



# DATA SHEET

## 1N5333B~1N5388B

### GLASS PASSIVATED JUNCTION SILICON ZENER DIODES

**VOLTAGE** 3.3 to 200 Volts **CURRENT** 5.0 Watts

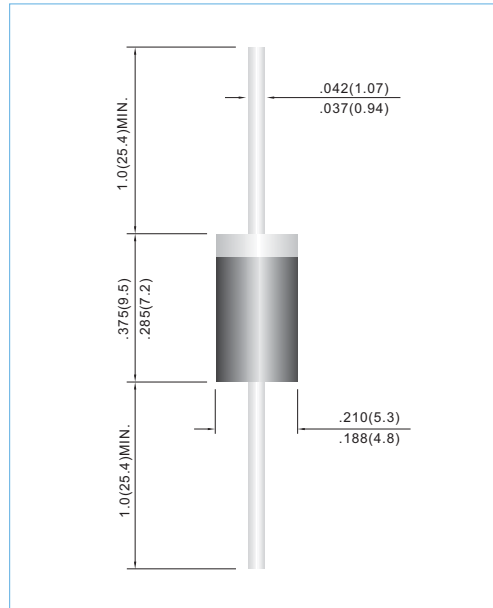
**DO-201AE** Unit: inch(mm)

#### FEATURES

- For surface mounted applications in order to optimize board space.
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Typical  $I_p$  less than 1.0 $\mu$ A above 13V
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Pb free product are available : 99% Sn can meet Rohs environment substance directive request

#### MECHANICAL DATA

Case: JEDEC DO-201AE molded plastic  
 Terminals: Axial leads, solderable per MIL-STD-202G, Method 208  
 Polarity: Color band denoted cathode except Bipolar  
 Mounting Position: Any  
 Weight: 0.045 ounce, 1.2 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Units
DC Power Dissipation on TL=75°C ,Measure at Zero Lead Length Derate above 50°C ( NOTE 1)	$P_D$	5.0 40	Watts mW / °C
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-50 to +150	°C

**NOTE:**

1. Mounted on 8.0mm<sup>2</sup> copper pads to each terminal.



Part Number	Nominal Zener Voltage			Maximum Zener Impedance				Maximum Leakage Current	
	V <sub>Z</sub> @ I <sub>ZT</sub>			Z <sub>ZT</sub> @ I <sub>ZT</sub>		Z <sub>ZK</sub> @ I <sub>ZK</sub>		I <sub>R</sub>	V <sub>R</sub>
	Nom. V	Min. V	Max. V	Ohms	mA	Ohms	mA	μA	V
1N5333B	3.3	3.1	3.5	3	380	400	1	300	1
1N5334B	3.6	3.4	3.8	2.5	350	500	1	150	1
1N5335B	3.9	3.7	4.1	2	320	500	1	50	1
1N5336B	4.3	4.1	4.52	2	290	500	1	10	1
1N5337B	4.7	4.5	4.9	2	260	450	1	5	1
1N5338B	5.1	4.9	5.4	1.5	240	400	1	1	1
1N5339B	5.6	5.3	5.9	1	220	400	1	1	2
1N5340B	6	5.7	6.3	1	200	300	1	1	3
1N5341B	6.2	5.9	6.5	1	200	200	1	1	3
1N5342B	6.8	6.5	7.1	1	175	200	1	10	5.2
1N5343B	7.5	7.1	7.9	1.5	175	200	1	10	5.7
1N5344B	8.2	7.8	8.6	1.5	150	200	1	10	6.2
1N5345B	8.7	8.3	9.1	2	150	200	1	10	6.6
1N5346B	9.1	8.7	9.6	2	150	150	1	7.5	6.9
1N5347B	10	9.5	10.5	2	125	125	1	5	7.6
1N5348B	11	10.5	11.6	2.5	125	125	1	5	8.4
1N5349B	12	11.4	12.6	2.5	100	125	1	2	9.1
1N5350B	13	12.4	13.7	2.5	100	100	1	1	9.9
1N5351B	14	13.3	15.8	2.5	100	75	1	1	10.6
1N5352B	15	14.2	16.8	2.5	75	75	1	1	11.5
1N5353B	16	15.2	17.9	2.5	75	75	1	1	12.2
1N5354B	17	16.2	18.9	2.5	70	75	1	0.5	12.9
1N5355B	18	17.1	20	2.5	65	75	1	0.5	13.7
1N5356B	19	18.1	21	3	65	75	1	0.5	14.4
1N5357B	20	19	23.1	3	65	75	1	0.5	15.2
1N5358B	22	20.9	25.2	3.5	50	75	1	0.5	16.7
1N5359B	24	22.8	26.3	3.5	50	100	1	0.5	18.2
1N5360B	25	23.8	28.4	4	50	110	1	0.5	19
1N5361B	27	25.7	29.4	5	50	120	1	0.5	20.6
1N5362B	28	26.6	31.5	6	50	130	1	0.5	21.2
1N5363B	30	28.5	34.7	8	40	140	1	0.5	22.8
1N5364B	33	31.4	37.8	10	40	150	1	0.5	25.1
1N5365B	36	34.2	41	11	30	160	1	0.5	27.4
1N5366B	39	37.1	45.2	14	30	170	1	0.5	29.7
1N5367B	43	40.9	49.4	20	30	190	1	0.5	32.7
1N5368B	47	44.7	53.6	25	25	210	1	0.5	35.8
1N5369B	51	48.5	58.8	27	25	230	1	0.5	38.8
1N5370B	56	53.2	63	35	20	280	1	0.5	42.6
1N5371B	60	57	65.1	40	20	350	1	0.5	45.5



