

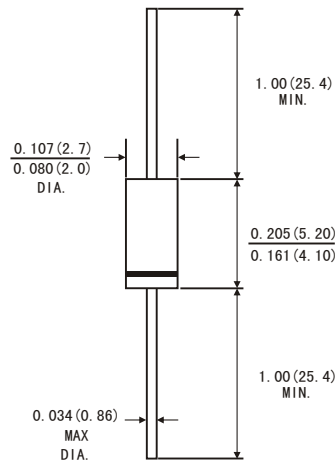
FEATURES

- 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°C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

MECHANICAL DATA

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

DO-41(GLASS)



Dimensions in inches and (millimeters)

ABSOLUTE MAXIMUM RATINGS(LIMITING VALUES) (TA=25°C)

	Symbols	Value	Units
Zener current see table "Characteristics"			
Power dissipation at TA=25°C	P _{tot}	1.3 ¹⁾	W
Junction temperature	T _J	200	°C
Storage temperature range	T _{STG}	-55 to +200	°C

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

ELECTRICAL CHARACTERISTICS (TA=25 °C)

	Symbols	Min	Typ	Max	Units
Thermal resistance junction to ambient	R _{θJA}			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.

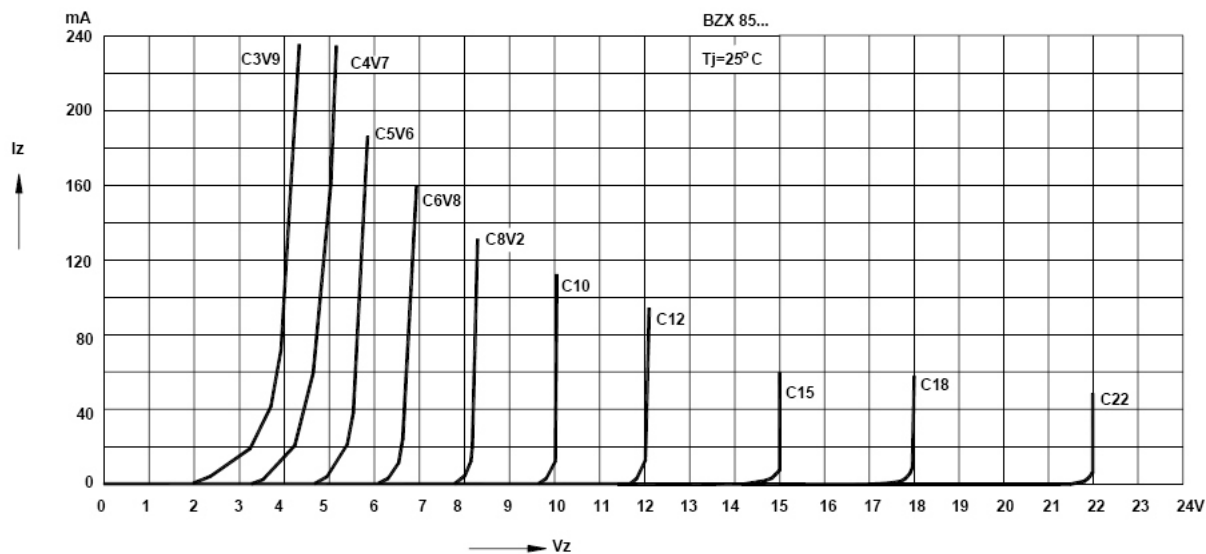
BZX85... SILICON PLANAR ZENER DIODES

Type	Zener Voltage range ¹⁾			Dynamic resistance			Reverse leakage current		Temp Coefficient of zener voltage
	V _{ZNOM}	I _{ZT} for V _{ZT} ²⁾		r _{ZK} and r _{ZK} at I _{ZK}			I _R ²⁾ at V _R		TKvz
	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

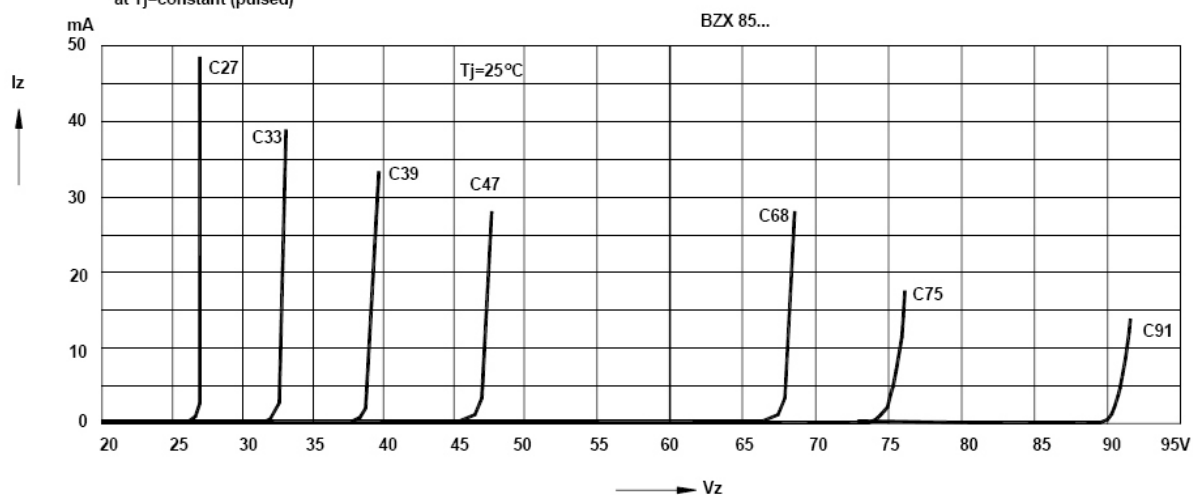
Note: 1) Tested with pulse tp=20ms.

