

Silicon Planar Zener Diodes

Feature:

- Hermetically sealed, glass silicon diodes.



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

Description	Symbol	Value	Unit
Average Forward Current (averaged Over any 20 ms period)	I _{F(av)}	250	mA
Repetitive Peak Forward Current	I _{FRM}	250	
Total Power Dissipation up to T _{flange} = 50°C	P _{tot}	500	mW
Up to Ta = 50°C and Mounted on a Ceramic Substrate of 10mm x 10mm x 0.6mm	P _{tot}	400	
Non-Repetitive Peak Reverse Power Dissipation t = 100μs, T _j = 150°C	P _{ZSM}	30	W
Storage Temperature	T _{stg}	- 65 to +200	°C
Junction Temperature	T _j	200	
Thermal Resistance			
From Junction to tie-point (flanges)	R _{th (j-tp)}	0.3	K/mW
From Junction to Ambient when Mounted on a Ceramic Substrate of 10mm x 10mm x 0.6mm	R _{th (j-a)}	0.38	

Electrical Characteristics ($T_a = 25^\circ\text{C}$ unless specified otherwise)

Working Voltage* +/- 5% V_Z (V) at $I_{Z\text{test}} = 5\text{mA}$		Differential * Resistance $r_{\text{diff}}(\Omega)$ at $I_{Z\text{test}} = 5\text{mA}$	Temperature Coefficient $S_Z(\text{mV/K})$ at $I_{Z\text{test}} = 5\text{mA}$		Differential Resistance $r_{\text{diff}}(\Omega)$ at $I_{Z\text{test}} = 1\text{mA}$	I_R at T_a 25°C (μA)	V_R (V)	Part Number
Minimum	Maximum	Maximum	Minimum	Maximum	Maximum	Maximum		
9.4	10.6	20	4.5	8	150	0.2	7	BZV55C10
10.4	11.6	20	5.4	9	150	0.1	8	BZV55C11
11.4	12.7	25	6	10	150	0.1	8	BZV55C12
12.4	14.1	30	7	11	170	0.1	8	BZV55C13
13.8	15.6	30	9.2	13	200	0.05	10.5	BZV55C15
15.3	17.1	40	10.4	14	200	0.05	11.2	BZV55C16
16.8	19.1	45	12.4	16	225	0.05	12.6	BZV55C18
18.8	21.2	55	14.4	18	225	0.05	14	BZV55C20
20.8	23.3	55	16.4	20	250	0.05	15.4	BZV55C22
22.8	25.6	70	18.4	22	250	0.05	16.8	BZV55C24
at $I_{Z\text{test}} = 2\text{mA}$		at $I_{Z\text{test}} = 2\text{mA}$	at $I_{Z\text{test}} = 2\text{mA}$		at $I_{Z\text{test}} = 0.5\text{mA}$			
25.1	28.9	80	21.4	25.3	300	0.05	18.9	BZV55C27
28	32	80	24.4	29.4	300	0.05	21	BZV55C30
31	35	80	27.4	33.4	325	0.05	23.1	BZV55C33
34	38	90	30.4	37.4	350	0.05	25.2	BZV55C36
3.4	3.8	90	-3.5	0	600	5	1	BZV55C3V6
3.7	4.1	90	-3.5	0	600	3	1	BZV55C3V9
40	46	150	37.6	46.6	375	0.05	30.1	BZV55C43
44	50	170	42	51.8	375	0.05	32.9	BZV55C47
4	4.6	90	-3.5	0	600	3	1	BZV55C4V3
4.4	5	80	-3.5	0.2	500	3	2	BZV55C 4V7
48	54	180	46.6	57.2	400	0.05	35.7	BZV55C51
4.8	5.4	60	-2.7	1.2	480	2	2	BZV55C 5V1
5.2	6	40	-2	2.5	400	1	2	BZV55C 5V6
5.8	6.6	10	0.4	3.7	150	3	4	BZV55C 6V2
7	7.9	15	2.5	5.3	80	1	5	BZV55C 7V5
7.7	8.7	15	3.2	6.2	80	0.7	5	BZV55C 8V2
8.5	9.6	15	3.8	7	100	0.5	6	BZV55C 9V1

*Pulse test: $20\text{ms} < t_p < 50\text{ms}$

Notes:

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