

MM3Z5V1

500mW, SOD-323 Zener Diode

<http://www.sh-willsemi.com>
Features

- Power Dissipation :500mW
- Package :SOD-323
- Zener voltage :5.1V
- Zener current :5mA
- Tolerance :±5%
- Reverse leakage :See characteristics
- ESD Rating :±15KV
- Peak power :300W
- Pb-Free


SOD-323

Pin configuration (Top view)

SOD-323
Mechanical Characteristics

- Case : SOD-323 Molded Plastic
- Polarity : Cathode Band
- Weight : 0.01 grams (approx.)
- Soldering temperature : 260°C per 10 second.
- Storage temperature : -55°C to +150°C

3 = Device code
***** = Month code (A~Z)
Marking

Applications

- Mobile phone
- GPS
- MID
- Portable Media Player
- Set-Top BOX
- HD Player

Order information

Device	Package	Shipping
MM3Z5V1-2/TR	SOD-323	3000/Tape&Reel

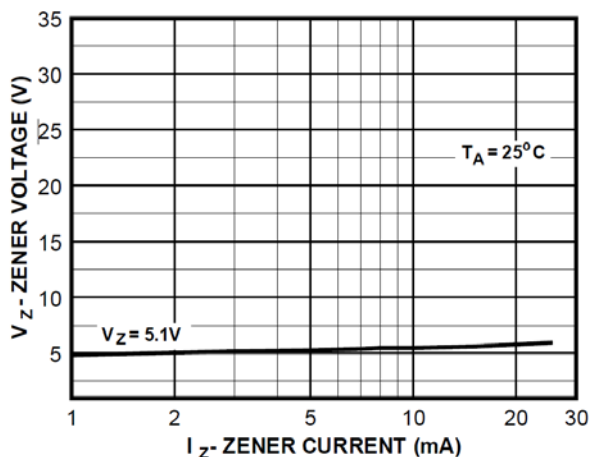
Absolute maximum ratings

Parameter	Symbol	Rating	Unit
Forward voltage	V_F	0.9	V
Power dissipation	P_D	500	mW
Thermal resistance, Junction-to-Ambient	$R_{\theta JA}$	340	$^{\circ}\text{C/W}$
Storage temperature	T_{STG}	-55 to +150	$^{\circ}\text{C}$

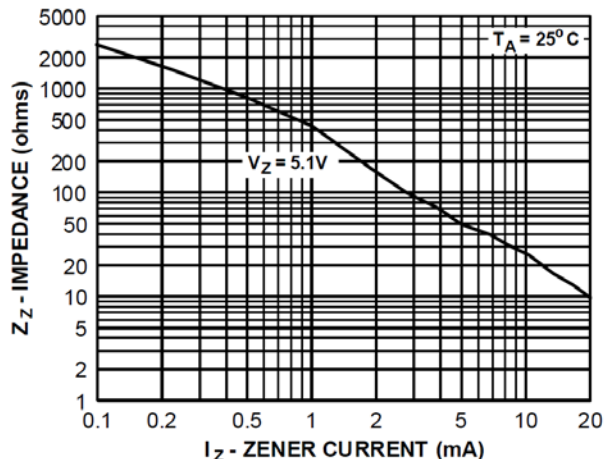
Electrical characteristics ($T_A = 25^{\circ}\text{C}$, unless otherwise noted)

Device	Zener Impedance (V_Z) @ $I_{ZT} = 5\text{mA}$			Dynamic resistance		Reverse leakage current		Junction capacitance
	Min. (V)	Typ. (V)	Max. (V)	$Z_{ZK} (\Omega) @$ $I_{ZK} = 1\text{mA}$	$Z_{ZT} (\Omega) @$ $I_{ZT} = 5\text{mA}$	$I_R (\mu\text{A})$	$V_R (\text{V})$	C (pF)
MM3Z5V1	4.85	5.10	5.36	480	50	0.1	1	110

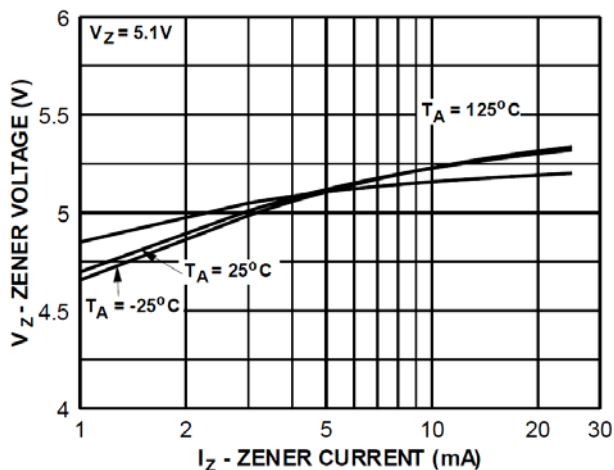
Typical characteristics ($T_A = 25^\circ\text{C}$, unless otherwise noted)



