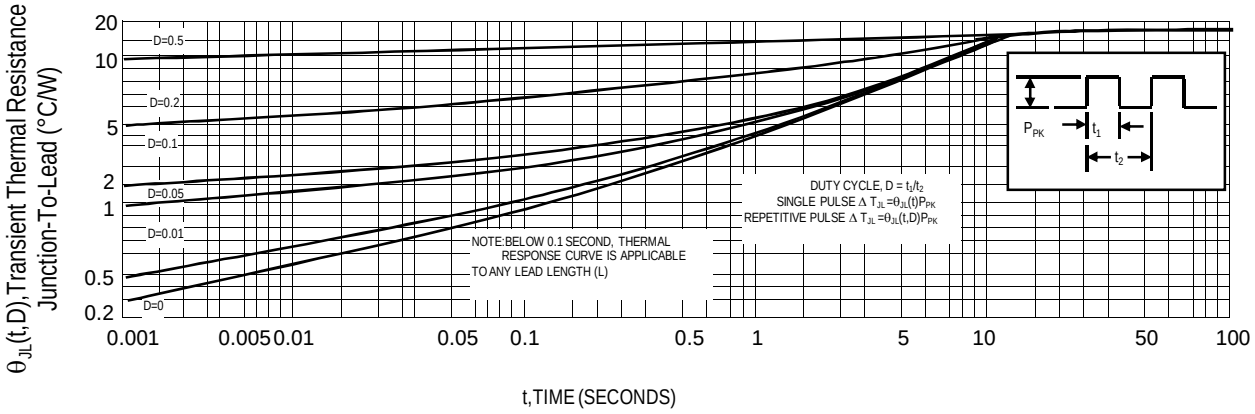


Fig.4 Maximum Non-Repetitive Surg Current versus Nominal Zener Voltage

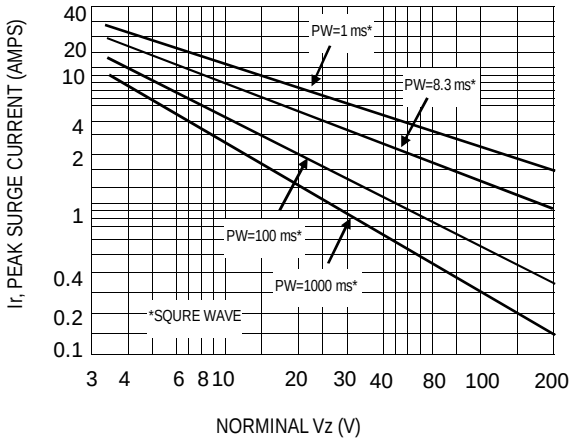
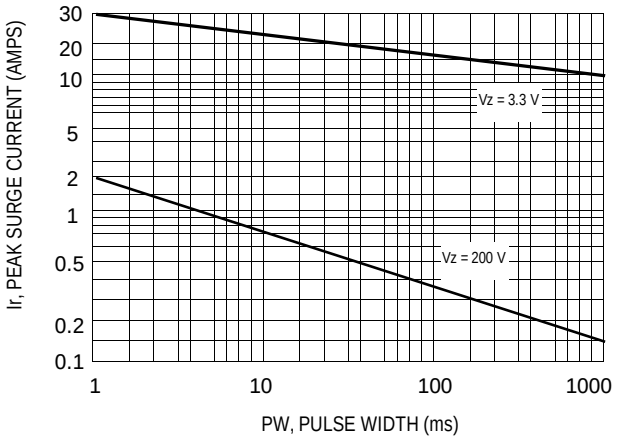


Fig. 5 Peak Surg Current versus Pulse Width



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SZ5562 BZG05C3V3 1N5339B 2EZ8.2D5 MZ5954A 2EZ4.3D5 30KP170 SZ15B0 SZ558C FR606
SMBJ5377B SZ457F 15HCB 1N4746A 1N5954B 30KP400A 30KP400CA MM3Z36B SK33S SZ256I
HVR520 MMBZ5247B SMAZ5V6 SZ15B2 SZ2568 1SMA4734A 20HCC SMBJ5385B SZ3562 SZ6582