SEMICONDUCTOR

BZX85/C 2V7 THRU BZX85/C 200

1. 3W SILICON PLANAR ZENER DIODES

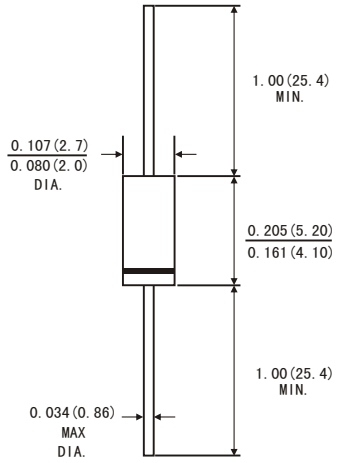
FEATURES

- For use in stabilizing and clipping circuits with high power rating.
- The Zener voltage is graded according to the international E24 standard.
- Other voltage tolerance and higher Zener voltages are on request.

High temperature soldering guaranteed: 260℃/10 seconds at terminals

Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

DO-41(GLASS)



Dimensions in inches and (millimeters)

MECHANICAL DATA

- *Case*: DO-41 glass case
- *Weight*: Approx. 0.35 gram

ABSOLUTE MAXIMUM RATINGS(LIMITING VALUES) (T_A=25℃)

	Symbols	*Value*	*Units*
Zener current see table "Characteristics"			
Power dissipation at T_A=25℃	P_{tot}	1.3[1)]	W
Junction temperature	T_J	200	℃
Storage temperature range	T_{STG}	-55 to+200	℃
1) Valid provided that a distance of 8mm from case is kept at ambient temperature.			

ELECTRICAL CHARACTERISTICS (T_A=25℃)

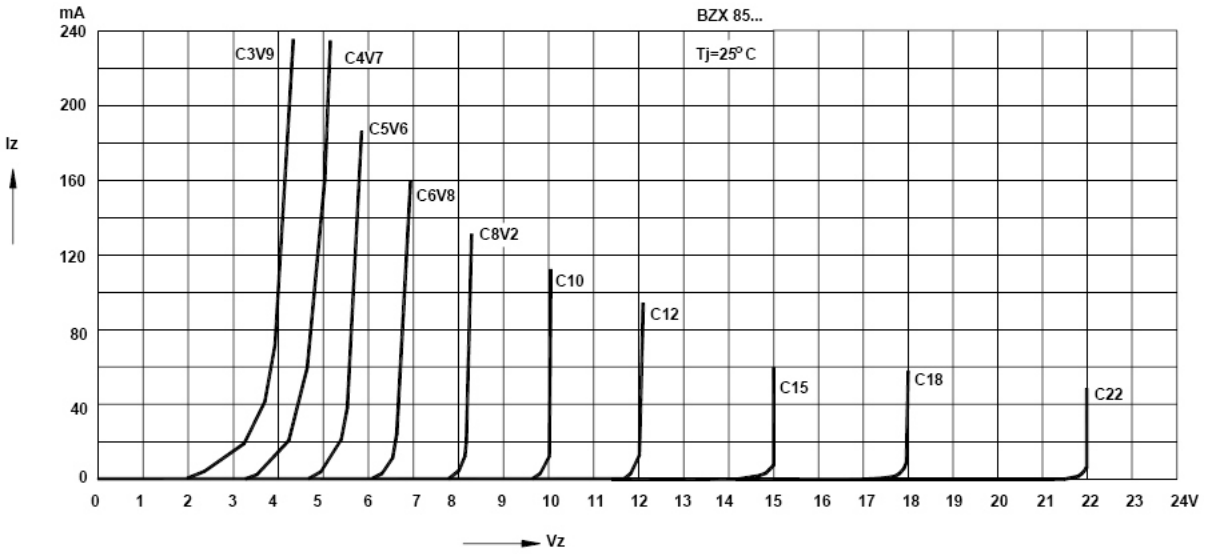
	Symbols	*Min*	*Typ*	*Max*	*Units*
Thermal resistance junction to ambient	$R_{\theta JA}$			130[1)]	K/W
Forward voltage at I_F=200mA	V_F			1.2	V
1) Valid provided that a distance of 8mm from case is kept at ambient temperature.					

