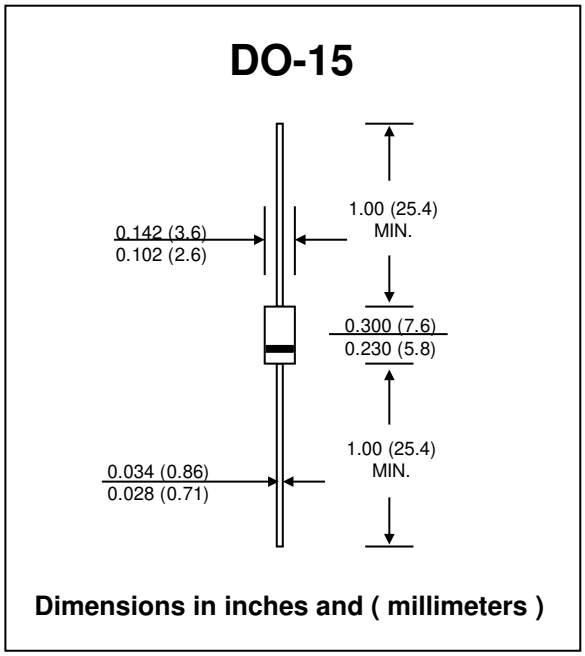
1N5338A - 1N5388A

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

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	Watts
Maximum Forward Voltage at I_F = 1 A	V_F	1.2	Volts
Operating Junction Temperature Range	T_J	- 65 to + 200	°C
Storage Temperature Range	T_{STG}	- 65 to + 200	°C

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

Fig. 1 POWER TEMPERATURE DERATING CURVE

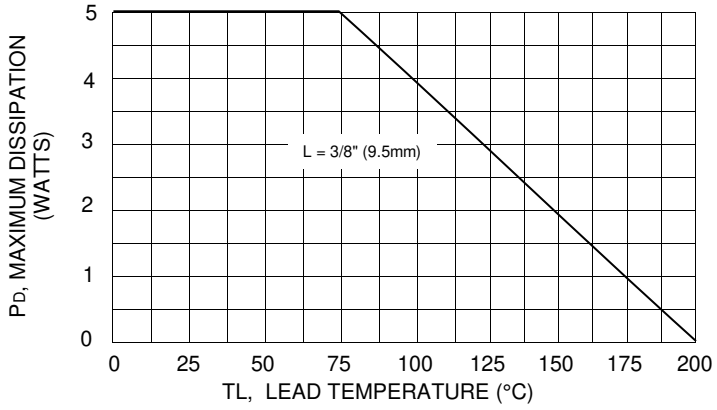
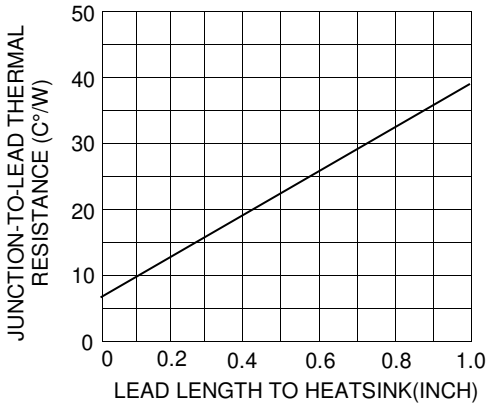