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



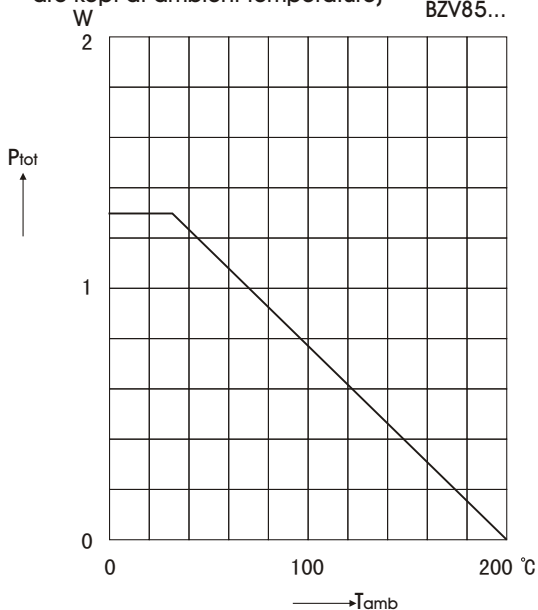
Breakdown characteristics
at $T_j = \text{constant}$ (pulsed)



BZX85... SILICON PLANAR ZENER DIODES

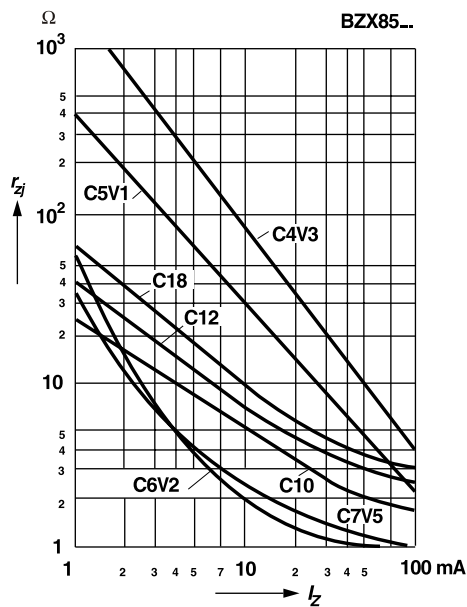
Admissible power dissipation versus ambient temperature
(Valid provided that leads at a distance of 10mm from case are kept at ambient temperature)

BZX85...



Dynamic resistance
versus Zener current

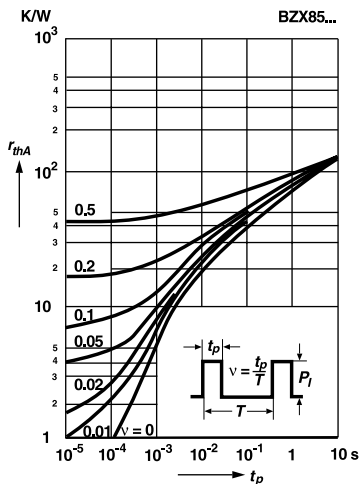
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Pulse thermal resistance
versus pulse duration

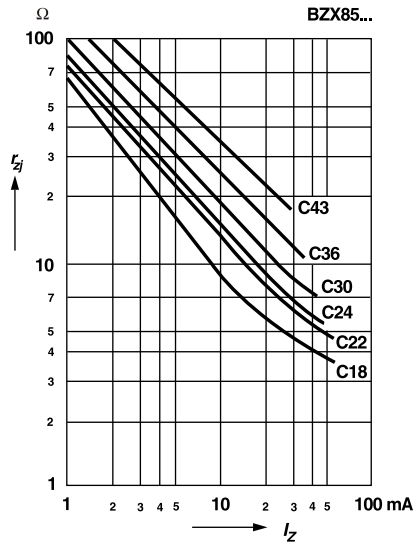
Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.

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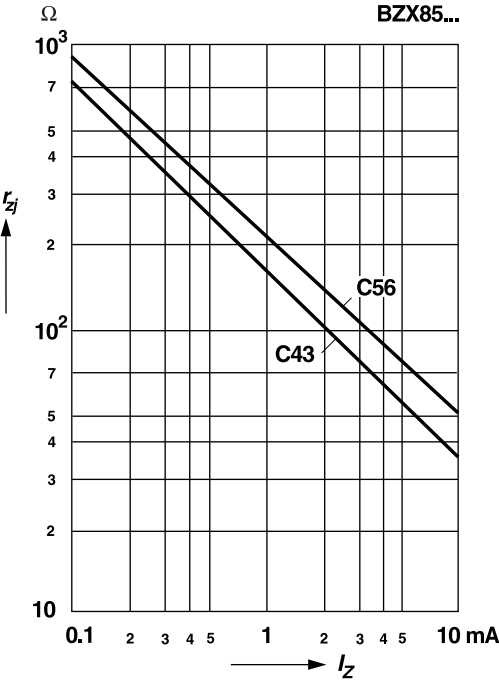
Dynamic resistance
versus Zener current

BZX85...



BZX85... SILICON PLANAR ZENER DIODES

Dynamic resistance
versus Zener current



Thermal resistance
versus lead length

