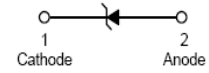


# Surface Mount Zener Diode



SOD-123

## Features:

- Planar Die Construction
- 500mW Power Dissipation On Ceramic PCB
- General Purpose, Medium Current
- Ideally Suited For Automated Assembly Processes

## Applications:

- Zener diode
- Ultra-small surface mount package

## Maximum Ratings:

Ratings at 25°C unless otherwise specified.

Characteristic	Symbol	Value	Unit
Forward voltage at $I_F=10\text{mA}$	$V_F$	0.9	V
Power dissipation	$P_D$	500	mW
Thermal resistance, junction to ambient air	$R_{\theta JA}$	305	°C/W
Junction and storage temperature range	$T_J, T_{stg}$	-65 to +150	°C

## Notes:

Device mounted on ceramic PCB 7.6mm × 9.4mm × 0.87mm with pad areas 25mm<sup>2</sup>.

Short duration test pulse used to minimize self-heating effect.

When provided, otherwise, parts are provided with date code only, and type number identifications appears on reel only.  
f = 1kHz.

# Surface Mount Zener Diode



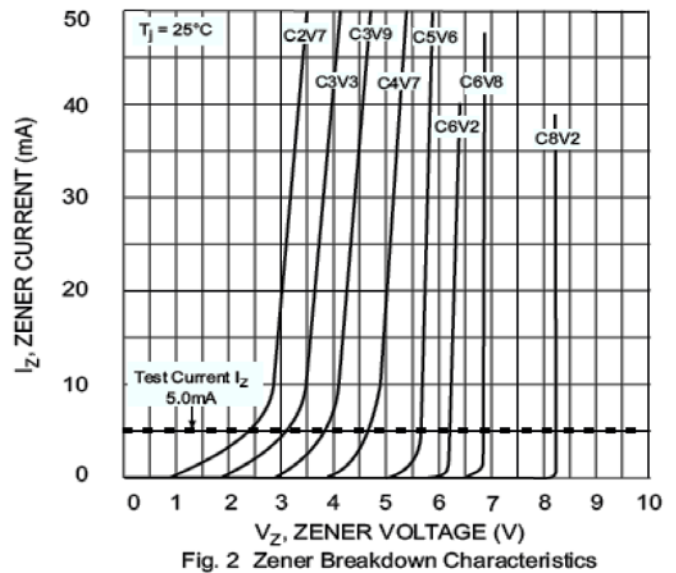
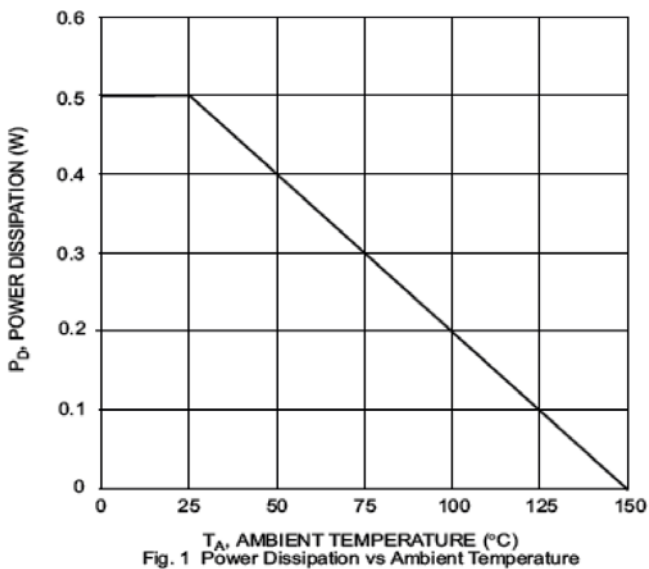
## Electrical Characteristics:

Ratings at 25°C unless otherwise specified.

Part Number	Marking Code	Zener Voltage Range				Max. Zener Impedance			Max. Reverse Current		Temperature Coefficient of zener voltage @ I <sub>ZTC</sub> mV/°C		Test Current I <sub>ZTC</sub> mA
		V <sub>Z</sub> @I <sub>ZT</sub>			I <sub>ZT</sub>	Z <sub>ZT</sub> @I <sub>ZT</sub>	Z <sub>ZK</sub> @I <sub>ZK</sub>	I <sub>ZK</sub>	I <sub>R</sub>	@V <sub>R</sub>			
		Nom.(V)	Min.(V)	Max.(V)	mA	Ω		mA	μA	V	Min.	Max.	
BZT52C6 V8-7-F	WB	6.8	6.4	7.2	5	15	80	1	2	4	1.2	4.5	5

## Typical Characteristics:

T<sub>A</sub> = 25°C unless otherwise specified.