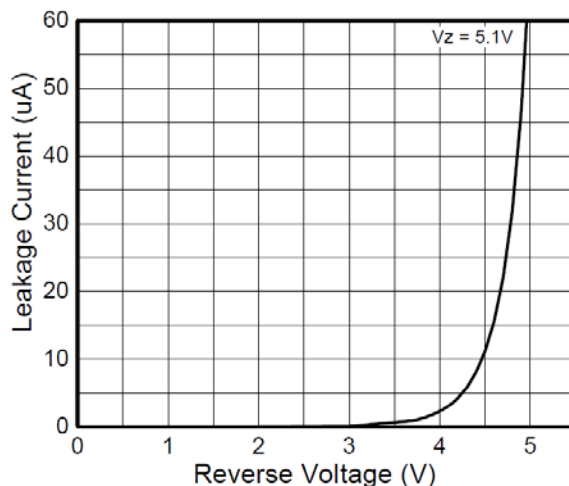
Zener current vs. Zener voltage



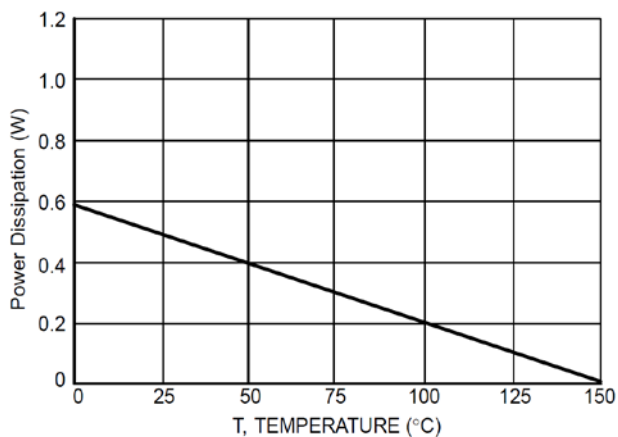
Zener current vs. Zener impedance



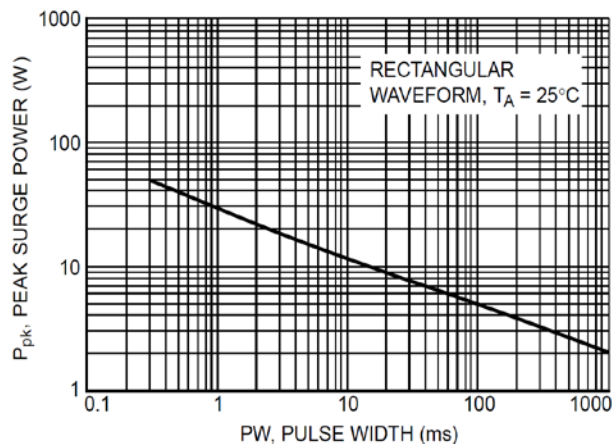
Zener voltage vs. Temperature



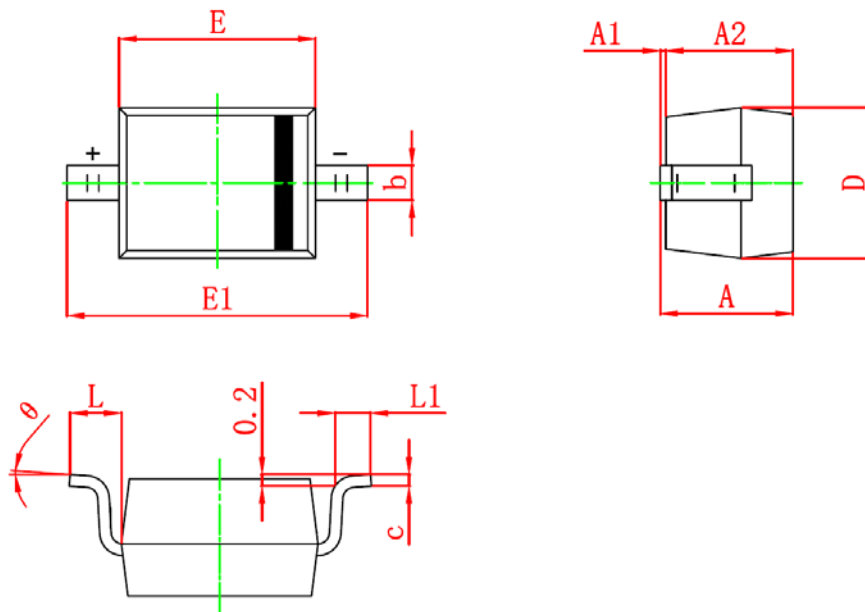
Leakage current vs. Reverse voltage



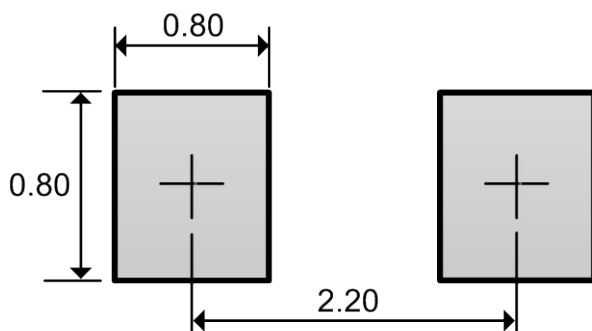
Power derating vs. Temperature



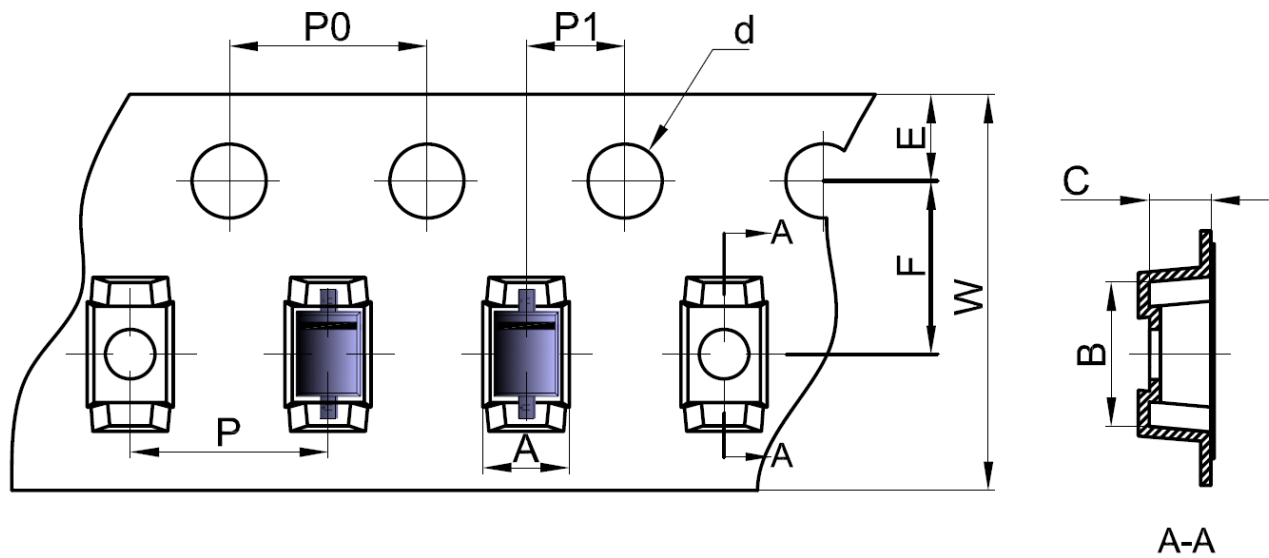
Peak surge power vs. Pulse width

Package outline dimensions
SOD-323


Symbol	Dimensions in millimeters		Dimensions in Inches	
	Min.	Max.	Min.	Max.
A	0.800	1.000	0.031	0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.500	2.700	0.098	0.106
L	0.475 REF		0.019 REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

Recommend land pattern (Unit: mm)


Note: This land pattern is for your reference only. Actual pad layouts may vary depending on application.

Tape and reel specification

SOD-323

Dimensions in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOD-323	1.46	2.90	1.25	Ø 1.50	1.75	3.50	4.00	4.00	2.00	8.00
(Tolerance)	±0.05	±0.05	±0.05	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	+0.3/-0.1