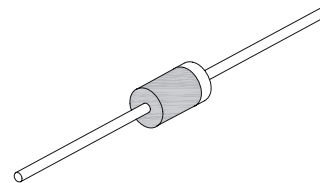


## 5.0W Zener Diodes

### Features

- Glass passivated junction
- Complete voltage range 3.3 to 200V
- High peak reverse power dissipation
- High reliability
- Low leakage current
- RoHS Compliance



1.5KE



### Mechanical Data

<b>Case:</b>	Molded plastic black body, 1.5KE
<b>Epoxy:</b>	Plastic package has UL flammability 94V-0
<b>Lead:</b>	Plated axial leads, solderable per MIL-STD-750, Method 2026
<b>Polarity:</b>	Color band denotes cathode end
<b>Weight:</b>	0.045 ounce, 1.2 grams

### Maximum Ratings ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	Value	Unit	Conditions
<b>P<sub>D</sub></b>	Power Dissipation	5.0	W	TA=75 °C
<b>P<sub>ZSM</sub></b>	Non Repetitive Peak Zener Dissipation (t=8.3ms)	180	W	
<b>V<sub>F</sub></b>	Max. Forward Voltage Drop	1.2	V	I <sub>F</sub> =3.0A
<b>R<sub>thj-a</sub></b>	Max. Thermal Resistance at: 10mm Lead Length	20	°C/W	
<b>T<sub>J</sub>, T<sub>STG</sub></b>	Operating Junction and Storage Temperature Range	-55 to 175	°C	

# 5.0W Zener Diodes

## 1N5333B - 1N5388B

### Electrical Characteristics ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Part NO.	Nominal Zener Voltage @ I <sub>ZT</sub>			Test Current	Max. Zener Impedance ( $\Omega$ )			Max. Reverse Leakage Current IR @ VR		Max. Zener Current
	V <sub>Z</sub> (V)							I <sub>ZT</sub> (mA)	I <sub>R</sub> ( $\mu$ A)	
	Nom.	Min.	Max.	Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub>	I <sub>ZK</sub> (mA)	I <sub>ZM</sub> (mA)			
1N5333B	3.3	3.14	3.47	380	3.0	400	1.0	300	1.0	1440
1N5334B	3.6	3.42	3.78	350	2.5	500	1.0	150	1.0	1320
1N5335B	3.9	3.71	4.10	320	2.0	500	1.0	50	1.0	1220
1N5336B	4.3	4.09	4.52	290	2.0	500	1.0	10	1.0	1100
1N5337B	4.7	4.47	4.94	260	2.0	450	1.0	5.0	1.0	1010
1N5338B	5.1	4.85	5.36	240	1.5	400	1.0	1.0	1.0	930
1N5339B	5.6	5.32	5.88	220	1.0	400	1.0	1.0	2.0	865
1N5340B	6.0	5.70	6.30	200	1.0	300	1.0	1.0	3.0	790
1N5341B	6.2	5.89	6.51	200	1.0	200	1.0	1.0	3.0	765
1N5342B	6.8	6.46	7.14	175	1.0	200	1.0	10	5.2	700
1N5343B	7.5	7.13	7.88	175	1.5	200	1.0	10	5.7	630
1N5344B	8.2	7.79	8.61	150	1.5	200	1.0	10	6.2	580
1N5345B	8.7	8.27	9.14	150	2.0	200	1.0	10	6.6	545
1N5346B	9.1	8.65	9.56	150	2.0	150	1.0	7.5	6.9	520
1N5347B	10	9.50	10.50	125	2.0	125	1.0	5.0	7.6	475
1N5348B	11	10.45	11.55	125	2.5	125	1.0	5.0	8.4	430
1N5349B	12	11.40	12.60	100	2.5	125	1.0	2.0	9.1	395
1N5350B	13	12.35	13.65	100	2.5	100	1.0	1.0	9.9	365
1N5351B	14	13.30	14.70	100	2.5	75	1.0	1.0	10.6	340
1N5352B	15	14.25	15.75	75	2.5	75	1.0	1.0	11.5	315
1N5353B	16	15.20	16.80	75	2.5	75	1.0	1.0	12.2	295
1N5354B	17	16.15	17.85	70	2.5	75	1.0	0.5	12.9	280
1N5355B	18	17.10	18.90	65	2.5	75	1.0	0.5	13.7	264
1N5356B	19	18.05	19.95	65	3.0	75	1.0	0.5	14.4	250
1N5357B	20	19.00	21.00	65	3.0	75	1.0	0.5	15.2	237
1N5358B	22	20.90	23.10	50	3.5	75	1.0	0.5	16.7	216
1N5359B	24	22.80	25.20	50	3.5	100	1.0	0.5	18.2	198
1N5360B	25	23.75	26.25	50	4.0	110	1.0	0.5	19.0	190
1N5361B	27	25.65	28.35	50	5.0	120	1.0	0.5	20.6	176
1N5362B	28	26.60	29.40	50	6.0	130	1.0	0.5	21.2	170
1N5363B	30	28.50	31.50	40	8.0	140	1.0	0.5	22.8	158
1N5364B	33	31.35	34.65	40	10	150	1.0	0.5	25.1	144

