

FEATURES

- ❑ For small surface mounted applications
- ❑ Response time is typically < 1ns
- ❑ Low clamping voltage
- ❑ Low leakage current
- ❑ RoHS compliant

MAIN APPLICATIONS

- ❑ Cell phone handsets and accessories
- ❑ Personal digital assistants (PDA's)
- ❑ Notebooks, desktops, and servers
- ❑ Portable instrumentation

PROTECTION SOLUTION TO MEET

- ❑ IEC61000-4-2 (ESD) $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)
- ❑ IEC61000-4-5 (Lightning) $200\text{A}(1.2/50\mu\text{s}-8/20\mu\text{s}@2\Omega)$

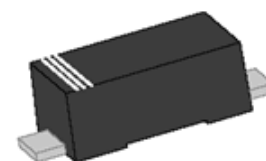
MECHANICAL CHARACTERISTICS

- ❑ SOD-123FL package
- ❑ Molding compound flammability rating : UL 94V-0
- ❑ Typical weight: 0.0168g/pcs
- ❑ Lead finish: lead free

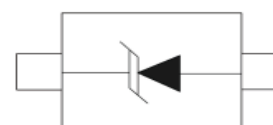
MARKING CODE



24UF : Device Marking Code



SOD-123FL



PIN Configuration

PART No.	UNIT WEIGHT (g/PCS) typ.	PACKAGE	REEL (PCS)	DESCRIPTION
TS2451LKX	0.0168	SOD-123FL	3000	7 inch reel pack

ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation on 1.2/50 μs -8/20 μs @2 Ω waveform	P_{PP}	6800	W
Peak pulse current on 1.2/50 μs -8/20 μs @2 Ω waveform	I_{PP}	200	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	+/- 30 +/- 30	kV
Lead soldering temperature	T_L	260 (10 sec.)	$^{\circ}\text{C}$
Operating junction temperature range	T_J	-55 to +150	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

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

Part Number	Marking	V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$P_{PP}^{①}$	$V_C@I_{PP}$	$I_{PP}^{②}$
Uni-Polar	Uni	V	μA	min(V)	max(V)	mA	W	max(V)	A
TS2451LKX	24UF	24	1.0	26.0	30.0	1	6800	34.0	200

① Peak pulse power dissipation (Surge waveform: 1.2/50 μs -8/20 μs @2 Ω)

② Peak pulse current (Surge waveform: 1.2/50 μs -8/20 μs @2 Ω)

V_R : Stand-off voltage -- Maximum voltage that can be applied

V_C : Clamping voltage -- Peak voltage measured across the suppressor at a specified I_{PP}

V_{BR} : Breakdown voltage I_R : Reverse leakage current

RATINGS AND V-I CHARACTERISTICS CURVES ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

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

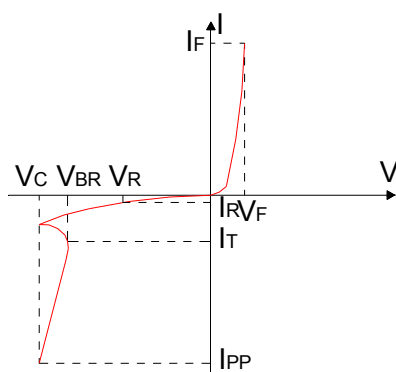
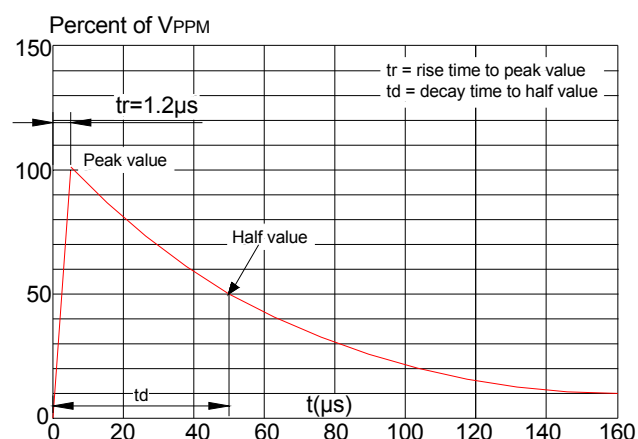


FIG.2: Pulse waveform (1.2/50 μs)



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	

The diagram illustrates a roll-to-roll manufacturing process for a thin-film device. The top part shows a plan view of a rectangular substrate with dimensions A_0 , B_0 , C , D_0 , E , F , P_0 , P_1 , P_2 , and W . It features a central cathode region and several smaller rectangular regions. The bottom part shows a cross-sectional view of the substrate being fed from left to right, with dimensions C , E_1 , and W_1 . An arrow indicates the "Direction of Feed".

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