

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

Note :

Device mounted on ceramic PCB 7.6mm × 9.4mm × 0.87mm with pad areas 25mm².

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_{ZTC} mV/°C		Test Current I_{ZTC}
		$V_Z@I_{ZT}$			I_{ZT}	$Z_{ZT}@I_{ZT}$	$Z_{ZK}@I_{ZK}$	I_{ZK}	I_R	@ V_R			
		Nom.(V)	Min.(V)	Max.(V)	mA	Ω		mA	μA	V	Min.	Max.	mA
BZT52C5 V1-7-F	W8	5.1	4.8	5.4	5	60	480	1	2	2	-2.7	1.2	5

Typical Characteristics:

$T_A = 25^\circ\text{C}$ unless otherwise specified.

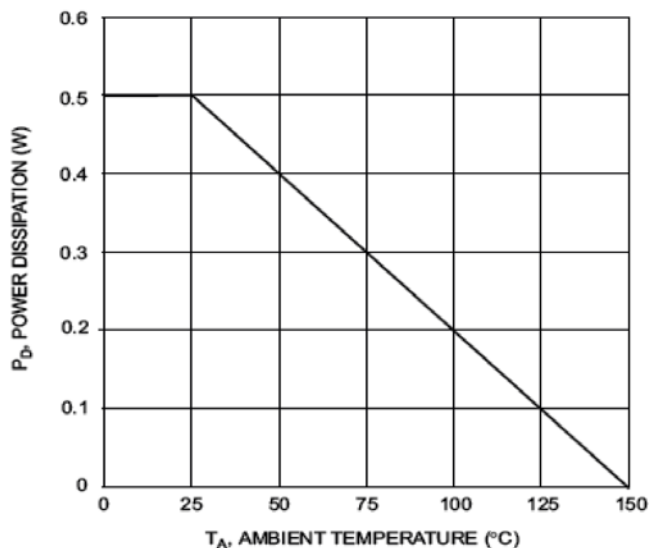


Fig. 1 Power Dissipation vs Ambient Temperature

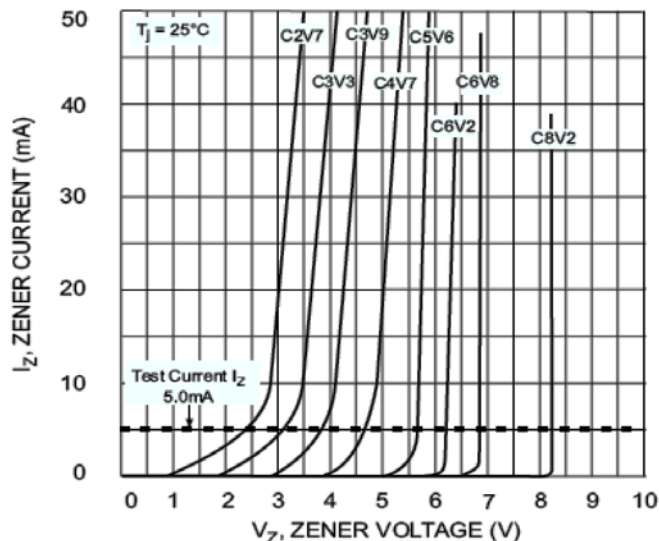
