

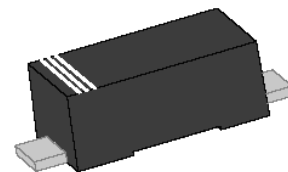


Zener Diodes with Surge Current Specification: BZD55C Series

Rev.1.1

FEATURE

- ✧ Silicon power zener diodes.
- ✧ Low zener impedance.
- ✧ 1000mW rating on FR-4 or FR-5 board.
- ✧ Voltage range includes breakdown voltages from 3.9V to 6.2V with $\pm 5\%$ for BZD55C series.
- ✧ Low profile surface-mount package.
- ✧ Zener and surge current specification.
- ✧ For use in stabilizing and clamping circuits with high power rating.



SOD-123FL



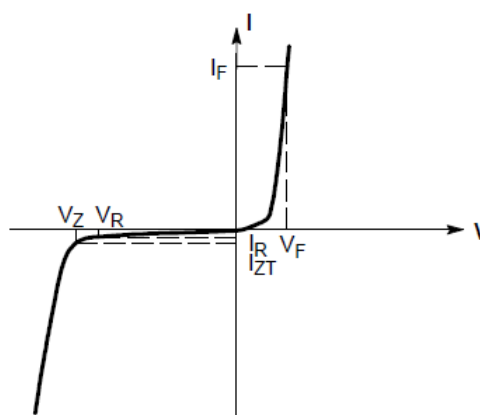
ABSOLUTE MAXIMUM RATINGS AND THERMAL CHARACTERISTICS

Parameter	Symbol	Max Value	Unit
Total power dissipation @ 75°C	P_D	1000	mW
Thermal resistance junction to ambient (Note1)	$R_{\theta JA}$	330	°C/W
Junction temperature	T_j	150	°C
Storage temperature range	T_S	-55 to +150	°C
Operating temperature range	T_{op}	-55 to +150	°C
Peak pulse power dissipation on 10/1000μs waveform	P_{PP}	100 to 150	W

Note1: Device mounted on FR-4 PCB with minimum recommended pad layout

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$)

Symbol	Parameter
V_Z	Reverse zener voltage at I_{zt}
I_{zt}	Reverse current
I_R	Reverse leakage current at V_R
V_R	Reverse voltage
I_F	Forward current
V_F	Forward voltage at I_F



Zener voltage regulator

MARKING



7T1: Device Marking Code

BZD55C ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)Maximum $V_F=1.2\text{V}$ at $I_F=200\text{mA}$

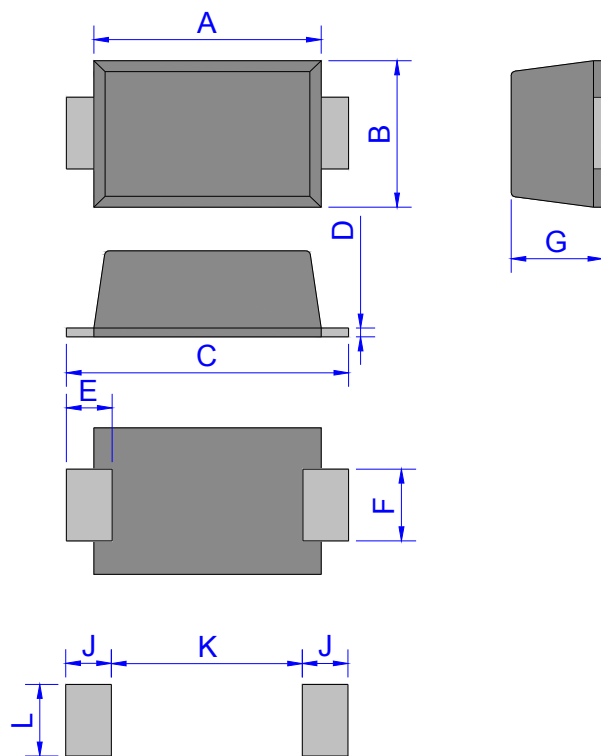
Type number	Zener voltage range at I_{zt}				Maximum zener impedance			Maximum reverse leakage current		Clamping voltage at I_{PP}		Marking code
	Nom (Volts)	Min (Volts)	Max (Volts)	I_{zt} (mA)	Z_{ZT} (Ω)	Z_{ZK} (Ω)	I_{ZK} (mA)	I_R (μA)	V_R (Volts)	Max (Volts)	I_{PP} (A)	
BZD55C3V9	3.9	3.71	4.10	64	20	800	1.0	120	1	6.2	16.1	7P1
BZD55C4V3	4.3	4.09	4.52	58	20	600	1.0	20	1	6.9	14.5	7Q1
BZD55C4V7	4.7	4.47	4.94	53	8	600	1.0	10	1	7.6	19.7	7R1
BZD55C5V1	5.1	4.85	5.36	49	7	500	1.0	5	1	8.3	18.1	7T1
BZD55C5V6	5.6	5.32	5.88	45	5	500	1.0	5	2	8.9	16.9	7U1
BZD55C6V2	6.2	5.89	6.51	41	4	500	1.0	5	3	9.9	15.2	7V1

