GOOD-ARK

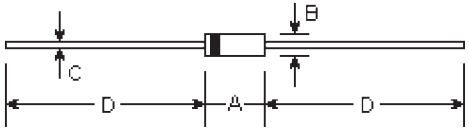
BZX85 ...

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℃)

	Symbols	Values	Units
Zener current see Table "Characteristics"			
Power dissipation at T_{amb}=25℃	P_{tot}	1.3 [1)]	W
Junction temperature	T_j	200	℃
Storage temperature range	T_S	-55 to +200	℃

Note:

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

Characteristics at T_{amb}=25℃

	Symbols	Min.	Typ.	Max.	Units
Thermal resistance junction to ambient Air	R_{thA}	-	-	130 [1)]	K/W
Forward voltage at I_F=200mA	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 [1]			Dynamic resistance			Reverse leakage current		Temp. coefficient of Zener voltage
	V_{znom}	I_{ZT} for V_{ZT} [2]		r_{zjT} and r_{zjk} at I_{ZK}			I_R [2] at V_R		TK_{VZ}
	V	mA	V	Ω	Ω	mA	uA	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

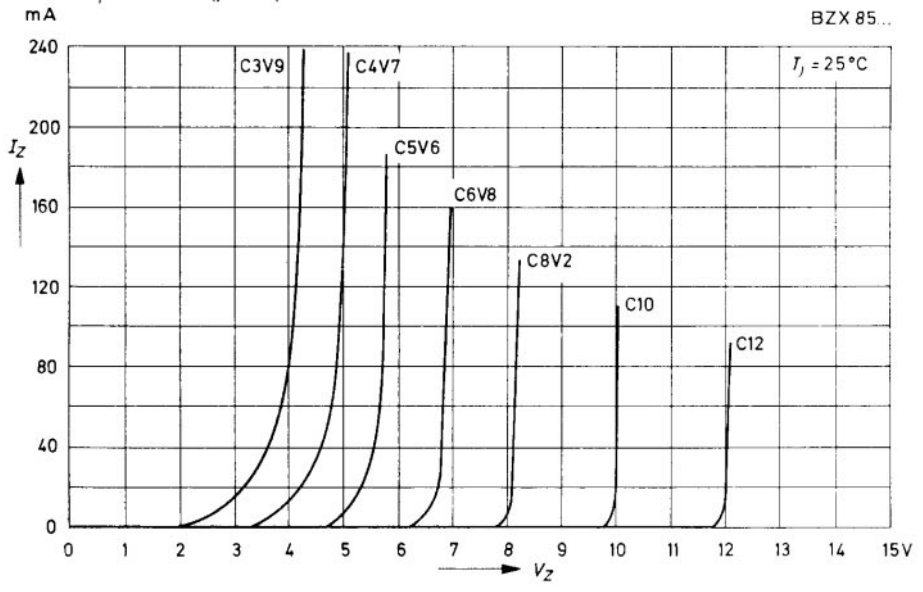
Notes:

(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 = constant (pulsed)



Breakdown characteristics
at T_j = constant (pulsed)