

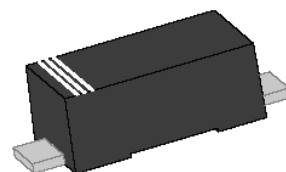


Zener Diodes with Surge Current Specification: BZD52C Series

Rev.1.2

FEATURE

- ✧ Silicon power zener diodes.
- ✧ Low zener impedance.
- ✧ Power dissipation: 500mW.
- ✧ Voltage includes breakdown voltages from 3.3V to 3.6V with $\pm 5\%$ for BZD52C series.
- ✧ Low profile surface-mount package.
- ✧ Zener and surge current specification.
- ✧ For use in stabilizing and clamping circuits with high power rating.
- ✧ Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C.



SOD-123FL



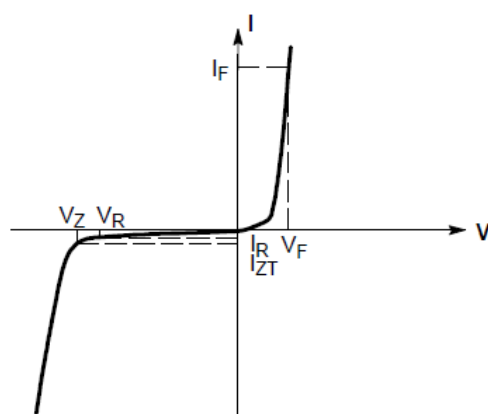
ABSOLUTE MAXIMUM RATINGS AND THERMAL CHARACTERISTICS

Parameter	Symbol	Max Value	Unit
Total power dissipation @ $T_L=75^\circ\text{C}$	P_D	500	mW
Thermal resistance junction to ambient (Note1)	$R_{\theta JA}$	330	$^\circ\text{C}/\text{W}$
Junction temperature	T_J	150	$^\circ\text{C}$
Storage temperature range	T_S	-55 to +150	$^\circ\text{C}$
Operating temperature range	T_{OP}	-55 to +150	$^\circ\text{C}$

Note1: Mounted on epoxy-glass PCB with 3 mm x 3 mm Cu pads ($\geq 40 \mu\text{m}$ thick)

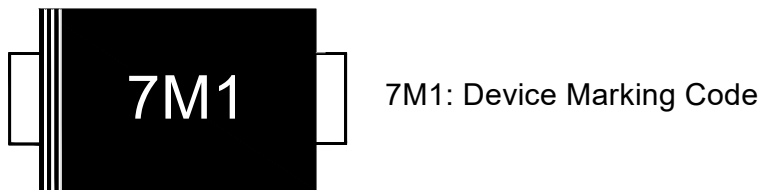
ELECTRICAL CHARACTERISTICS

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



BZD52C ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

Maximum V_F=1.2V at I_F=200mA

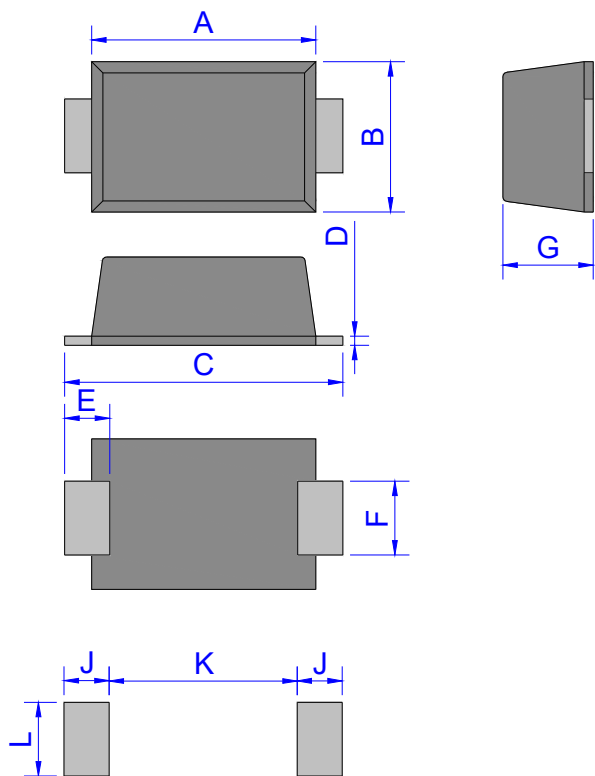
Type number	Zener voltage range at I _{zt}				Maximum zener impedance			Maximum reverse leakage current		Marking code
	Nom (Volts)	Min (Volts)	Max (Volts)	I _{zt} (mA)	Z _{ZT} (Ω)	Z _{ZK} (Ω)	I _{ZK} (mA)	I _R (μA)	V _R (Volts)	
BZD52C3V3	3.3	3.13	3.47	38	1000	1000	1.0	150	1	7M1
BZD52C3V6	3.6	3.42	3.78	35	800	1000	1.0	120	1	7N1

