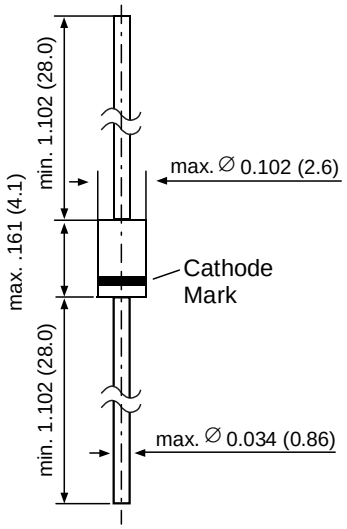
BZX85-C3V6 THRU BZX85-C62

ZENER DIODES

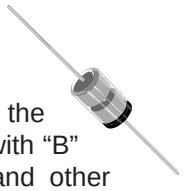
DO-41 Glass



Dimensions in inches and (millimeters)

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. Replace suffix “C” with “B” for ±2% tolerance. Other voltage tolerances and other Zener voltages are available upon request.

MECHANICAL DATA

Case: DO-41 Glass Case
Weight: approx. 0.35 g

MAXIMUM RATINGS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOL	VALUE	UNIT
Zener Current (see Table “Characteristics”)			
Power Dissipation at T_{amb} = 25°C	P_{tot}	1.3(1)	Watts
Junction Temperature	T_j	175	°C
Storage Temperature Range	T_S	– 55 to +175	°C

	SYMBOL	MIN.	TYP.	MAX.	UNIT
Thermal Resistance Junction to Ambient Air	R_{thJA}	–	–	130(1)	°C/W
Forward Voltage at I_F = 200 mA	V_F	–	–	1.0	Volts

NOTES:
(1) Valid provided that leads at a distance of 10 mm from case are kept at ambient temperature.

