

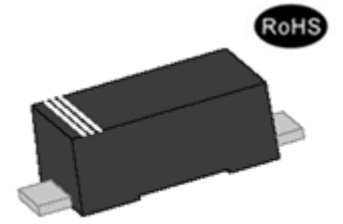


SMF3.3A 200W Transient Voltage Suppressor

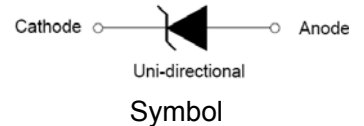
Rev.1.2

FEATURES:

- ✧ Planar technology.
- ✧ Halogen-free and RoHS compliant.
- ✧ Stand-off voltage: 3.3V.
- ✧ 200W peak pulse power capability at 10/1000μs waveform.
- ✧ Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C.
- ✧ Terminal: solder plated, solderable per J-STD-002.
- ✧ Excellent clamping capability.
- ✧ Fast response time.
- ✧ IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact).



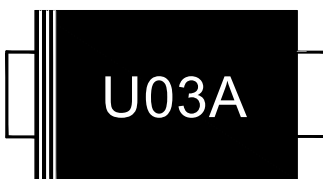
SOD-123FL



ABSOLUTE MAXIMUM RATINGS($T_A=25^{\circ}\text{C}$, RH=45%-75%, 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}	200	W
Typical thermal resistance junction to lead	$R_{\theta JL}$	100	$^{\circ}\text{C}/\text{W}$
Typical thermal resistance junction to ambient	$R_{\theta JA}$	220	$^{\circ}\text{C}/\text{W}$

MARKING



U03A : Device Marking Code

ELECTRICAL CHARACTERISTICS($T_A=25^{\circ}\text{C}$)

Part Number	V_R	$I_R@V_R$	$V_{BR}@I_T$	I_T	$V_C@I_{PP}$	$I_{PP}^{①}$	$C_o^{②}$	Marking
	V	μA(max)	V(min)	mA	V(max)	A(max)	pF(typ.)	
SMF3.3A	3.3	50	4.1	1	7.3	27	1900	U03A

① Surge waveform: 10/1000μs

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

ORDERING INFORMATION

<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>SMF</p> <p>200W SOD-123FL Series</p> </div> <div style="text-align: center;"> <p>3.3</p> <p>V_R Voltage</p> </div> <div style="text-align: center;"> <p>A</p> <p>5% V_{BR} voltage tolerance</p> </div> </div>
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RATINGS AND V-I CHARACTERISTICS CURVES ($T_A=25^{\circ}C$, unless otherwise noted)

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

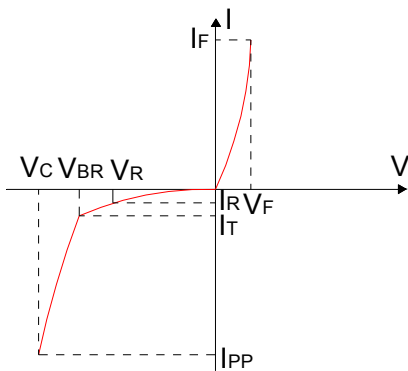


FIG.2: Pulse waveform

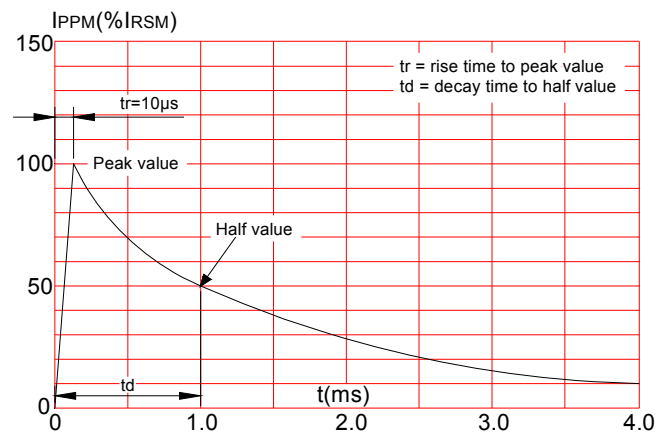
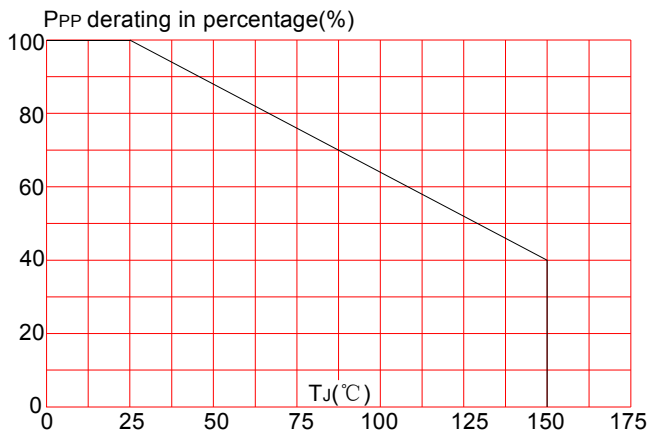
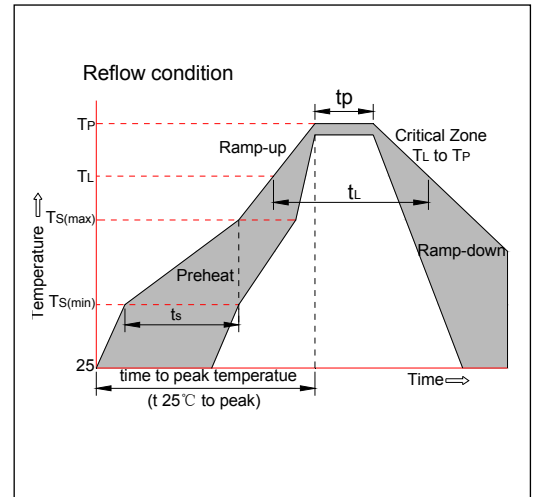


