

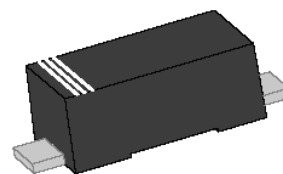


Zener Diodes with Surge Current Specification: BZD27C Series

Rev.1.7

FEATURE

- ✧ Silicon power zener diodes.
- ✧ Low zener impedance.
- ✧ Power dissipation: 2.3W.
- ✧ Voltage includes breakdown voltages from 3.9V to 6.2V with $\pm 5\%$ for BZD27C 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



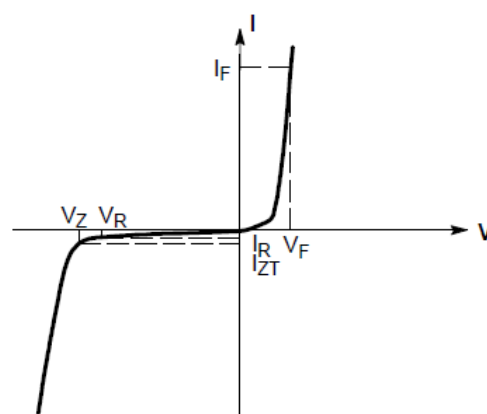
ABSOLUTE MAXIMUM RATINGS AND THERMAL CHARACTERISTICS

Parameter	Symbol	Max Value	Unit
Total power dissipation @ $T_L=105^\circ\text{C}$	P_D	2300	mW
Total power dissipation @ $T_A=25^\circ\text{C}$	P_D	800	mW
Thermal resistance junction to ambient (Note1)	$R_{\theta JA}$	180	$^\circ\text{C}/\text{W}$
Maximum junction temperature	T_J	175	$^\circ\text{C}$
Storage temperature range	T_S	-65 to +175	$^\circ\text{C}$

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



7T1: Device Marking Code

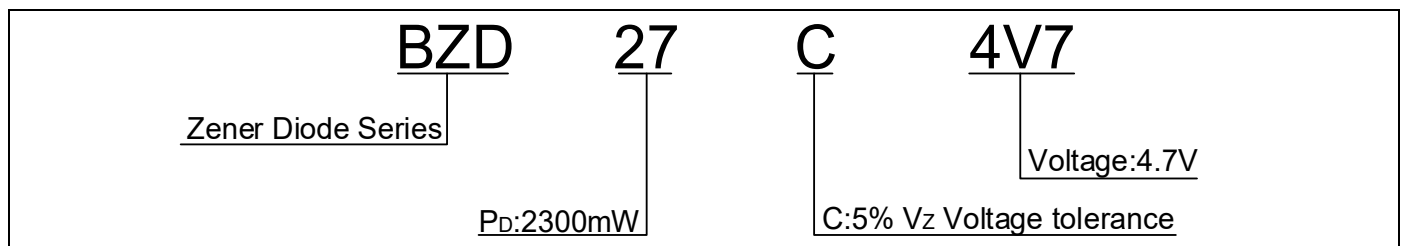
BZD27C ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

Maximum V_F=1.2V at I_F=200mA

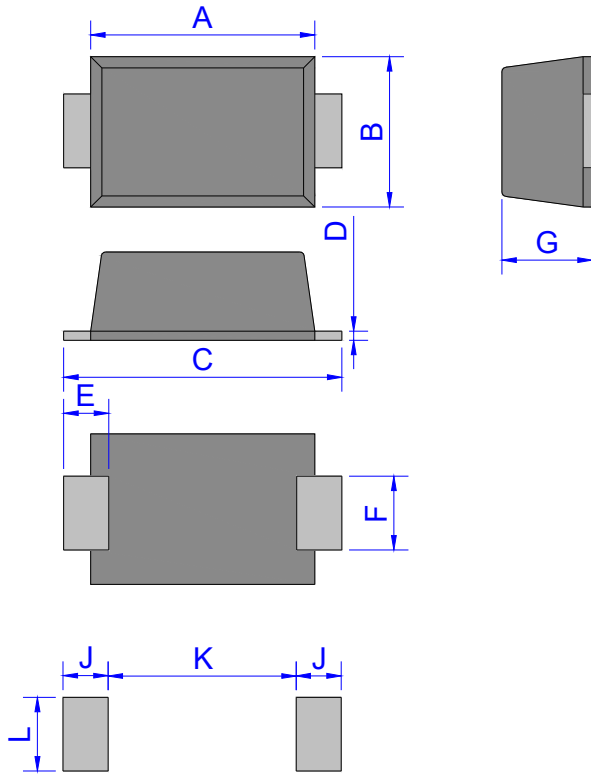
Type number	Zener voltage range at I _{zt}				Maximum zener impedance			Maximum reverse leakage current		Marking code
	Nom (Volts)	Min (Volts)	Max (Volts)	I _{zt} (mA)	Z _{ZT} (Ω)	Z _{ZK} (Ω)	I _{ZK} (mA)	I _R (μA)	V _R (Volts)	
BZD27C3V9	3.9	3.71	4.10	96.0	20	800	1.0	120	1	7P1
BZD27C4V3	4.3	4.09	4.52	87.0	20	600	1.0	20	1	7Q1
BZD27C4V7	4.7	4.47	4.94	79.8	8	600	1.0	10	1	7R1
BZD27C5V1	5.1	4.85	5.36	73.5	7	500	1.0	5	1	7T1
BZD27C5V6	5.6	5.32	5.88	67.0	5	500	1.0	5	2	7U1
BZD27C6V2	6.2	5.89	6.51	60.5	4	500	1.0	5	3	7V1