# 5.0W Zener Diodes

## 1N5333B - 1N5388B

Part NO.	Nominal Zener Voltage @ I <sub>ZT</sub>			Test Current	Max. Zener Impedance (Ω)			Max. Reverse Leakage Current I <sub>R</sub> @ V <sub>R</sub>		Max. Zener Current
	V <sub>Z</sub> (V)									
	Nom.	Min.	Max.	I <sub>ZT</sub> (mA)	Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub>	I <sub>ZK</sub> (mA)	I <sub>R</sub> (μA)	V <sub>R</sub> (V)	I <sub>ZM</sub> (mA)
1N5365B	36	34.20	37.80	30	11	160	1.0	0.5	27.4	132
1N5366B	39	37.05	40.95	30	14	170	1.0	0.5	29.7	122
1N5367B	43	40.85	45.15	30	20	190	1.0	0.5	32.7	110
1N5368B	47	44.65	49.35	25	25	210	1.0	0.5	35.8	100
1N5369B	51	48.45	53.55	25	27	230	1.0	0.5	38.8	93.0
1N5370B	56	53.20	58.80	20	35	280	1.0	0.5	42.6	86.0
1N5371B	60	57.00	63.00	20	40	350	1.0	0.5	45.5	79.0
1N5372B	62	58.90	65.10	20	42	400	1.0	0.5	47.1	76.0
1N5373B	68	64.60	71.40	20	44	500	1.0	0.5	51.7	70.0
1N5374B	75	71.25	78.75	20	45	620	1.0	0.5	56.0	63.0
1N5375B	82	77.90	86.10	15	65	720	1.0	0.5	62.2	58.0
1N5376B	87	82.65	91.35	15	75	760	1.0	0.5	66.0	54.5
1N5377B	91	86.45	95.55	15	75	760	1.0	0.5	69.2	52.5
1N5378B	100	95.00	105.0	12	90	800	1.0	0.5	76.0	47.5
1N5379B	110	104.5	115.5	12	125	1000	1.0	0.5	83.6	43.0
1N5380B	120	114.0	126.0	10	170	1150	1.0	0.5	91.2	39.5
1N5381B	130	123.5	136.5	10	190	1250	1.0	0.5	98.8	36.6
1N5382B	140	133.0	147.0	8.0	230	1500	1.0	0.5	106	34.0
1N5383B	150	142.5	157.5	8.0	330	1500	1.0	0.5	114	31.6
1N5384B	160	152.0	168.0	8.0	350	1650	1.0	0.5	122	29.4
1N5385B	170	161.5	178.5	8.0	380	1750	1.0	0.5	129	28.0
1N5386B	180	171.0	189.0	5.0	430	1750	1.0	0.5	137	26.4
1N5387B	190	180.5	199.5	5.0	450	1850	1.0	0.5	144	25.0
1N5388B	200	190.0	210.0	5.0	480	1850	1.0	0.5	152	23.6

**Note:**

1. Test with pulses. Pulse test:  $t_p \leq 50$  ms;  $\delta < 2\%$
2. Test conditions for voltage regulation are as follows. V<sub>Z</sub> measurements are made at 10% and then at 50% of the I<sub>Z</sub> max. value listed in the electrical characteristics table.