BZX85... SILICON PLANAR ZENER DIODES

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	μA	V	%/K
BZX85/C2V7	2.7	80	2.5…2.9	< 20	< 400	1	< 150	1	-0.08…-0.05
BZX85/C3V0	3.0	80	2.8…3.2	< 20	< 400	1	< 100	1	-0.08…-0.05
BZX85/C3V3	3.3	70	3.1…3.5	< 20	< 400	1	< 40	1	-0.08…-0.05
BZX85/C3V6	3.6	60	3.4…3.8	< 15	< 500	1	< 20	1	-0.08…-0.05
BZX85/C3V9	3.9	60	3.7…4.1	< 15	< 500	1	< 10	1	-0.07…-0.02
BZX85/C4V3	4.3	50	4…4.6	< 13	< 500	1	< 3	1	-0.07…+0.01
BZX85/C4V7	4.7	45	4.4…5	< 13	< 600	1	< 3	1	-0.03…+0.04
BZX85/C5V1	5.1	45	4.8…5.4	< 10	< 500	1	< 1	1.5	-0.01…+0.04
BZX85/C5V6	5.6	45	5.2…6	< 7	< 400	1	< 1	2	0…+0.045
BZX85/C6V2	6.2	35	5.8…6.6	< 4	< 300	1	< 1	3	+0.01…+0.055
BZX85/C6V8	6.8	35	6.4…7.2	< 3.5	< 300	1	< 1	4	+0.015…+0.06
BZX85/C7V5	7.5	35	7.0…7.9	< 3	< 200	0.5	< 1	4.5	+0.02…+0.065
BZX85/C8V2	8.2	25	7.7…8.7	< 5	< 200	0.5	< 1	6.2	0.03…0.07
BZX85/C9V1	9.1	25	8.5…9.6	< 5	< 200	0.5	< 1	6.8	0.035…0.075
BZX85/C10	10	25	9.4…10.6	< 7	< 200	0.5	< 0.5	7	0.04…0.08
BZX85/C11	11	20	10.4…11.6	< 8	< 300	0.5	< 0.5	8.2	0.045…0.08
BZX85/C12	12	20	11.4…12.7	< 9	< 350	0.5	< 0.5	9.1	0.045…0.085
BZX85/C13	13	20	12.4…14.1	< 10	< 400	0.5	< 0.5	10	0.05…0.085
BZX85/C15	15	15	13.8…15.6	< 15	< 500	0.5	< 0.5	11	0.055…0.09
BZX85/C16	16	15	15.3…17.1	< 15	< 500	0.5	< 0.5	12	0.055…0.09
BZX85/C18	18	15	16.8…19.1	< 20	< 500	0.5	< 0.5	13	0.06…0.09
BZX85/C20	20	10	18.8…21.2	< 24	< 600	0.5	< 0.5	15	0.06…0.09
BZX85/C22	22	10	20.8…23.3	< 25	< 600	0.5	< 0.5	16	0.06…0.095
BZX85/C24	24	10	22.8…25.6	< 25	< 600	0.5	< 0.5	18	0.06…0.095
BZX85/C27	27	8	25.1…28.9	< 30	< 750	0.25	< 0.5	20	0.06…0.095
BZX85/C30	30	8	28…32	< 30	< 1000	0.25	< 0.5	22	0.06…0.095
BZX85/C33	33	8	31…35	< 35	< 1000	0.25	< 0.5	24	0.06…0.095
BZX85/C36	36	8	34…38	< 40	< 1000	0.25	< 0.5	27	0.06…0.095
BZX85/C39	39	6	37…41	< 50	< 1000	0.25	< 0.5	30	0.06…0.095
BZX85/C43	43	6	40…46	< 50	< 1000	0.25	< 0.5	33	0.06…0.095
BZX85/C47	47	4	44…50	< 90	< 1500	0.25	< 0.5	36	0.06…0.095
BZX85/C51	51	4	48…54	< 115	< 1500	0.25	< 0.5	39	0.06…0.095
BZX85/C56	56	4	52…60	< 120	< 2000	0.25	< 0.5	43	0.06…0.095
BZX85/C62	62	4	58…66	< 125	< 2000	0.25	< 0.5	47	0.06…0.095
BZX85/C68	68	4	64…72	< 130	< 2000	0.25	< 0.5	51	0.06…0.095
BZX85/C75	75	4	70…79	< 135	< 2000	0.25	< 0.5	56	0.06…0.095
BZX85/C82	82	2.7	77…87	< 200	< 3000	0.25	< 0.5	62	0.07…0.10
BZX85/C91	91	2.7	85…96	< 250	< 3000	0.25	< 0.5	68	0.07…0.10
BZX85/C100	100	2.7	94…106	< 350	< 3000	0.25	< 0.5	75	0.07…0.11
BZX85/C110	110	2.7	104…116	< 450	< 4000	0.25	< 0.5	82	0.07…0.11
BZX85/C120	120	2	114…127	< 550	< 4500	0.25	< 0.5	91	0.07…0.11
BZX85/C130	130	2	124…141	< 700	< 5000	0.25	< 0.5	100	0.07…0.11
BZX85/C150	150	2	138…156	< 1000	< 6000	0.25	< 0.5	110	0.07…0.11
BZX85/C160	160	1.5	153…171	< 1100	< 6500	0.25	< 0.5	120	0.07…0.11
BZX85/C180	180	1.5	168…191	< 1200	< 7000	0.25	< 0.5	130	0.07…0.11
BZX85/C200	200	1.5	188…212	< 1500	< 8000	0.25	< 0.5	150	0.07…0.11

