



S E M I C O N D U C T O R

BZV85/C 2V7 THRU BZV85/C 200

1W SILICON PLANAR ZENER DIODES

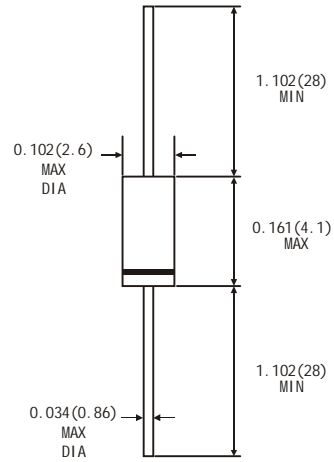
FEATURES

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

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) °

	<i>Symbols</i>	<i>Value</i>	<i>Units</i>
Zener current see table "Characteristics"			
Power dissipation at TA=25°C	P _{tot}	1 ¹⁾	W
Junction temperature	T _J	200	°C
Storage temperature range	T _{STG}	-65 to +200	°C

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

ELECTRICAL CHARACTERISTICS (TA=25 C)

	<i>Symbols</i>	<i>Min</i>	<i>Typ</i>	<i>Max</i>	<i>Units</i>
Thermal resistance junction to ambient air	R _{thA}			170 ¹⁾	K/W
Forward voltage at I _F =200mA	V _F			1.2	V

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Type	Zener Voltage range ¹⁾			Dynamic resistance			Reverse leakage current		Temp Coefficient of zener voltage
	V _{ZNOM}	I _{ZT} for V _{ZT} ²⁾		r _{ZT} and r _{ZK} at I _{ZK}			I _R ³⁾ at V _R		TK _{VZ}
		V	mA	V	Ω	Ω	mA	μA	V
BZX 85/C 2 V 7	2.7	80	2.5...2.9	<20	<400	1	<150	1	-0.08...-0.05
BZX 85/C 3 V 0	3.0		2.8...3.2				<40		
BZX 85/C 3 V 3	3.3	70	3.1...3.5	<15	<500	<20	<10	-0.07...-0.02	
BZX 85/C 3 V 6	3.6	60	3.4...3.8			<13	<600	<3	
BZX 85/C 3 V 9	3.9	45	3.7...4.1	<10	<500	1	1.5	-0.03...+0.04	
BZX 85/C 4 V 3	4.3		50					4.0...4.6	<7
BZX 85/C 4 V 7	4.7	35	4.4...5.0	<4	<300	0.5	3	0.01...0.055	
BZX 85/C 5 V 1	5.1		45					4.8...5.4	<3.5
BZX 85/C 5 V 6	5.6	25	5.2...6.0	<3	<200	0.5	4.5	0.02...0.065	
BZX 85/C 6 V 2	6.2		35					5.8...6.6	<5
BZX 85/C 6 V 8	6.8	20	6.4...7.2	<7	<300	0.5	7	0.04...0.08	
BZX 85/C 7 V 5	7.5		25					7.0...7.9	<8
BZX 85/C 8 V 2	8.2	15	7.7...8.7	<9	<350	0.5	9.1	0.045...0.085	
BZX 85/C 9 V 1	9.1		25					8.5...9.6	<10
BZX 85/C 10	10	10	9.4...10.6	<15	<500	0.5	11	0.055...0.09	
BZX 85/C 11	11		20					10.4...11.6	<20
BZX 85/C 12	12	8	11.4...12.7	<24	<600	0.25	13	0.06...0.09	
BZX 85/C 13	13		15					12.4...14.1	<25
BZX 85/C 15	15	10	13.8...15.6	<30	<750	0.25	16	0.06...0.095	
BZX 85/C 16	16		15						15.3...17.1
BZX 85/C 18	18	8	16.8...19.1	<40	<1000	20			
BZX 85/C 20	20	10	18.8...21.2				<30		<750
BZX 85/C 22	22	8	20.8...23.3	<35	<1000	0.25	24		
BZX 85/C 24	24		10					22.8...25.6	<30
BZX 85/C 27	27	8	25.1...28.9	<40	<1000	0.25	27		
BZX 85/C 30	30		8					28...32	<30
BZX 85/C 33	33	8	31...35	<40	<1000	0.25	27		
BZX 85/C 36	36		8					34...38	<30

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Type	Zener Voltage range ¹⁾			Dynamic resistance			Reverse leakage current		Temp Coefficient of zener voltage		
	V _{ZNOM}	I _{ZT} for V _{ZT} ²⁾		r _{ZT} and r _{ZK} at I _{ZK}			I _R ²⁾ at V _R		TK _{VZ}		
	V	mA	V	Ω	Ω	mA	μA	V	%/K		
BZX 85/C 39	39	6	37...41	<50	<1000	0.25	<0.5	30	0.06...0.095		
BZX 85/C 43	43		40...46					33			
BZX 85/C 47	47	4	44...50	<90	<1500			36			
BZX 85/C 51	51		48...54	<115	39						
BZX 85/C 56	56		52...60	<120	43						
BZX 85/C 62	62		58...66	<125	47						
BZX 85/C 68	68		64...72	<135	51						
BZX 85/C 75	75		70...79	<135	56						
BZX 85/C 82	82		2.7	77...87	<200			<3000		62	0.07...0.10
BZX 85/C 91	91			85...96	<250			68			
BZX 85/C 100	100	94...106		<350	75						
BZX 85/C 110	110	104...116		<450	<4000			82			
BZX 85/C 120	120	2	114...127	<550	<4500			91	0.07...0.11		
BZX 85/C 130	130		124...141	<700	<5000			100			
BZX 85/C 150	150		138...156	<1000	<6000			110			
BZX 85/C 160	160		1.5	153...171	<1100			<6500		120	
BZX 85/C 180	180	168...191		<1200	<7000			130			
BZX 85/C 200	200	188...212		<1500	<8000			150			

Note 1) Tested with pulse t_p=20ms

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

SILICON PLANAR POWER ZENER DIODES

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