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	Nom. V	Min. V	Max. V	Ohms	mA	Ohms	mA	μA	V
1N5372B	62	58.9	65.1	42	20	400	1	0.5	47.1
1N5373B	68	64.6	71.4	44	20	500	1	0.5	51.7
1N5374B	75	71.3	78.8	45	20	620	1	0.5	56
1N5375B	82	77.9	86.1	65	15	720	1	0.5	62.2
1N5376B	87	82.7	91.4	75	15	760	1	0.5	66
1N5377B	91	86.5	95.6	75	15	760	1	0.5	69.2
1N5378B	100	95	105	90	12	800	1	0.5	76
1N5379B	110	104.5	115.5	125	12	1000	1	0.5	83.6
1N5380B	120	114	126	170	10	1150	1	0.5	91.2
1N5381B	130	123.5	136.5	190	10	1250	1	0.5	98.8
1N5382B	140	133	147	230	8	1500	1	0.5	106
1N5383B	150	142.5	157.5	330	8	1500	1	0.5	114
1N5384B	160	152	168	350	8	1650	1	0.5	122
1N8385B	170	161.5	178.5	380	8	1750	1	0.5	129
1N5386B	180	171	189	430	5	1750	1	0.5	137
1N5387B	190	180.5	199.5	450	5	1850	1	0.5	144
1N5388B	200	190	210	480	5	1850	1	0.5	152



## RATING AND CHARACTERISTIC CURVES

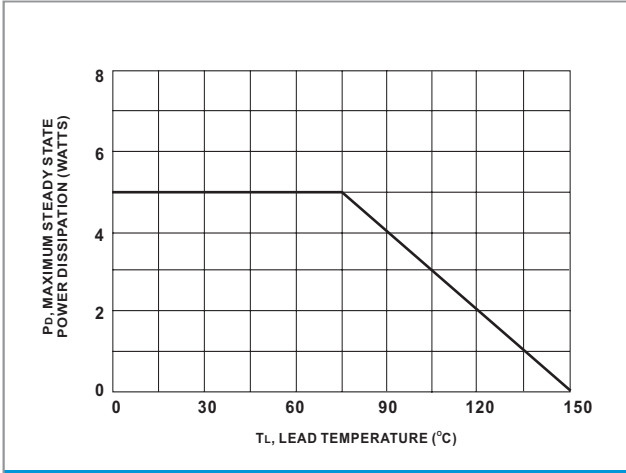


Fig.1 Power temperature Derating Curve

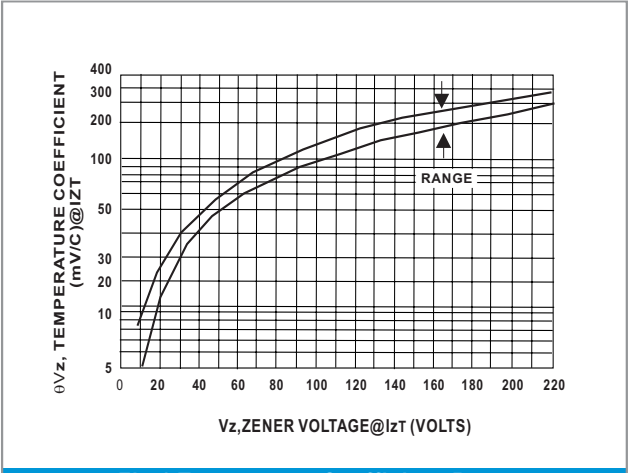


Fig.2 Temperature Coefficient-Range for Units 11 to 39 Volts

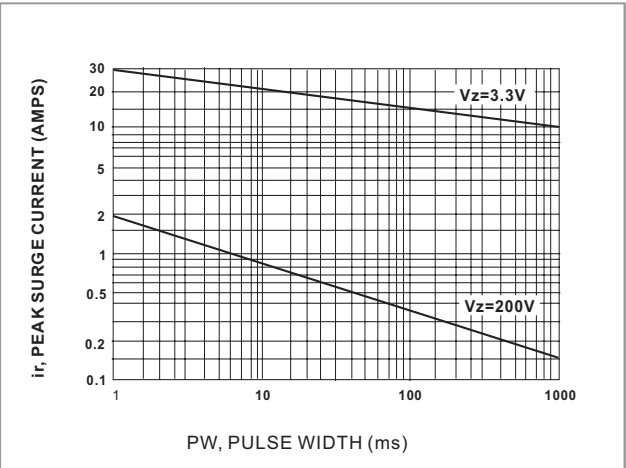


Fig.3 Peak Surge Current versus Pulse Width

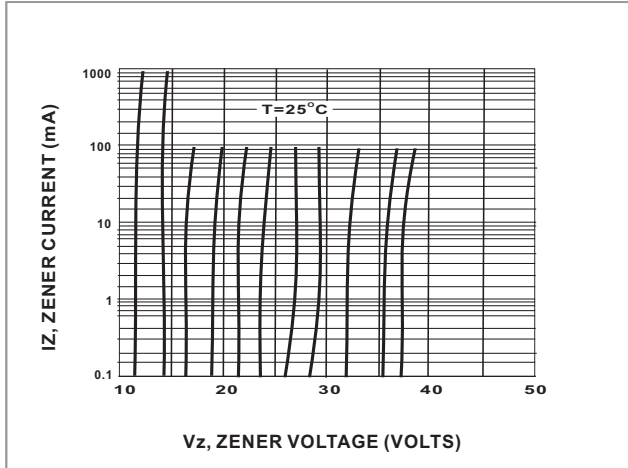


Fig.4 Zener Voltage versus Zener Current Vz=11 thru 39 Volts