GENERAL SEMICONDUCTOR®

BZX85-C3V6 THRU BZX85-C62

ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Type	Zener Voltage range[1] at $I_Z = I_{ZT}$ V_Z V	Dynamic resistance				Temp. coefficient of Zener Voltage at $I_Z = I_{ZT}$ α_{VZ} %/K		Reverse leakage current		Admissable Zener current[2]	
		r_{zj} Ω	at f=1 kHz I_{ZT} mA	r_{zj} Ω	at f =1 kHz I_{ZT} mA	min.	max.	at I_R µA	at V_R V	I_Z mA	at t_p=10 ms I_{ZSM} mA
BZX85 – C3V6	3.4 ... 3.8	< 15	60	< 500	1	– 0.08	– 0.05	< 20	1	290	2660
BZX85 – C3V9	3.7 ... 4.1	< 15	60	< 500	1	– 0.07	– 0.02	< 10	1	280	2540
BZX85 – C4V3	4.0 ... 4.6	< 13	50	< 500	1	– 0.05	+0.01	< 3	1	250	2440
BZX85 – C4V7	4.4 ... 5.0	< 13	45	< 600	1	– 0.03	+0.04	< 3	1	215	2320
BZX85 – C5V1	4.8 ... 5.4	< 10	45	< 500	1	– 0.01	+0.04	< 1	1.5	200	2200
BZX85 – C5V6	5.2 ... 6.0	< 7	45	< 400	1	0	+0.045	< 1	2	190	2080
BZX85 – C6V2	5.8 ... 6.6	< 4	35	< 300	1	+0.01	+0.055	< 1	3	170	1960
BZX85 – C6V8	6.4 ... 7.2	< 3.5	35	< 300	1	+0.015	+0.06	< 1	4	155	1800
BZX85 – C7V5	7.0 ... 7.9	< 3	35	< 200	0.5	+0.02	+0.065	< 1	4.5	140	1620
BZX85 – C8V2	7.7 ... 8.7	< 5	25	< 200	0.5	+0.03	+0.07	< 1	6.2	130	1520
BZX85 – C9V1	8.5 ... 9.6	< 5	25	< 200	0.5	+0.035	+0.075	< 1	6.8	120	1340
BZX85 – C10	9.4 ... 10.6	< 7	25	< 200	0.5	+0.04	+0.08	< 0.5	7.5	105	1200
BZX85 – C11	10.4 ... 11.6	< 8	20	< 300	0.5	+0.045	+0.08	< 0.5	8.2	97	1100
BZX85 – C12	11.4 ... 12.7	< 9	20	< 350	0.5	+0.045	+0.085	< 0.5	9.1	88	1000
BZX85 – C13	12.4 ... 14.1	< 10	20	< 400	0.5	+0.05	+0.085	< 0.5	10	79	900
BZX85 – C15	13.8 ... 15.6	< 10	15	< 500	0.5	+0.055	+0.09	< 0.5	11	71	760
BZX85 – C16	15.3 ... 17.1	< 15	15	< 500	0.5	+0.055	+0.09	< 0.5	12	66	700
BZX85 – C18	16.8 ... 19.1	< 20	15	< 500	0.5	+0.06	+0.09	< 0.5	13	62	600
BZX85 – C20	18.8 ... 21.2	< 24	10	< 600	0.5	+0.06	+0.09	< 0.5	15	56	540
BZX85 – C22	20.8 ... 23.3	< 25	10	< 600	0.5	+0.06	+0.095	< 0.5	16	52	500
BZX85 – C24	22.8 ... 25.6	< 25	10	< 600	0.5	+0.06	+0.095	< 0.5	18	47	450
BZX85 – C27	25.1 ... 28.9	< 30	8	< 750	0.25	+0.06	+0.095	< 0.5	20	41	400
BZX85 – C30	28 ... 32	< 30	8	< 1000	0.25	+0.06	+0.095	< 0.5	22	36	380
BZX85 – C33	31 ... 35	< 35	8	< 1000	0.25	+0.06	+0.095	< 0.5	24	33	350
BZX85 – C36	34 ... 38	< 40	8	< 1000	0.25	+0.06	+0.095	< 0.5	27	30	320
BZX85 – C39	37 ... 41	< 50	6	< 1000	0.25	+0.06	+0.095	< 0.5	30	28	296
BZX85 – C43	40 ... 46	< 50	6	< 1000	0.25	+0.06	+0.095	< 0.5	33	26	270
BZX85 – C47	44 ... 50	< 90	4	< 1500	0.25	+0.06	+0.095	< 0.5	36	23	246
BZX85 – C51	48 ... 54	< 115	4	< 1500	0.25	+0.06	+0.095	< 0.5	39	21	226
BZX85 – C56	52 ... 60	< 120	4	< 2000	0.25	+0.06	+0.095	< 0.5	43	19	208
BZX85 – C62	58 ... 66	< 125	4	< 2000	0.25	+0.06	+0.095	< 0.5	47	16	186