Notes: Zener voltage tolerance of standard BZD55C series is $\pm 5\%$

ORDERING INFORMATION

BZD		55		C		4V7	
Zener Diode Series		$P_D: 1000\text{mW}$		C: 5% V_Z Voltage tolerance		Voltage: 4.7V	

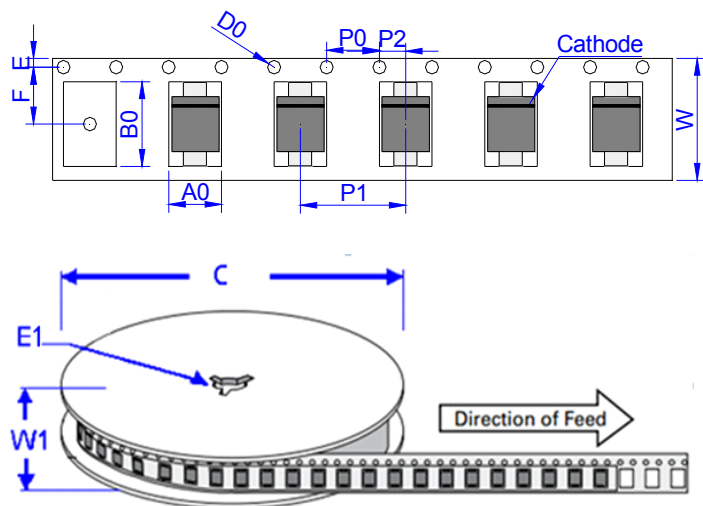
PACKAGE MECHANICAL DATA



SOD-123FL

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.60	3.00	0.102	0.118
B	1.60	2.00	0.063	0.079
C	3.45	3.95	0.136	0.156
D	0.10	0.25	0.004	0.01
E	0.3	0.9	0.012	0.035
F	0.80	1.20	0.031	0.047
G	0.95	1.35	0.037	0.053
J	1.30		0.051	
K		1.70		0.067
L	1.30		0.051	

TAPE AND REEL SPECIFICATION-SOD-123FL



Ref.	Dimensions	
	Millimeters	Inches
A0	1.95 ± 0.3	0.077 ± 0.012
B0	3.95 ± 0.3	0.156 ± 0.012
C	178	7.0
D0	1.55 ± 0.1	0.061 ± 0.004
E	1.75 ± 0.2	0.069 ± 0.008
E1	13.3 ± 0.3	0.524 ± 0.012
F	3.50 ± 0.2	0.138 ± 0.008
P0	4.00 ± 0.2	0.157 ± 0.008
P1	4.00 ± 0.2	0.157 ± 0.008
P2	2.00 ± 0.2	0.079 ± 0.008
W	8.0 ± 0.2	0.315 ± 0.008
W1	11.5 ± 1.0	0.453 ± 0.039

PART No.	UNIT WEIGHT (g/PCS) typ.	PACKAGE	REEL (PCS)	DESCRIPTION
BZD55C Series	0.0141	SOD-123FL	3,000	7 inch reel pack

RATINGS AND CHARACTERISTICS CURVES ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

Fig.1 Power dissipation vs lead temperature

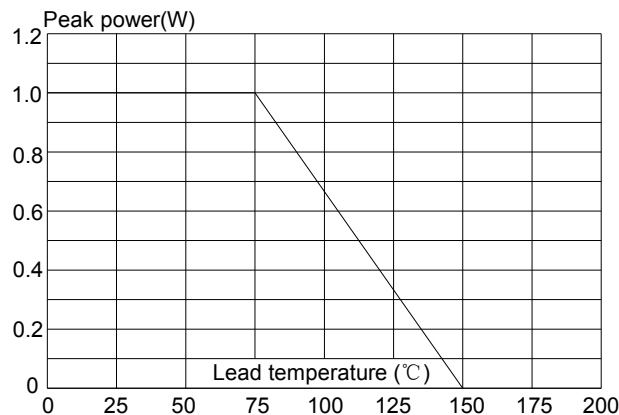
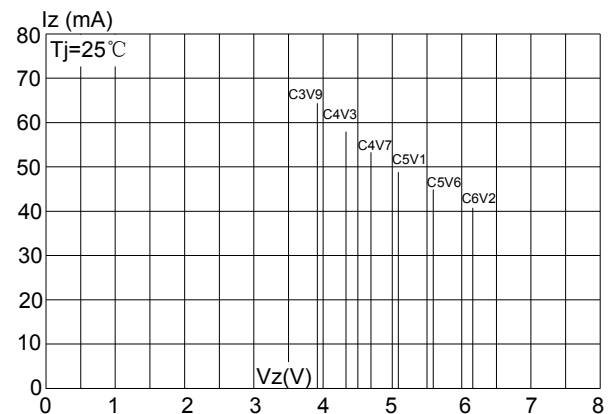


Fig.2 Zener breakdown characteristics



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