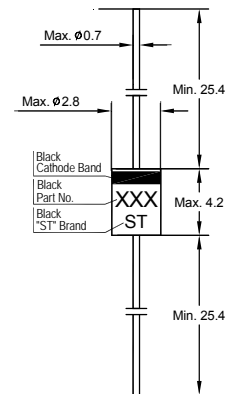


# BZX85C

## 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 tolerances and higher Zener voltages are upon request.



Glass Case DO-41  
Dimensions in mm

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

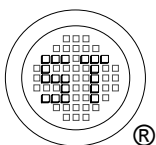
Parameter	Symbol	Value	Unit
Power Dissipation	$P_{tot}$	1.3 <sup>1)</sup>	W
Junction Temperature	$T_j$	200	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 200	$^\circ\text{C}$

<sup>1)</sup> Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.

### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

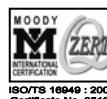
Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient Air	$R_{thA}$	130 <sup>1)</sup>	K/W
Forward Voltage at $I_F = 200\text{ mA}$	$V_F$	1.2	V

<sup>1)</sup> Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.



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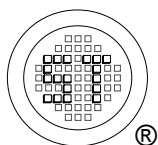
Dated : 10/09/2009

# BZX85C

## Characteristics at $T_a = 25\text{ }^\circ\text{C}$

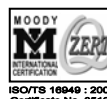
Type	Zener Voltage <sup>1)</sup>			Dynamic Resistance				Reverse Current	
	$V_{Znom}$	$V_{ZT}$	at $I_{ZT}$	$Z_{ZT}$	at $I_{ZT}$	$Z_{ZK}$	at $I_{ZK}$	$I_R$	at $V_R$
	(V)	(V)	(mA)	Max. ( $\Omega$ )	(mA)	Max. ( $\Omega$ )	(mA)	Max. ( $\mu\text{A}$ )	(V)
BZX85C2V7	2.7	2.5...2.9	80	20	80	400	1	150	1
BZX85C3V0	3	2.8...3.2	80	20	80	400	1	100	1
BZX85C3V3	3.3	3.1...3.5	70	20	70	400	1	40	1
BZX85C3V6	3.6	3.4...3.8	60	15	60	500	1	20	1
BZX85C3V9	3.9	3.7...4.1	60	15	60	500	1	10	1
BZX85C4V3	4.3	4...4.6	50	13	50	500	1	3	1
BZX85C4V7	4.7	4.4...5	45	13	45	600	1	3	1
BZX85C5V1	5.1	4.8...5.4	45	10	45	500	1	1	1.5
BZX85C5V6	5.6	5.2...6	45	7	45	400	1	1	2
BZX85C6V2	6.2	5.8...6.6	35	4	35	300	1	1	3
BZX85C6V8	6.8	6.4...7.2	35	3.5	35	300	1	1	4
BZX85C7V5	7.5	7...7.9	35	3	35	200	0.5	1	4.5
BZX85C8V2	8.2	7.7...8.7	25	5	25	200	0.5	1	6.2
BZX85C9V1	9.1	8.5...9.6	25	5	25	200	0.5	1	6.8
BZX85C10	10	9.4...10.6	25	7	25	200	0.5	0.5	7
BZX85C11	11	10.4...11.6	20	8	20	300	0.5	0.5	8.2
BZX85C12	12	11.4...12.7	20	9	20	350	0.5	0.5	9.1
BZX85C13	13	12.4...14.1	20	10	20	400	0.5	0.5	10
BZX85C15	15	13.8...15.6	15	15	15	500	0.5	0.5	11
BZX85C16	16	15.3...17.1	15	15	15	500	0.5	0.5	12
BZX85C18	18	16.8...19.1	15	20	15	500	0.5	0.5	13
BZX85C20	20	18.8...21.2	10	24	10	600	0.5	0.5	15
BZX85C22	22	20.8...23.3	10	25	10	600	0.5	0.5	16
BZX85C24	24	22.8...25.6	10	25	10	600	0.5	0.5	18
BZX85C27	27	25.1...28.9	8	30	8	750	0.25	0.5	20
BZX85C30	30	28...32	8	30	8	1000	0.25	0.5	22
BZX85C33	33	31...35	8	35	8	1000	0.25	0.5	24
BZX85C36	36	34...38	8	40	8	1000	0.25	0.5	27
BZX85C39	39	37...41	6	50	6	1000	0.25	0.5	30
BZX85C43	43	40...46	6	50	6	1000	0.25	0.5	33
BZX85C47	47	44...50	4	90	4	1500	0.25	0.5	36
BZX85C51	51	48...54	4	115	4	1500	0.25	0.5	39
BZX85C56	56	52...60	4	120	4	2000	0.25	0.5	43
BZX85C62	62	58...66	4	125	4	2000	0.25	0.5	47
BZX85C68	68	64...72	4	130	4	2000	0.25	0.5	51
BZX85C75	75	70...79	4	135	4	2000	0.25	0.5	56

<sup>1)</sup> Tested with pulses  $t_p = 20\text{ ms}$ .