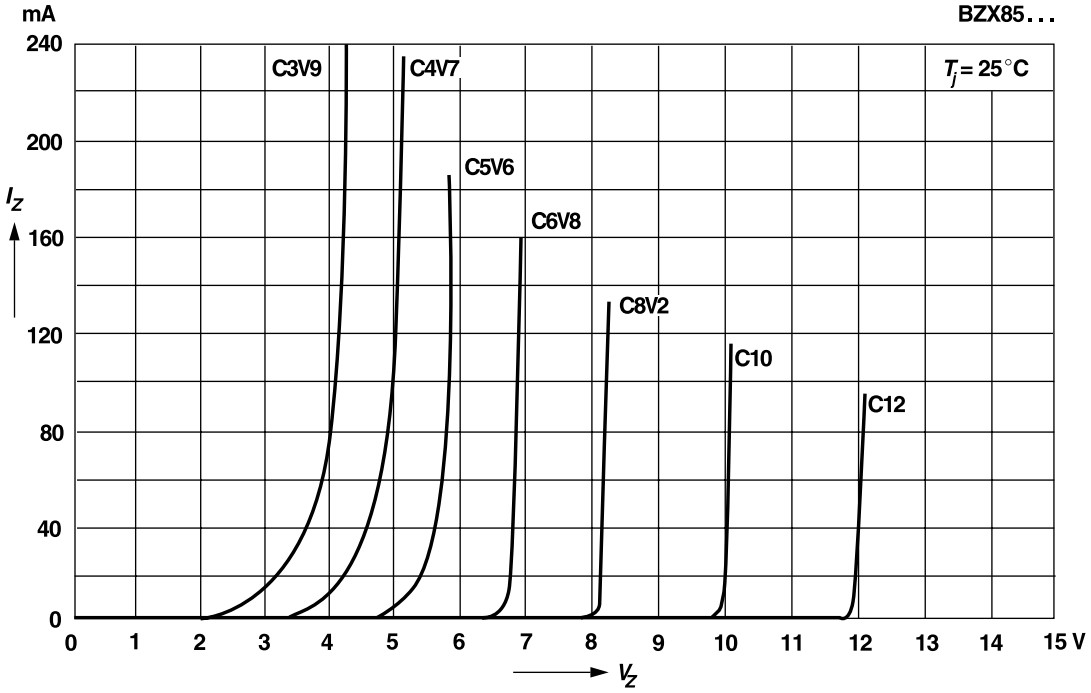
NOTES:

(1) Measured with pulses t_p = 5 ms

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

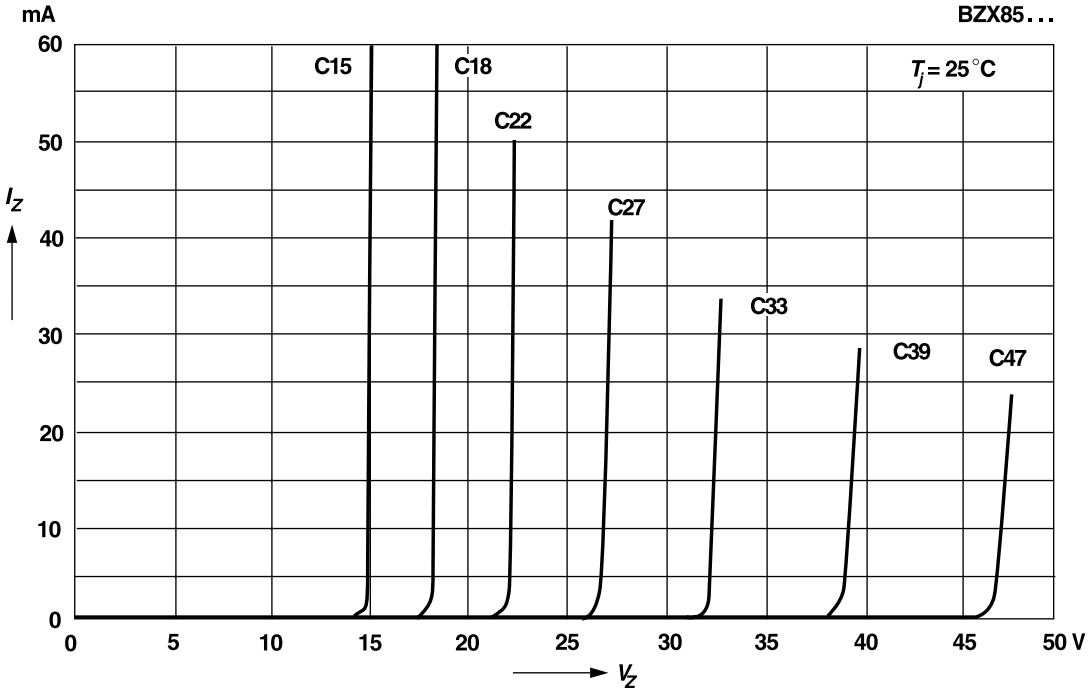
Breakdown characteristics

at T_j = constant (pulsed)



