

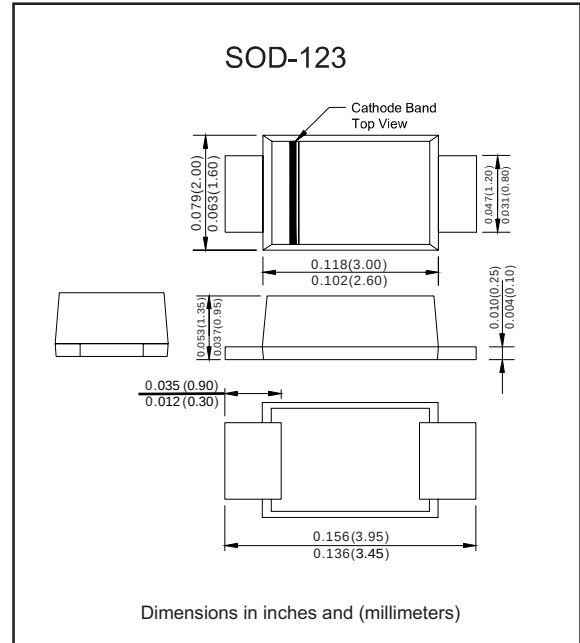
Features

- Planar technology
- Stand-off voltage: 3.3V
- 400W peak pulse power capability at 10/1000μs waveform
- IEC61000-4-2 (ESD) ±30kV(air), ±30kV (contact)
- Excellent clamping capability
- Fast response time
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101

Mechanical data

- Case : SOD-123
- Terminals solder plated, solderable per J-STD-002
- Polarity : Indicated by cathode band
- Mounting Position : Any

Package outline



Maximum ratings (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage and operating junction temperature range	T_{STG}/T_J	-55 to +150	$^{\circ}\text{C}$
Peak pulse power dissipation at 10/1000μs waveform	P_{PP}	400	W
Typical thermal resistance junction to lead	$R_{\theta\text{JL}}$	100	$^{\circ}\text{C}/\text{W}$
Typical thermal resistance junction to ambient	$R_{\theta\text{JA}}$	220	$^{\circ}\text{C}/\text{W}$

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

Part Number	V_R	$I_R@V_R$	$V_{\text{BR}}@I_T$	I_T	$V_C@I_{\text{PP}}$	$I_{\text{PP}}^{(1)}$	$C_o^{(2)}$	Marking
	V	μA(max)	V(min)	mA	V(max)	A(max)	pF(typ.)	
S4MF3.3A-Q1	3.3	80	4.1	1	7.3	54.7	2900	U03L

① Surge waveform: 10/1000μs

② C_o is measured at: $V_{\text{bias}}=0\text{V}$, $V_{\text{RMS}}=0.1\text{V}$, $f=1\text{MHz}$

Rating and characteristic curves

FIG.1: V - I curve characteristics (Uni-directional)

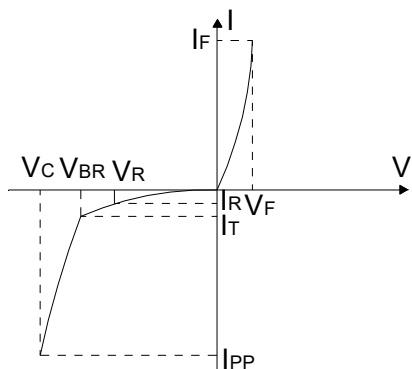


FIG.2: Pulse waveform

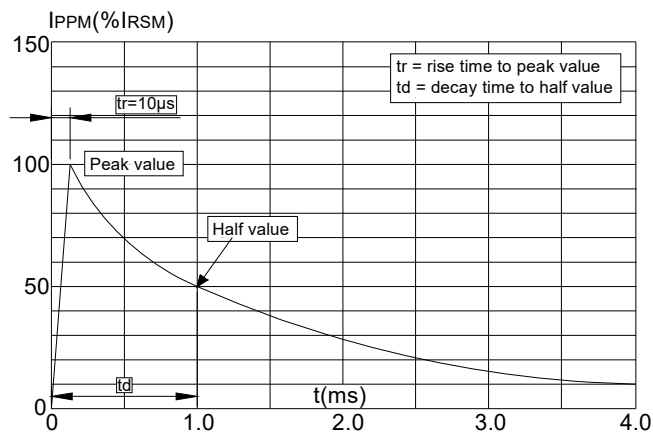
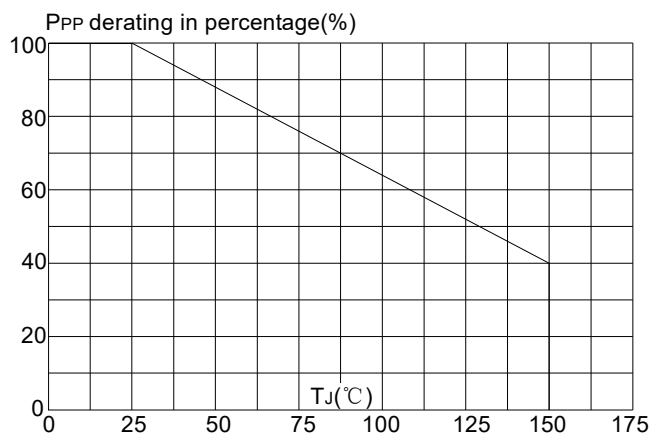


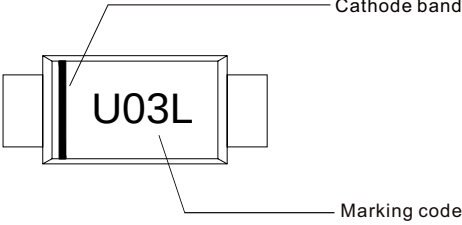
FIG.3: Pulse derating curve



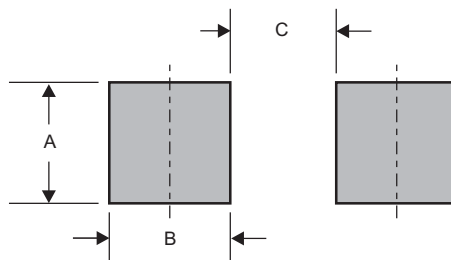
Pinning information

Pin	Simplified outline	Symbol
Uni-Directional Pin1 cathode Pin2 anode		

Marking

Type number	Example
S4MF3.3A-Q1	

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123	0.056 (1.40)	0.062 (1.55)	0.067 (1.70)