

# BZX85B Series

$V_Z$  : 3.6 to 200V  
 $P_D$  : 1.3W

### FEATURES :

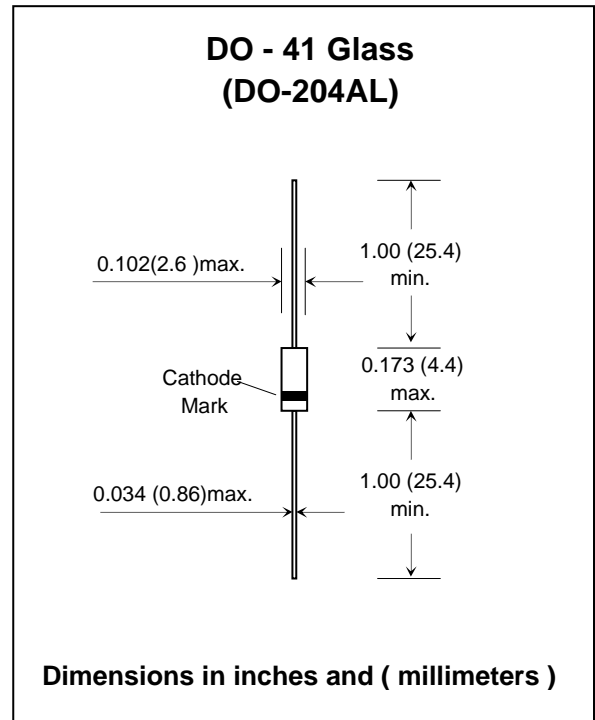
- Silicon planar power zener diodes.
- For use in stabilizing and clipping circuits with high power rating.
- Standard zener voltage tolerance is  $\pm 2\%$
- Other tolerances are available upon request.
- **Pb / RoHS Free**

### MECHANICAL DATA :

**Case:** DO-41 Glass Case

**Weight:** approx. 0.35g

## ZENER DIODES



### Maximum Ratings and Thermal Characteristics

Rating at 25 °C ambient temperature unless otherwise specific.

Parameter	Symbol	Value	Unit
Zener Current see Table "Characteristics"			
Maximum Forward Voltage at $I_F = 200$ mA.	$V_F$	1.2	V
Power Dissipation at $T_a = 25^\circ\text{C}$	$P_D$	1.3 <sup>(1)</sup>	W
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	130 <sup>(1)</sup>	$^\circ\text{C/W}$
Junction temperature	$T_J$	175	$^\circ\text{C}$
Storage temperature range	$T_S$	-65 to + 200	$^\circ\text{C}$

**Note:**

(1) Valid provided that leads at a distance of 3/8" from case are kept at ambient temperature.

## ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

Type Number	Nominal Zener Voltage <sup>(1)</sup>		Maximum Zener Impedance, f = 1kHz			Maximum Reverse Leakage Current		Maximum DC Zener Current	Temp. coefficient of Zener Voltage $\alpha_{mvz}(\% / ^\circ\text{C})$	
	Vz @ IZT	IZT	ZzT @ IZT	ZzK @ IZK	IZK	IR @ VR		IZM <sup>(2)</sup>	min.	max.
	(V)	(mA)	( $\Omega$ )	( $\Omega$ )	(mA)	( $\mu\text{A}$ )	(V)			
BZX85B3V6G	3.6	60	15	500	1.0	20	1.0	290	-0.08	-0.05
BZX85B3V9G	3.9	60	15	500	1.0	10	1.0	280	-0.07	-0.02
BZX85B4V3G	4.3	50	13	500	1.0	3.0	1.0	250	-0.05	0.010
BZX85B4V7G	4.7	45	13	500	1.0	3.0	1.0	215	-0.03	0.040
BZX85B5V1G	5.1	45	10	500	1.0	1.0	1.5	200	-0.01	0.040
BZX85B5V6G	5.6	45	7.0	400	1.0	1.0	2.0	190	0	0.045
BZX85B6V2G	6.2	35	4.0	300	1.0	1.0	3.0	170	0.010	0.055
BZX85B6V8G	6.8	35	3.5	300	1.0	1.0	4.0	155	0.015	0.060
BZX85B7V5G	7.5	35	3.0	200	0.5	1.0	4.5	140	0.020	0.065
BZX85B8V2G	8.2	25	5.0	200	0.5	1.0	6.2	130	0.030	0.070
BZX85B9V1G	9.1	25	5.0	200	0.5	1.0	6.8	120	0.040	0.075
BZX85B10G	10	25	7.0	200	0.5	0.5	7.5	105	0.450	0.080
BZX85B11G	11	20	8.0	300	0.5	0.5	8.2	97	0.045	0.080
BZX85B12G	12	20	9.0	350	0.5	0.5	9.1	88	0.045	0.085
BZX85B13G	13	20	10	400	0.5	0.5	10	79	0.050	0.085
BZX85B15G	15	15	10	500	0.5	0.5	11	71	0.055	0.090
BZX85B16G	16	15	15	500	0.5	0.5	12	66	0.055	0.090
BZX85B18G	18	15	20	500	0.5	0.5	13	62	0.060	0.090
BZX85B20G	20	10	24	600	0.5	0.5	15	56	0.060	0.090
BZX85B22G	22	10	25	600	0.5	0.5	16	52	0.060	0.095
BZX85B24G	24	10	25	600	0.5	0.5	18	47	0.060	0.095
BZX85B27G	27	8.0	30	750	0.25	0.5	20	41	0.060	0.095
BZX85B30G	30	8.0	30	1000	0.25	0.5	22	36	0.060	0.095
BZX85B33G	33	8.0	35	1000	0.25	0.5	24	33	0.060	0.095
BZX85B36G	36	8.0	40	1000	0.25	0.5	27	30	0.060	0.095
BZX85B39G	39	6.0	50	1000	0.25	0.5	30	28	0.060	0.095
BZX85B43G	43	6.0	50	1000	0.25	0.5	33	26	0.060	0.095
BZX85B47G	47	4.0	90	1500	0.25	0.5	36	23	0.060	0.095
BZX85B51G	51	4.0	115	1500	0.25	0.5	39	21	0.060	0.095
BZX85B56G	56	4.0	120	2000	0.25	0.5	43	19	0.060	0.095
BZX85B62G	62	4.0	125	2000	0.25	0.5	47	16	0.060	0.095
BZX85B68G	68	4.0	130	2000	0.25	0.5	51	15	0.055	0.095
BZX85B75G	75	4.0	135	2000	0.25	0.5	56	14	0.055	0.095
BZX85B82G	82	2.7	200	3000	0.25	0.5	62	12	0.055	0.095
BZX85B91G	91	2.7	250	3000	0.25	0.5	68	10	0.055	0.095
BZX85B100G	100	2.7	350	3000	0.25	0.5	75	9.4	0.055	0.095
BZX85B110G	110	2.7	450	4000	0.25	0.5	82	8.6	0.055	0.095
BZX85B120G	120	2.0	550	4500	0.25	0.5	91	7.8	0.055	0.095
BZX85B130G	130	2.0	700	5000	0.25	0.5	100	7.0	0.055	0.095
BZX85B150G	150	2.0	1000	6000	0.25	0.5	110	6.4	0.055	0.095
BZX85B160G	160	1.5	1100	6500	0.25	0.5	120	5.8	0.055	0.095
BZX85B180G	180	1.5	1200	7000	0.25	0.5	130	5.2	0.055	0.095
BZX85B200G	200	1.5	1500	8000	0.25	0.5	150	4.7	0.055	0.095

### Notes:

- (1) Measured with pulses  $t_p = 5 \text{ ms}$
- (2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case
- (3) The type number listed have a standard tolerance on the nominal zener voltage  $\pm 2\%$ .