MM1Z3V3X-CH

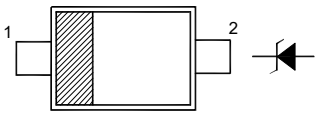
Silicon Planar Zener Diode

Features

- AEC-Q101 Qualified
- Power dissipation: max. 500 mW
- Small plastic package suitable for surface mounted design
- Halogen and Antimony Free(HAF), RoHS compliant

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Simplified outline SOD-123 and symbol

Absolute Maximum Ratings (T_a = 25℃)

Parameter		Symbol	Value	Unit
Power Dissipation	T_L = 75℃ [1]	P_D	500	mW
Operating Junction Temperature Range		T_j	- 55 to + 150	℃
Storage Temperature Range		T_{stg}	- 55 to + 150	℃

Characteristics at T_a = 25℃

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient [2]	$R_{\theta JA}$	340	℃/W
Thermal Resistance Junction to Lead [1]	$R_{\theta JL}$	150	℃/W

[1] FR−4 PCB = 89 * 38 mm.

[2] Mounted on an FR-4 PCB 38 * 38 * 1.6 mm with single-sided Cu pad areas 25mm^2(>70 μm thick).

Characteristics at T_a = 25℃ (V_F = 0.9 V Max. at I_F = 10 mA)

Type	Zener Voltage Range [1]			Dynamic Impedance [2]		Reverse Leakage Current	
	V_{znom}	V_{ZT}	at I_{ZT}	Z_{ZT}	at I_{ZT}	I_R	at V_R
	V	V	mA	Max. (Ω)	mA	Max. (μA)	V
MM1Z3V3X	3.3	3.1…3.5	5	130	5	20	1

[1] V_Z is tested with pulses (20 ms).

[2] Z_{ZT} is measured at I_Z by given a very small A.C. current signal.

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Electrical Characteristics Curves

Fig. 1 Zener Characteristics Curve

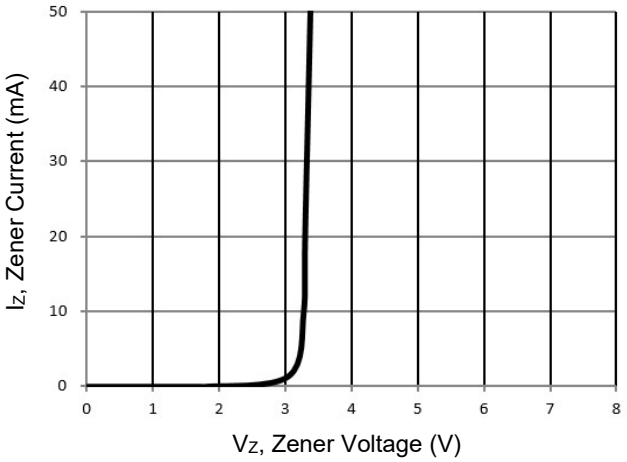
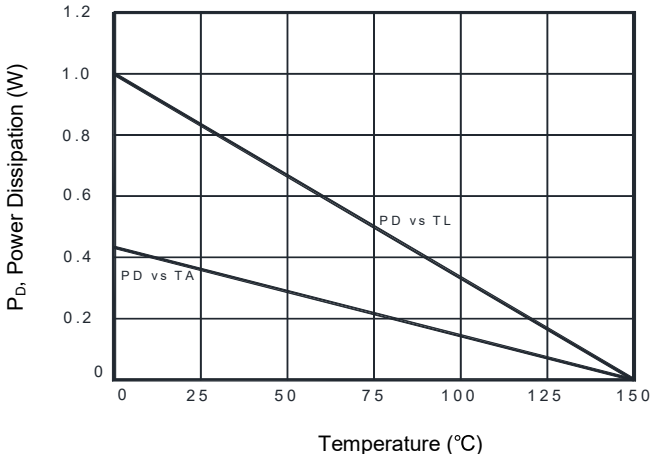
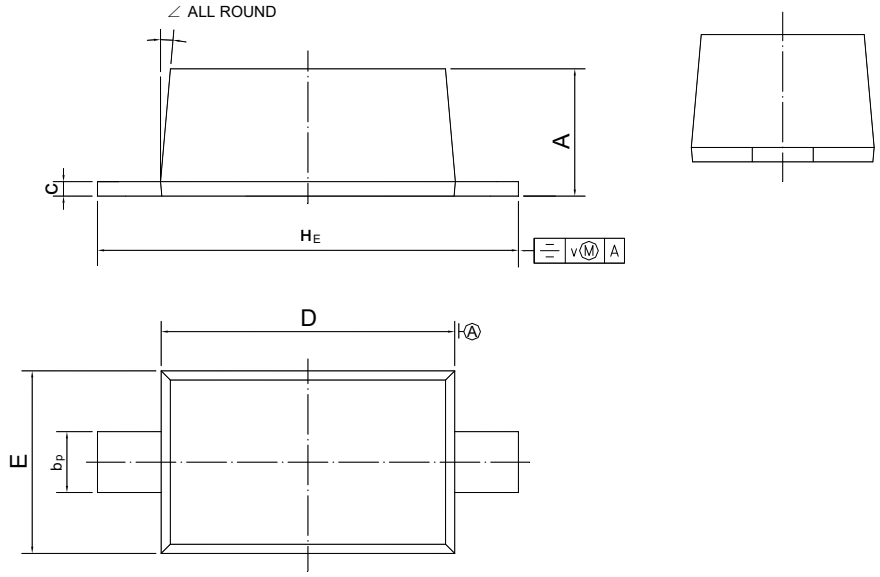


Fig. 2 Power Derating Curve



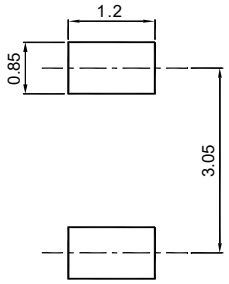
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads **SOD-123**



UNIT	A	b_p	c	D	E	H_E	v	∠
mm	1.15 1.05	0.6 0.5	0.135 0.100	2.7 2.6	1.65 1.55	3.85 3.55	0.2	5°

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	(inch)	mm	(inch)	
SOD-123	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" 4F " = Part No.
"III" = Cathode line
" • " = HAF (Halogen and Antimony Free)
Font type: Arial