Note: 1) Tested with pulse tp=20ms.

Breakdown characteristics
at Tj=constant (pulsed)



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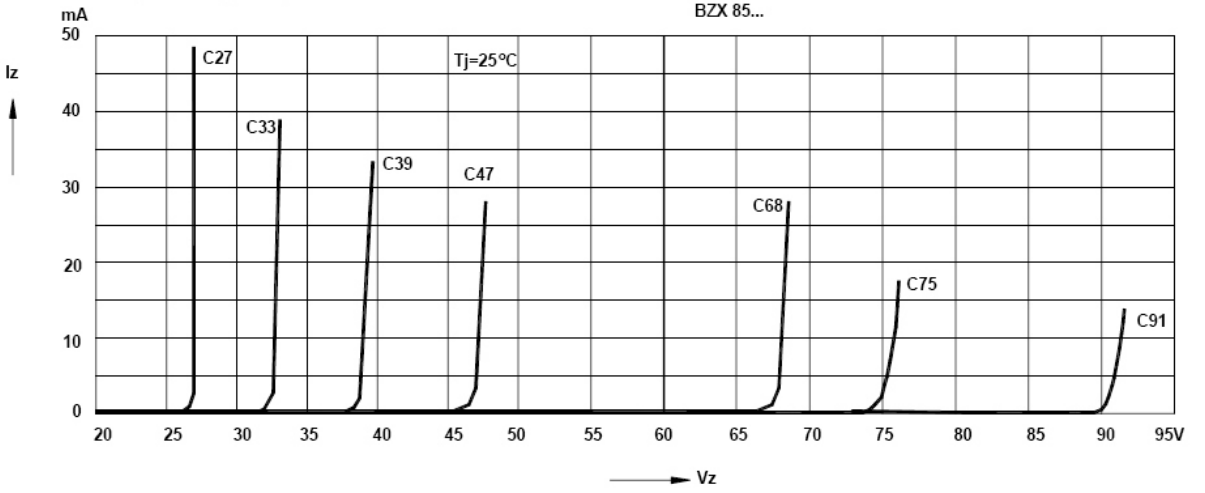
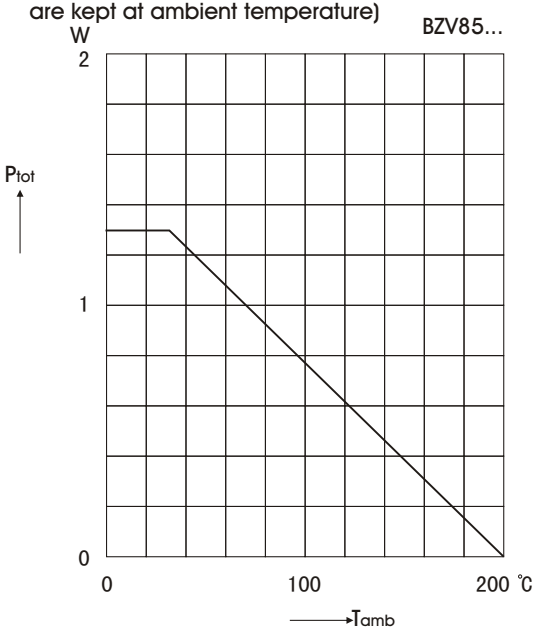
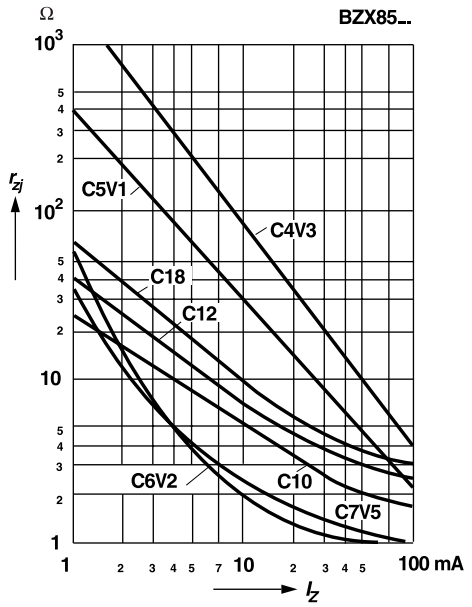