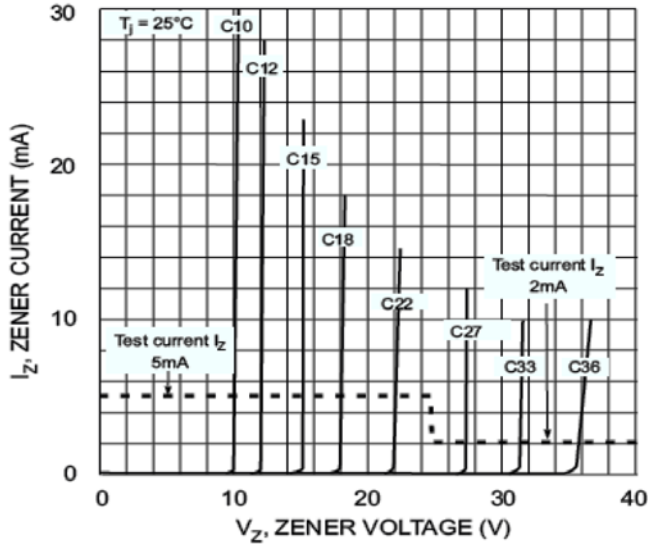


Fig. 3 Zener Breakdown Characteristics

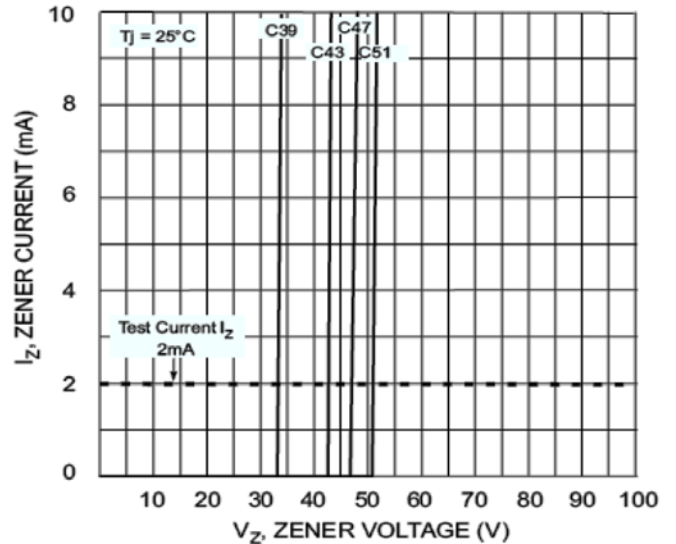


Fig. 4 Zener Breakdown Characteristics

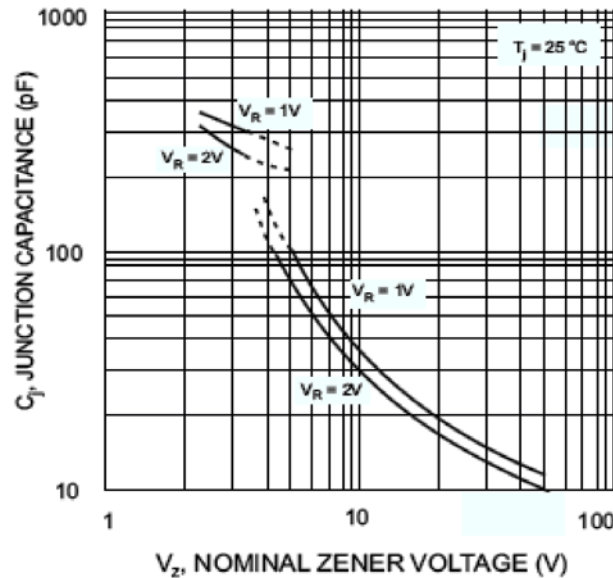


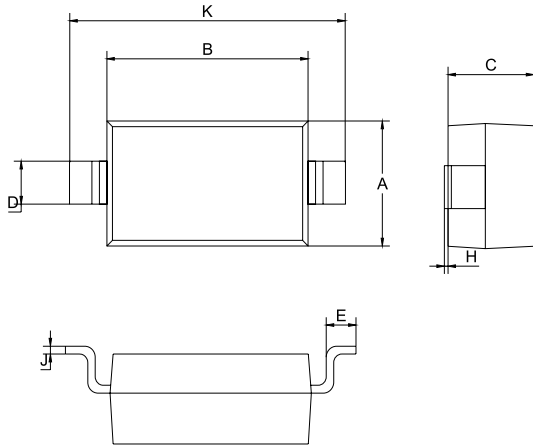
Fig. 5 Junction Capacitance vs Nominal Zener Voltage

# Surface Mount Zener Diode



## Package Outline:

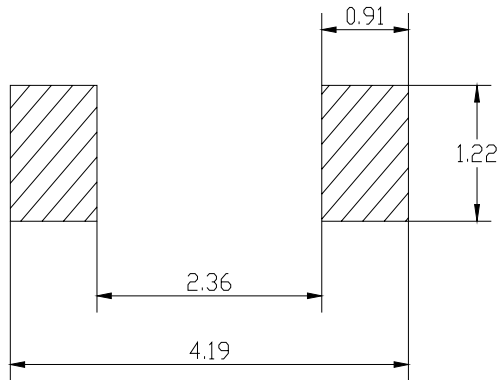
Plastic surface mounted package



SOD-123		
Dim.	Min.	Max.
A	1.4	1.8
B	2.55	2.85
C	1.15 Typ.	
D	0.5	0.6
E	0.3	0.4
H	0.02	0.1
J	0.1 Typ.	
K	3.55	3.85

Dimensions : Millimetres

## Soldering Footprint:



Dimensions : Millimetres

## Package Information:

Device	Package	Shipping
BZT52C6V8-7-F	SOD-123	3,000 / Tape & Reel

## Part Number Table

Description	Part Number
Surface Mount Zener Diode	BZT52C6V8-7-F

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