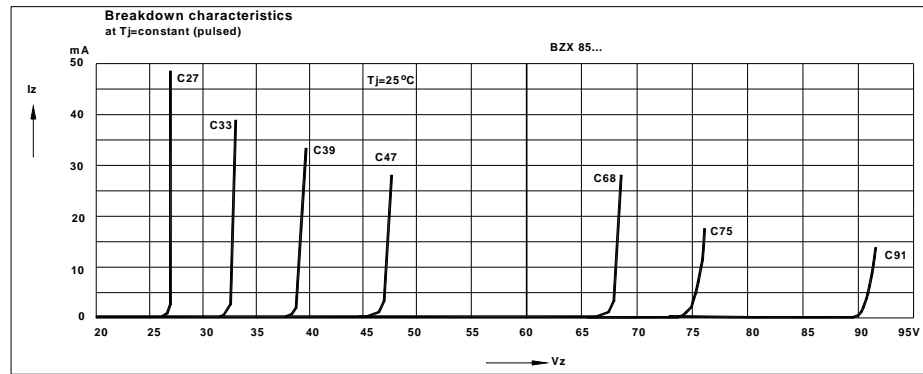
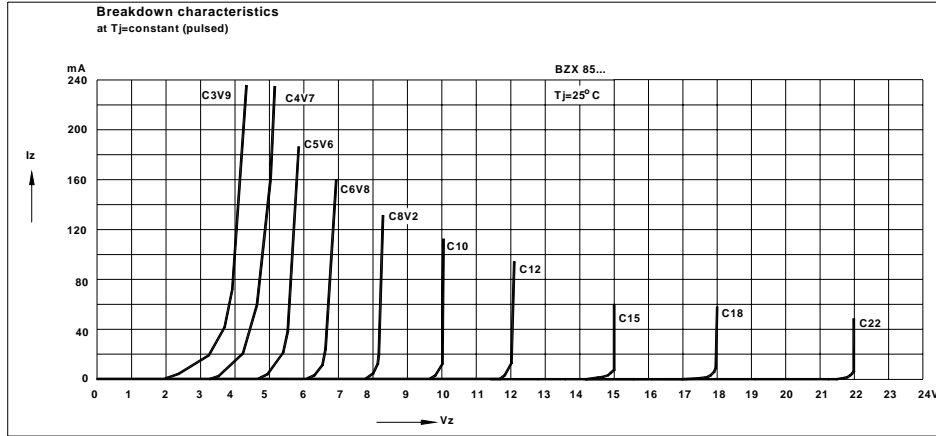
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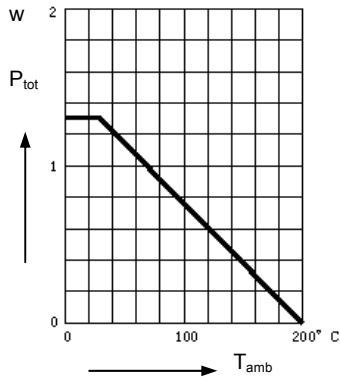


Dated : 10/09/2009

# BZX85C

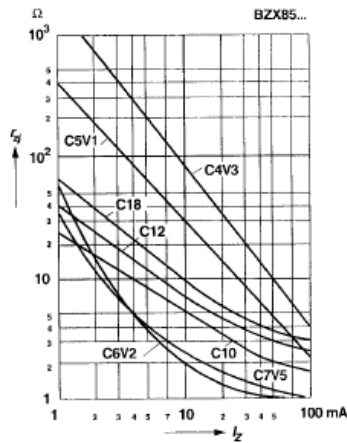


Admissible power dissipation  
Versus ambient temperature  
Valid provided that leads are kept at ambient  
Temperature at a distance of 10 mm from case

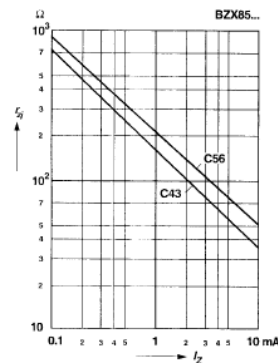
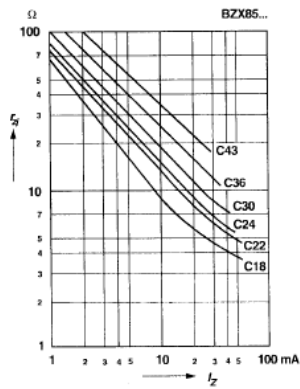


Dynamic resistance versus Zener current

Dynamic resistance versus Zener current

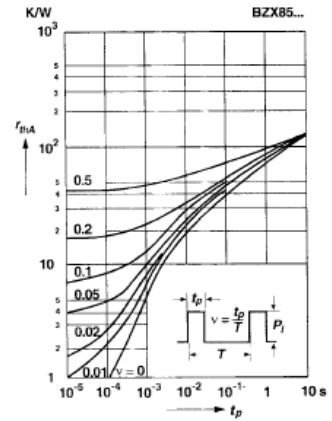


Dynamic resistance versus Zener current

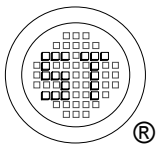
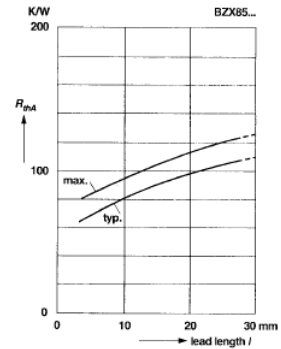


Pulse thermal resistance versus pulse duration

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



Thermal resistance versus lead length



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ISO/TS 16949:2002  
Certificate No. 08103

ISO 14001:2004  
Certificate No. 7116

ISO 9001:2008  
Certificate No. 080058

BS-OHSAS 18001:2007  
Certificate No. 7116

IECQ QC 080000  
Certificate No. 080058