Notes: Zener voltage tolerance of standard BZD52C series is ±5%

ORDERING INFORMATION

<u>BZD</u>	<u>52</u>	<u>C</u>	<u>3V3</u>
Zener Diode Series			Voltage:3.3V
	P _D :500mW	C:5% V _Z Voltage tolerance	

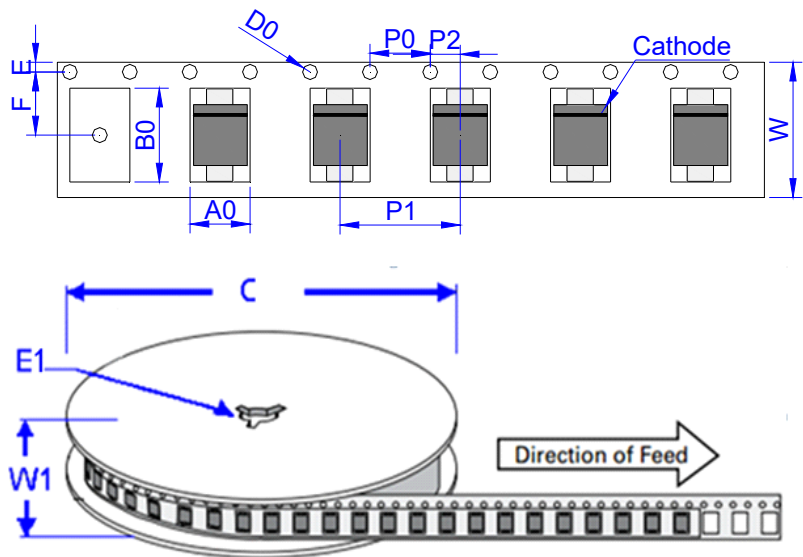
PACKAGE MECHANICAL DATA



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.	REEL (PCS)	PER CARTON (PCS)	DESCRIPTION
BZD52C Series	0.0144	3,000	150,000	7 inch reel pack

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

Fig.1 Power dissipation vs lead temperature

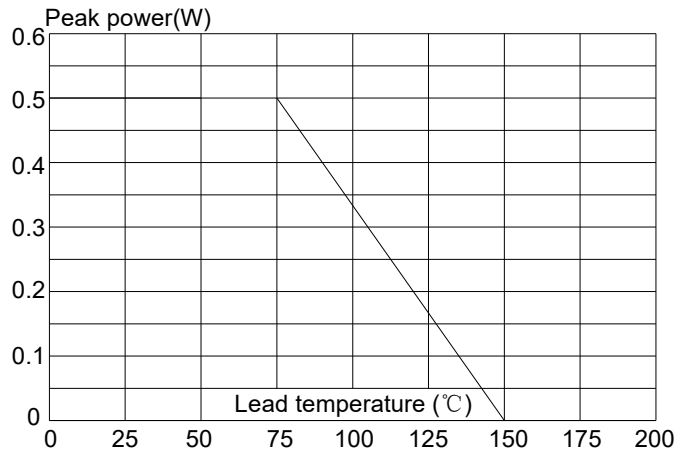
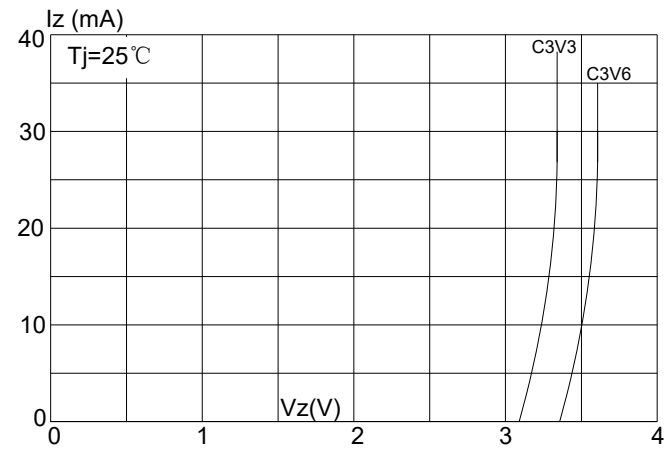


Fig.2 Zener breakdown characteristics



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