FIG.3: Pulse derating curve

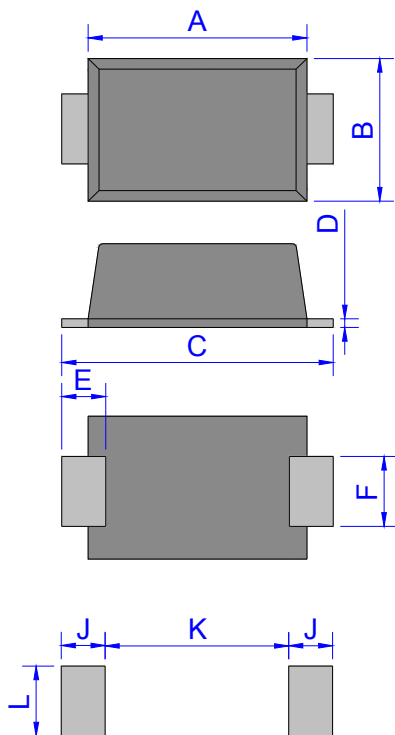


SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see figure at right)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquidus Temp (T_L)to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquidus)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		20-40secs.
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_p)		8 min. Max
Do not exceed		+260°C



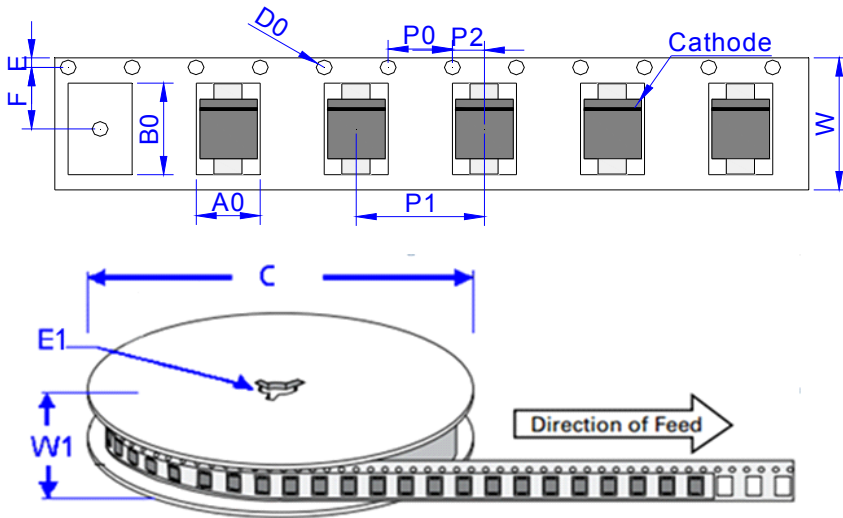
PACKAGE MECHANICAL DATA



SOD-123FL

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.60	3.00	0.102	0.118
B	1.60	2.00	0.063	0.079
C	3.45	3.95	0.136	0.156
D	0.10	0.25	0.004	0.01
E	0.3	0.9	0.012	0.035
F	0.80	1.20	0.031	0.047
G	0.95	1.35	0.037	0.053
J	1.30		0.051	
K		1.70		0.067
L	1.30		0.051	

TAPE AND REEL SPECIFICATION-SOD-123FL



Ref.	Dimensions	
	Millimeters	Inches
A0	1.95 ± 0.3	0.077± 0.012
B0	3.95 ± 0.3	0.156 ± 0.012
C	178	7.0
D0	1.55 ± 0.1	0.061 ± 0.004
E	1.75 ± 0.2	0.069 ± 0.008
E1	13.3 ± 0.3	0.524± 0.012
F	3.50 ± 0.2	0.138 ± 0.008
P0	4.00 ± 0.2	0.157 ± 0.008
P1	4.00 ± 0.2	0.157 ± 0.008
P2	2.00 ± 0.2	0.079 ± 0.008
W	8.0± 0.2	0.315 ± 0.008
W1	11.5 ± 1.0	0.453 ± 0.039

PART No.	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	DESCRIPTION
SMF3.3A	0.0136	3000	150,000	7 inch reel pack

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