



GOOD-ARK

**BZX85 ...**

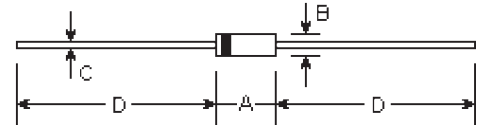
**SILICON PLANAR POWER ZENER DIODES**

**Features**

**Silicon Planar Power Zener Diodes**

for use in stabilizing and clipping circuits with high power rating. The Zener voltages are graded according to the international E 24 standard. Other voltage tolerances and higher Zener voltages upon request.

**DO-41**



DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	-	0.169	-	4.3	
B	-	0.110	-	2.8	ϕ
C	-	0.031	-	0.8	ϕ
D	1.102	-	28.0	-	

**Absolute Maximum Ratings** ( $T_a=25^{\circ}\text{C}$ )

	Symbols	Values	Units
Zener current see Table "Characteristics"			
Power dissipation at $T_{amb}=25^{\circ}\text{C}$	$P_{tot}$	1.3 <sup>(1)</sup>	W
Junction temperature	$T_j$	200	$^{\circ}\text{C}$
Storage temperature range	$T_s$	-55 to +200	$^{\circ}\text{C}$

Note:

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

**Characteristics** at  $T_{amb}=25^{\circ}\text{C}$

	Symbols	Min.	Typ.	Max.	Units
Thermal resistance junction to ambient Air	$R_{thA}$	-	-	130 <sup>(1)</sup>	K/W
Forward voltage at $I_F=200\text{mA}$	$V_F$	-	-	1.0	V

Note:

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

Type	Zener voltage range <sup>1)</sup>			Dynamic resistance			Reverse leakage current		Temp. coefficient of Zener voltage
	V <sub>znom</sub>	I <sub>ZT</sub> for V <sub>ZT</sub> <sup>2)</sup>		r <sub>ZT</sub> and r <sub>ZK</sub> at I <sub>ZK</sub>			I <sub>R</sub> <sup>2)</sup> at V <sub>R</sub>		TK <sub>VZ</sub>
	V	mA	V	Ω	Ω	mA	μA	V	%/K
BZX85/C 2V7	2.7	80	2.5 ... 2.9	<20	<400	1	<150	1	-0.08 ... -0.05
BZX85/C 3V0	3.0	80	2.8 ... 3.2	<20	<400	1	<100	1	-0.08 ... -0.05
BZX85/C 3V3	3.3	70	3.1 ... 3.5	<20	<400	1	<40	1	-0.08 ... -0.05
BZX85/C 3V6	3.6	60	3.4 ... 3.8	<15	<500	1	<20	1	-0.08 ... -0.05
BZX85/C 3V9	3.9	60	3.7 ... 4.1	<15	<500	1	<10	1	-0.07 ... -0.02
BZX85/C 4V3	4.3	50	4.0 ... 4.6	<13	<500	1	<3	1	-0.07 ... +0.01
BZX85/C 4V7	4.7	45	4.4 ... 5.0	<13	<600	1	<3	1	-0.03 ... +0.04
BZX85/C 5V1	5.1	45	4.8 ... 5.4	<10	<500	1	<1	1.5	-0.01 ... +0.04
BZX85/C 5V6	5.6	45	5.2 ... 6.0	<7	<400	1	<1	2	0 ... +0.045
BZX85/C 6V2	6.2	35	5.8 ... 6.6	<4	<300	1	<1	3	+0.01 ... +0.055
BZX85/C 6V8	6.8	35	6.4 ... 7.2	<3.5	<300	1	<1	4	+0.015 ... +0.06
BZX85/C 7V5	7.5	35	7.0 ... 7.9	<3	<200	0.5	<1	4.5	+0.02 ... +0.065
BZX85/C 8V2	8.2	25	7.7 ... 8.7	<5	<200	0.5	<1	6.2	0.03 ... 0.07
BZX85/C 9V1	9.1	25	8.5 ... 9.6	<5	<200	0.5	<1	6.8	0.035 ... 0.075
BZX85/C 10	10	25	9.4 ... 10.6	<7	<200	0.5	<0.5	7	0.04 ... 0.08
BZX85/C 11	11	20	10.4 ... 11.6	<8	<300	0.5	<0.5	8.2	0.045 ... 0.08
BZX85/C 12	12	20	11.4 ... 12.7	<9	<350	0.5	<0.5	9.1	0.045 ... 0.085
BZX85/C 13	13	20	12.4 ... 14.1	<10	<400	0.5	<0.5	10	0.05 ... 0.085
BZX85/C 15	15	15	13.8 ... 15.6	<15	<500	0.5	<0.5	11	0.055 ... 0.09
BZX85/C 16	16	15	15.3 ... 17.1	<15	<500	0.5	<0.5	12	0.055 ... 0.09
BZX85/C 18	18	15	16.8 ... 19.1	<20	<500	0.5	<0.5	13	0.06 ... 0.09
BZX85/C 20	20	10	18.8 ... 21.2	<24	<600	0.5	<0.5	15	0.06 ... 0.09
BZX85/C 22	22	10	20.8 ... 23.3	<25	<600	0.5	<0.5	16	0.06 ... 0.095
BZX85/C 24	24	10	22.8 ... 25.6	<25	<600	0.5	<0.5	18	0.06 ... 0.095
BZX85/C 27	27	8	25.1 ... 28.9	<30	<750	0.25	<0.5	20	0.06 ... 0.095
BZX85/C 30	30	8	28 ... 32	<30	<1000	0.25	<0.5	22	0.06 ... 0.095
BZX85/C 33	33	8	31 ... 35	<35	<1000	0.25	<0.5	24	0.06 ... 0.095
BZX85/C 36	36	8	34 ... 38	<40	<1000	0.25	<0.5	27	0.06 ... 0.095
BZX85/C 39	39	6	37 ... 41	<50	<1000	0.25	<0.5	30	0.06 ... 0.095
BZX85/C 43	43	6	40 ... 46	<50	<1000	0.25	<0.5	33	0.06 ... 0.095
BZX85/C 47	47	4	44 ... 50	<90	<1500	0.25	<0.5	36	0.06 ... 0.095
BZX85/C 51	51	4	48 ... 54	<115	<1500	0.25	<0.5	39	0.06 ... 0.095
BZX85/C 56	56	4	52 ... 60	<120	<2000	0.25	<0.5	43	0.06 ... 0.095
BZX85/C 62	62	4	58 ... 66	<125	<2000	0.25	<0.5	47	0.06 ... 0.095
BZX85/C 68	68	4	64 ... 72	<130	<2000	0.25	<0.5	51	0.06 ... 0.095
BZX85/C 75	75	4	70 ... 79	<135	<2000	0.25	<0.5	56	0.06 ... 0.095
BZX85/C 82	82	2.7	77 ... 87	<200	<3000	0.25	<0.5	62	0.07 ... 0.10
BZX85/C 91	91	2.7	85 ... 96	<250	<3000	0.25	<0.5	68	0.07 ... 0.10
BZX85/C 100	100	2.7	94 ... 106	<350	<3000	0.25	<0.5	75	0.07 ... 0.11
BZX85/C 110	110	2.7	104 ... 116	<450	<4000	0.25	<0.5	82	0.07 ... 0.11
BZX85/C 120	120	2	114 ... 127	<550	<4500	0.25	<0.5	91	0.07 ... 0.11
BZX85/C 130	130	2	124 ... 141	<700	<5000	0.25	<0.5	100	0.07 ... 0.11
BZX85/C 150	150	2	138 ... 156	<1000	<6000	0.25	<0.5	110	0.07 ... 0.11
BZX85/C 160	160	1.5	153 ... 171	<1100	<6500	0.25	<0.5	120	0.07 ... 0.11
BZX85/C 180	180	1.5	168 ... 191	<1200	<7000	0.25	<0.5	130	0.07 ... 0.11
BZX85/C 200	200	1.5	188 ... 212	<1500	<8000	0.25	<0.5	150	0.07 ... 0.11