# 5.0W Zener Diodes

## 1N5333B - 1N5388B

### Typical Characteristics Curves

Fig.1- Max. Continuous Power Dissipation

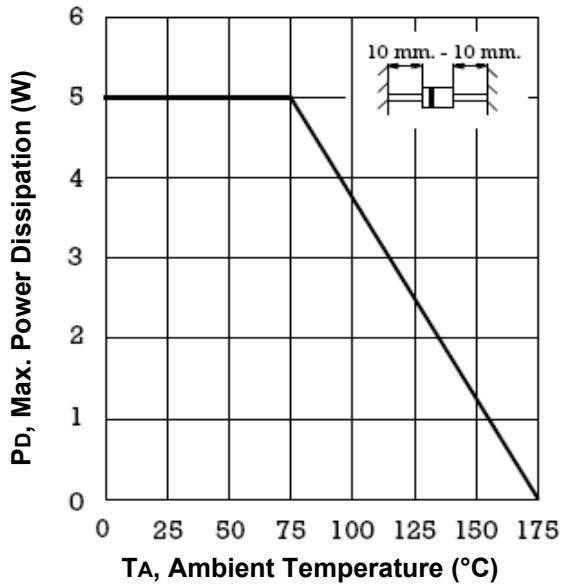
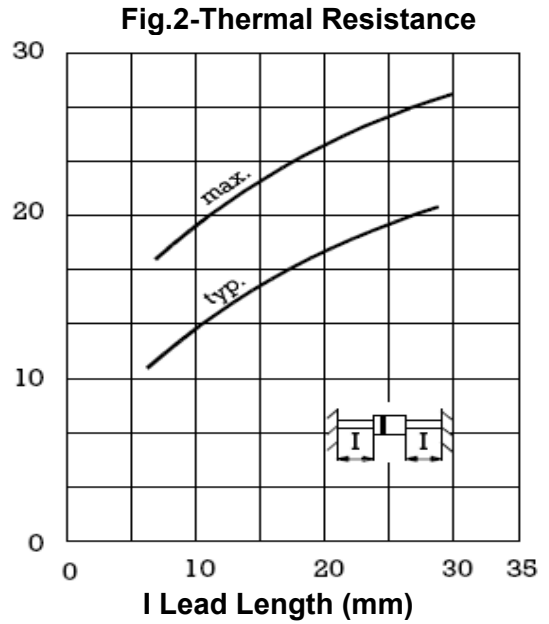
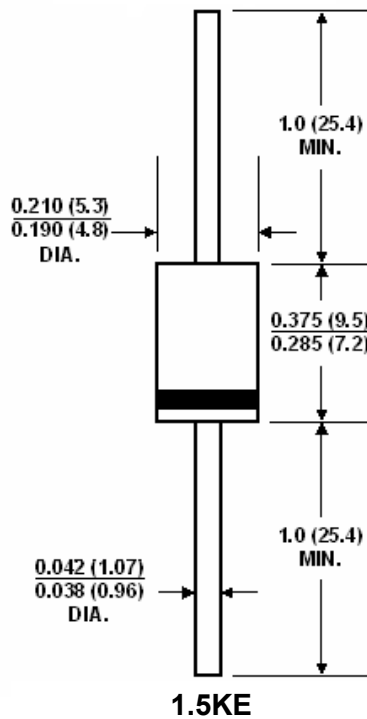


Fig.2- Thermal Resistance



### Dimensions in inch (mm)



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