Breakdown characteristics

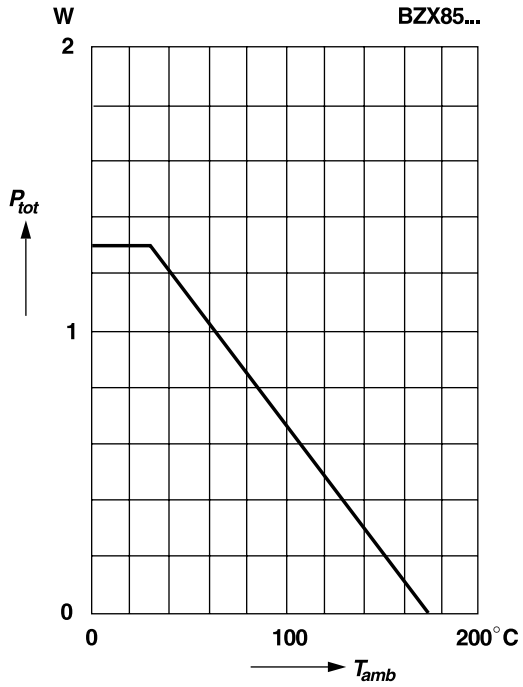
at T_j = constant (pulsed)



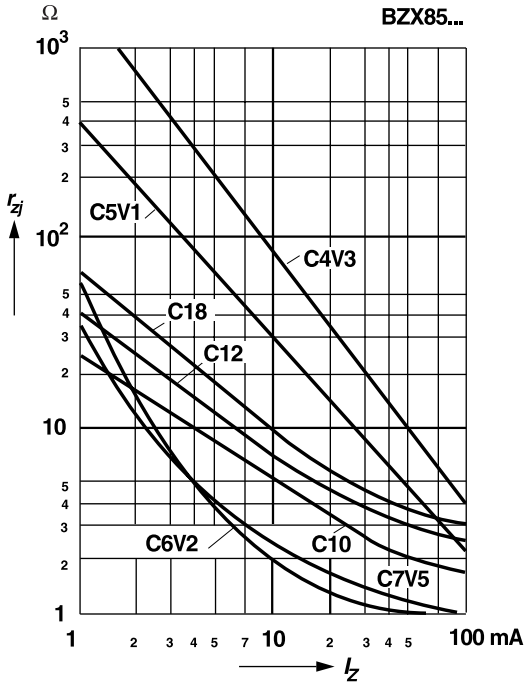
RATINGS AND CHARACTERISTIC CURVES BZX85-C3V6 THRU BZX85-C62