Fig. 2 TYPICAL THERMAL RESISTANCE



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

TYPE	Zener Voltage				Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
	V_Z[(1)] (V) @ I_{ZT}			I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R @ V_R		I_{ZM}
	Min.	Nom.	Max.	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
1N5338A	4.6	5.1	5.6	240	1.5	400	1.0	1.0	1.0	930
1N5339A	5.0	5.6	6.2	220	1.0	400	1.0	1.0	2.0	865
1N5340A	5.4	6.0	6.6	200	1.0	300	1.0	1.0	3.0	790
1N5341A	5.6	6.2	6.8	200	1.0	200	1.0	1.0	3.0	765
1N5342A	6.1	6.8	7.5	175	1.0	200	1.0	10	4.9	700
1N5343A	6.8	7.5	8.3	175	1.5	200	1.0	10	5.4	630
1N5344A	7.4	8.2	9.0	150	1.5	200	1.0	10	5.9	580
1N5345A	7.8	8.7	9.6	150	2.0	200	1.0	10	6.25	545
1N5346A	8.2	9.1	10.0	150	2.0	150	1.0	7.5	6.6	520
1N5347A	9.0	10	11.0	125	2.0	125	1.0	5.0	7.2	475
1N5348A	9.9	11	12.1	125	2.5	125	1.0	5.0	8.0	430
1N5349A	10.8	12	13.2	100	2.5	125	1.0	2.0	8.6	395
1N5350A	11.7	13	14.3	100	2.5	100	1.0	1.0	9.4	365
1N5351A	12.6	14	15.4	100	2.5	75	1.0	1.0	10.1	340
1N5352A	13.5	15	16.5	75	2.5	75	1.0	1.0	10.8	315
1N5353A	14.4	16	17.6	75	2.5	75	1.0	1.0	11.5	295
1N5354A	15.3	17	18.7	70	2.5	75	1.0	0.5	12.2	280
1N5355A	16.2	18	19.8	65	2.5	75	1.0	0.5	13.0	265
1N5356A	17.1	19	20.9	65	3.0	75	1.0	0.5	13.7	250
1N5357A	18.0	20	22.0	65	3.0	75	1.0	0.5	14.4	237
1N5358A	19.8	22	24.2	50	3.5	75	1.0	0.5	15.8	216
1N5359A	21.6	24	26.4	50	3.5	100	1.0	0.5	17.3	198
1N5360A	22.5	25	27.5	50	4.0	110	1.0	0.5	18.0	190
1N5361A	24.3	27	29.7	50	5.0	120	1.0	0.5	19.4	176
1N5362A	25.2	28	30.8	50	6.0	130	1.0	0.5	20.1	170
1N5363A	27.0	30	33.0	40	8.0	140	1.0	0.5	21.6	158
1N5364A	29.7	33	36.3	40	10	150	1.0	0.5	23.8	144
1N5365A	32.4	36	39.6	30	11	160	1.0	0.5	25.9	132
1N5366A	35.1	39	42.9	30	14	170	1.0	0.5	28.1	122
1N5367A	38.7	43	47.3	30	20	190	1.0	0.5	31.0	110
1N5368A	42.3	47	51.7	25	25	210	1.0	0.5	33.8	100
1N5369A	45.9	51	56.1	25	27	230	1.0	0.5	36.7	93.0
1N5370A	50.4	56	61.6	20	35	280	1.0	0.5	40.3	86.0
1N5371A	54.0	60	66.0	20	40	350	1.0	0.5	43.0	79.0
1N5372A	55.8	62	68.2	20	42	400	1.0	0.5	44.6	76.0
1N5373A	61.2	68	74.8	20	44	500	1.0	0.5	49.0	70.0
1N5374A	67.5	75	82.5	20	45	620	1.0	0.5	54.0	63.0
1N5375A	73.8	82	90.2	15	65	720	1.0	0.5	59.0	58.0
1N5376A	78.3	87	95.7	15	75	760	1.0	0.5	63.0	54.5
1N5377A	81.9	91	100.1	15	75	760	1.0	0.5	65.5	52.5
1N5378A	90.0	100	110.0	12	90	800	1.0	0.5	72.0	47.5
1N5379A	99.0	110	121.0	12	125	1000	1.0	0.5	79.2	43.0
1N5380A	108.0	120	132.0	10	170	1150	1.0	0.5	86.4	39.5
1N5381A	117.0	130	143.0	10	190	1250	1.0	0.5	93.2	36.6
1N5382A	126.0	140	154.0	8.0	230	1500	1.0	0.5	101	34.0
1N5383A	135.0	150	165.0	8.0	330	1500	1.0	0.5	108	31.6
1N5384A	144.0	160	176.0	8.0	350	1650	1.0	0.5	115	29.4
1N5385A	153.0	170	187.0	8.0	380	1750	1.0	0.5	122	28.0
1N5386A	162.0	180	198.0	5.0	430	1750	1.0	0.5	130	26.4
1N5387A	171.0	190	209.0	5.0	450	1850	1.0	0.5	137	25.0
1N5388A	180.0	200	220.0	5.0	480	1850	1.0	0.5	144	23.6

Note : (1) Suffix " A " indicates ± 10% tolerance, suffix " B " indicates ± 5.0% tolerance.

RATING AND CHARACTERISTIC CURVES (1N5338A - 1N5388A)

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

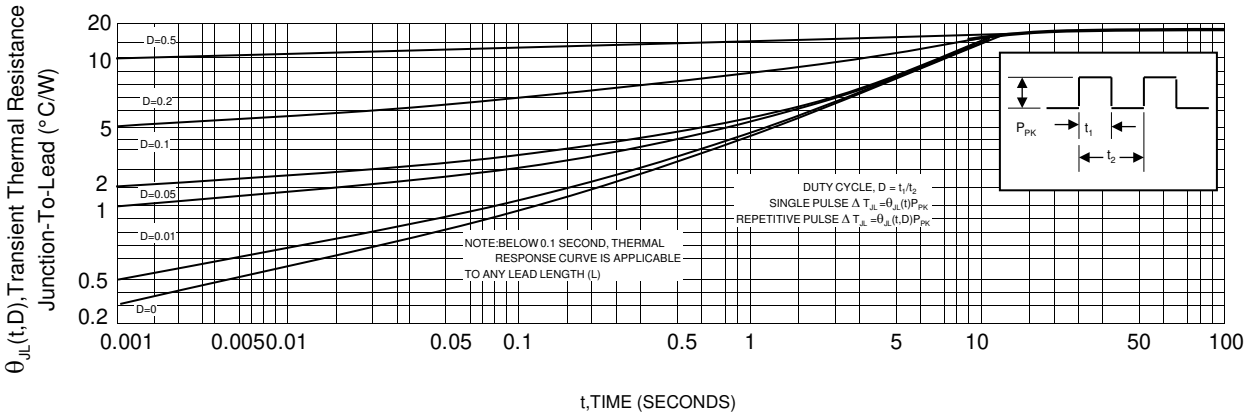


Fig.3 Maximum Non-Repetitive Surg Current versus Nominal Zener Voltage

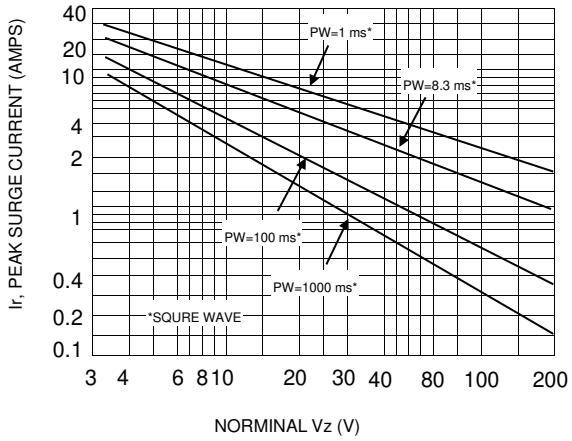


Fig. 4 Peak Surg Current versus Pulse Width