Admissible power dissipation versus ambient temperature
(Valid provided that leads at a distance of 10mm from case are kept at ambient temperature)

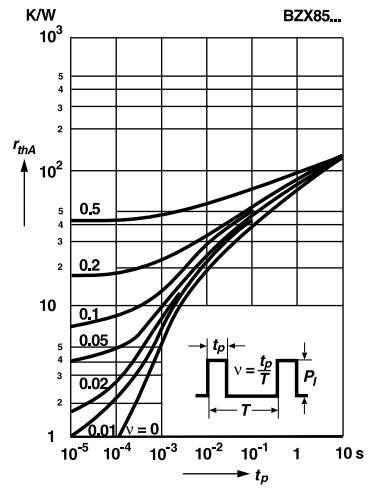


Dynamic resistance versus Zener current

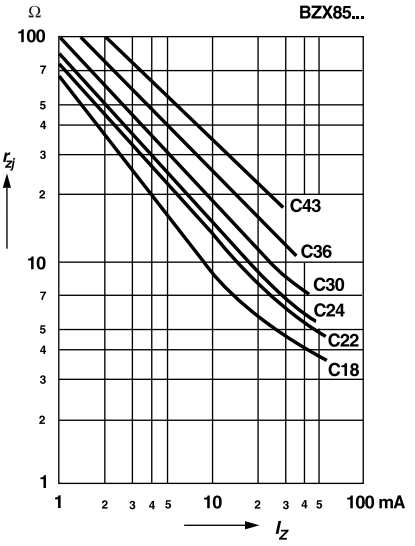


Pulse thermal resistance versus pulse duration

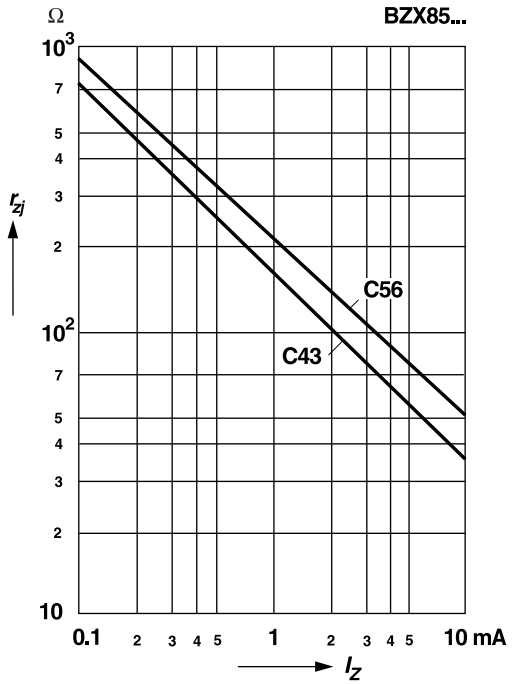
Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.



Dynamic resistance versus Zener current



Dynamic resistance versus Zener current



Thermal resistance versus lead length