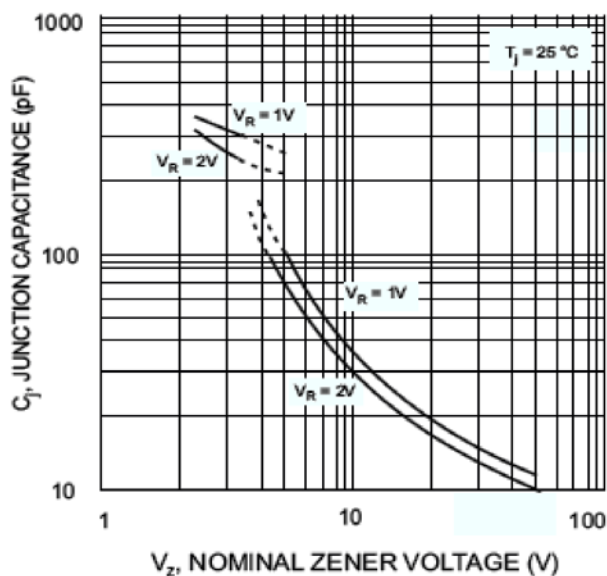
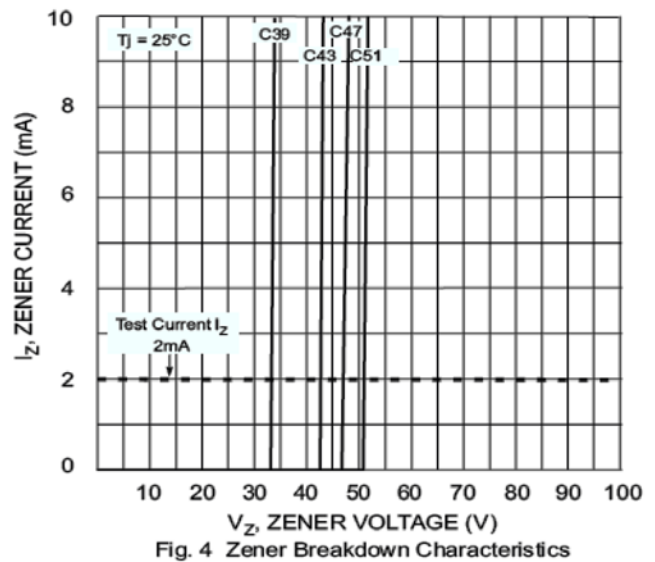
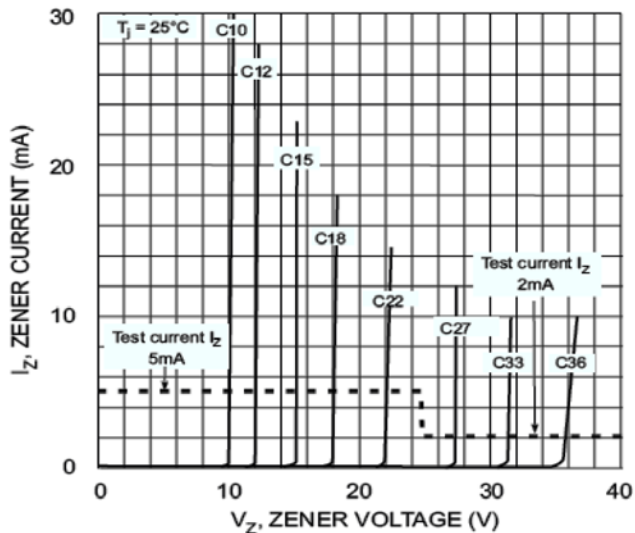


Fig. 2 Zener Breakdown Characteristics

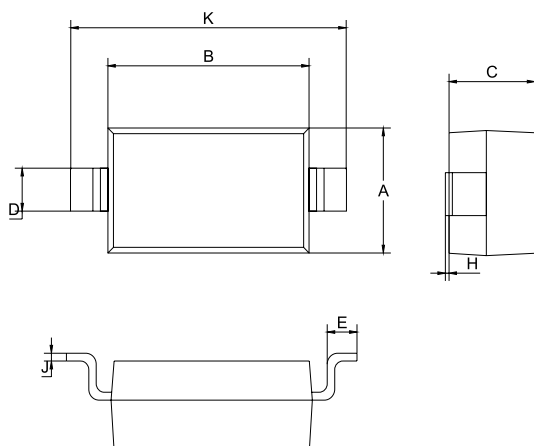


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Package Outline:

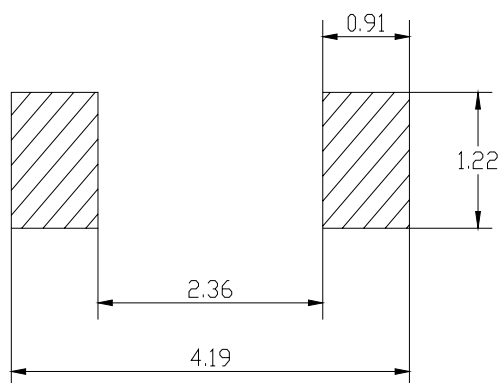
Plastic surface mounted package



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
BZT52C5V1-7-F	SOD-123	3,000 / Tape & Reel

Part Number Table

Description	Part Number
Surface Mount Zener Diode	BZT52C5V1-7-F

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