Notes:

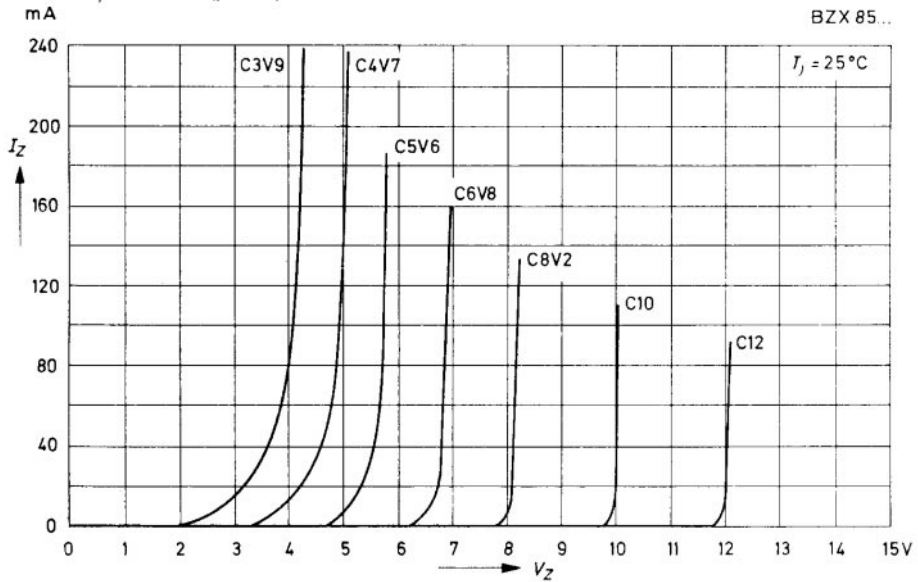
(1) Tested with pulses tp=20ms.

(2) Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.

# RATINGS AND CHARACTERISTIC CURVES

## Breakdown characteristics

at  $T_j = \text{constant}$  (pulsed)



## Breakdown characteristics

at  $T_j = \text{constant}$  (pulsed)