Admissible power dissipation versus ambient temperature

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

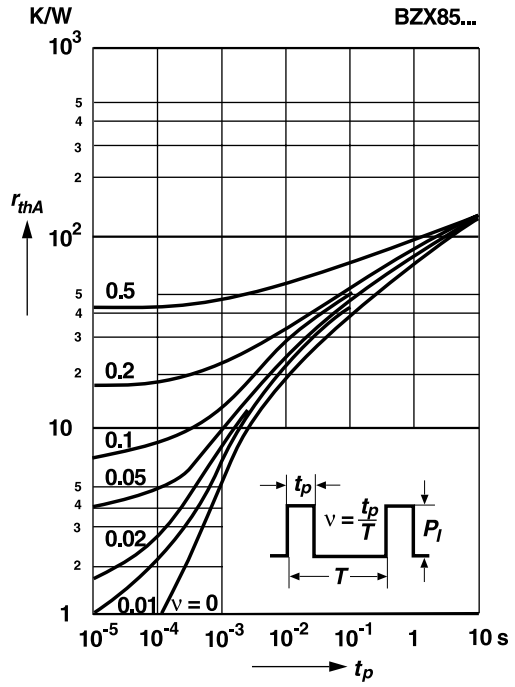


Dynamic resistance versus Zener current

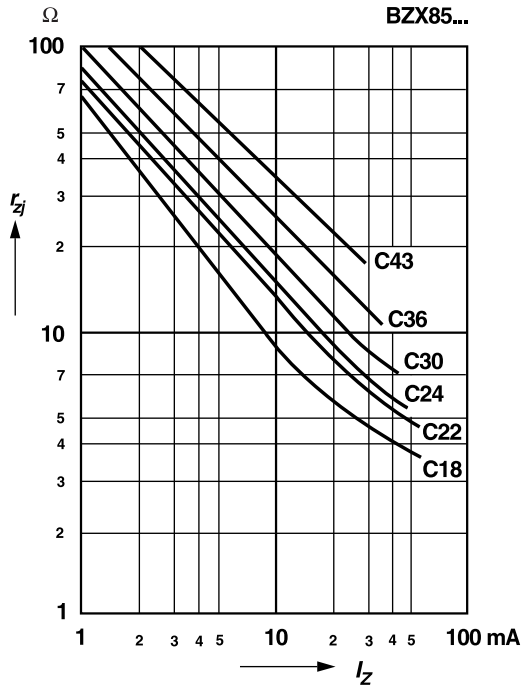


Pulse thermal resistance versus pulse duration

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



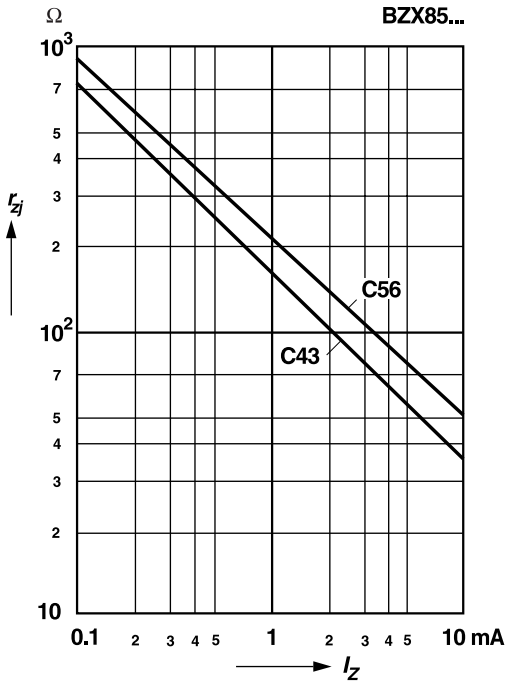
Dynamic resistance versus Zener current



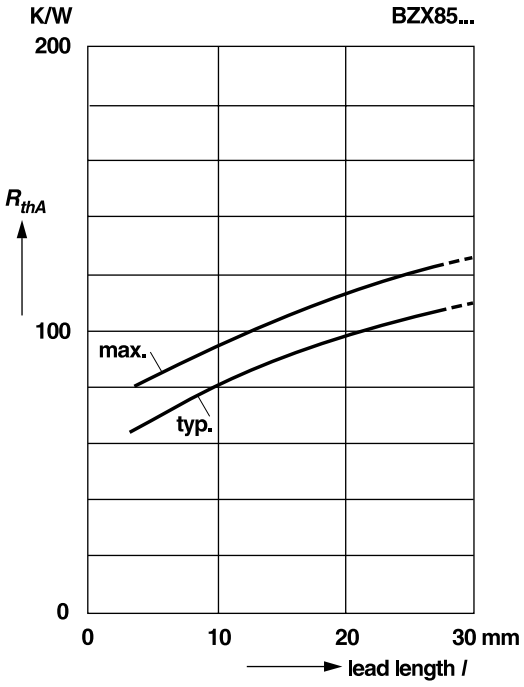
GENERAL SEMICONDUCTOR®

RATINGS AND CHARACTERISTIC CURVES BZX85-C3V6 THRU BZX85-C62

Dynamic resistance versus Zener current



Thermal resistance versus lead length



littlediode
COMPONENTS FOR ALL

Littlediode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.