Notes: Zener voltage tolerance of standard BZD27C series is ±5%

ORDERING INFORMATION



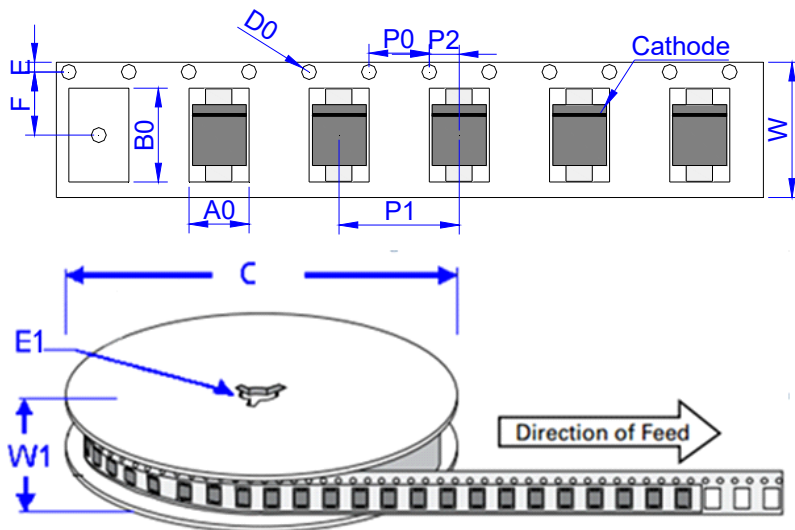
PACKAGE MECHANICAL DATA



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
BZD27C 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

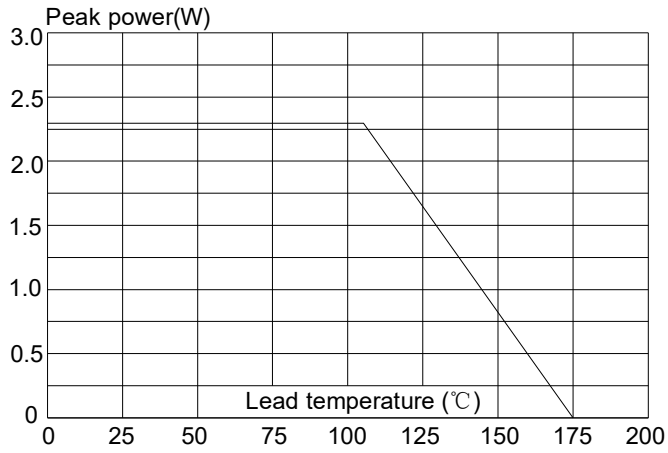


Fig.2 Zener breakdown characteristics

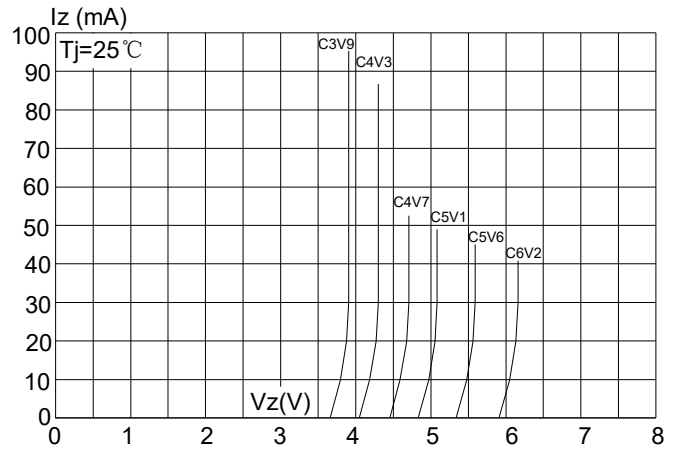
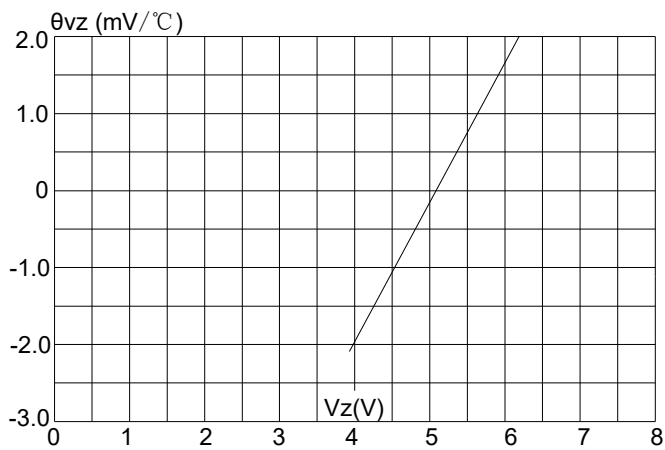


Fig.3 Temperature coefficient vs. zener voltage



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