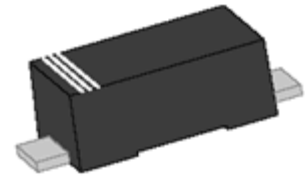


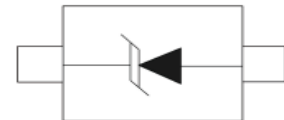


### DESCRIPTION:

The JEUxxD1FT series are designed to protect sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events.



SOD-123FLT



PIN Configuration

### FEATURES

- ✧ 3600W to 6800W peak pulse power dissipation at 1.2/50 $\mu$ s-8/20 $\mu$ s@2 $\Omega$  waveform.
- ✧ For small surface mounted applications.
- ✧ Response time is typically < 1ns.
- ✧ Low clamping voltage.
- ✧ Low leakage current.
- ✧ RoHS compliant.
- ✧ Meets MSL level 1, per J-STD-020, LF maximum peak of 260 $^{\circ}$ C.
- ✧ Terminal: solder plated, solderable per J-STD-002.

### 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)  $\pm$ 30kV (air),  $\pm$ 30kV (contact)
- ✧ IEC61000-4-5 (Lightning) 200A(1.2/50 $\mu$ s-8/20 $\mu$ s@2 $\Omega$ )

### MECHANICAL CHARACTERISTICS

- ✧ SOD-123FLT package
- ✧ Molding compound flammability rating: UL 94V-0
- ✧ Typical weight: 0.0144g/pcs
- ✧ Lead finish: lead free

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

Parameter	Symbol	Value	Unit
Peak pulse power dissipation at 1.2/50 $\mu\text{s}$ -8/20 $\mu\text{s}$ @2 $\Omega$ waveform	$P_{PP}$	3600 to 6800	W
Peak pulse current at 1.2/50 $\mu\text{s}$ -8/20 $\mu\text{s}$ @2 $\Omega$ 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	$V_R$	$I_R@V_R$	$V_{BR}@I_T$		$I_T$	$P_{PP}^{①}$	$V_C@I_{PP}$	$I_{PP}^{②}$
				min(V)	max(V)				
Uni-Polar	Uni	V	max( $\mu\text{A}$ )	min(V)	max(V)	mA	W	max(V)	A
JEU07D1FT	J07U	7	1.0	8.0	10.0	1	3600	18.0	200
JEU12D1FT	J12U	12	1.0	13.0	15.0	1	5600	28.0	200
JEU15D1FT	J15U	15	1.0	16.5	19.5	1	6000	30.0	200
JEU18D1FT	J18U	18	1.0	19.5	23.5	1	6600	33.0	200
☆JEU24D1FT	J24U	24	1.0	25	30.0	1	6800	34.0	200

① Peak pulse power dissipation (Surge waveform: 1.2/50 $\mu\text{s}$ -8/20 $\mu\text{s}$ @2 $\Omega$ )

② Peak pulse current (Surge waveform: 1.2/50 $\mu\text{s}$ -8/20 $\mu\text{s}$ @2 $\Omega$ )

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

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

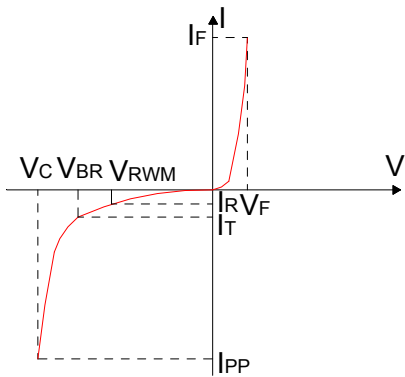
$V_{BR}$ : Breakdown voltage

$I_R$ : Reverse leakage current

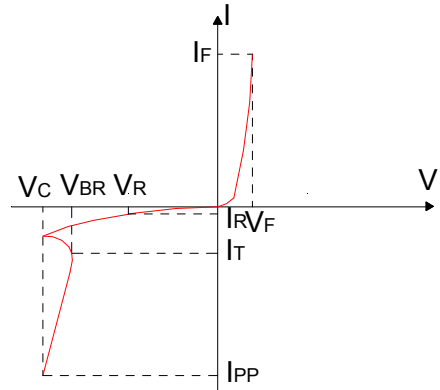
☆: Products with negative resistance

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

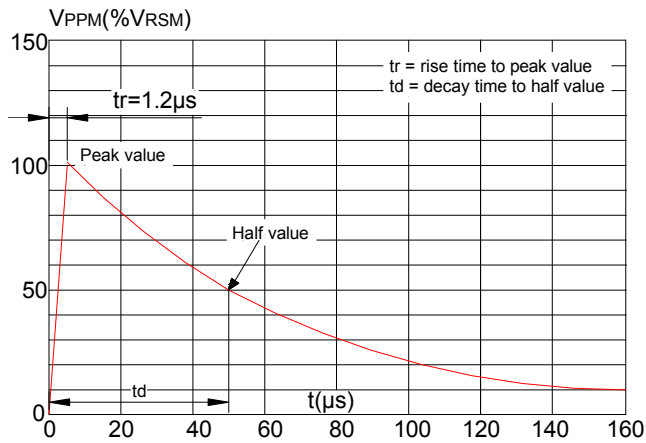
**FIG.1:V- I curve characteristics (Uni-directional)**



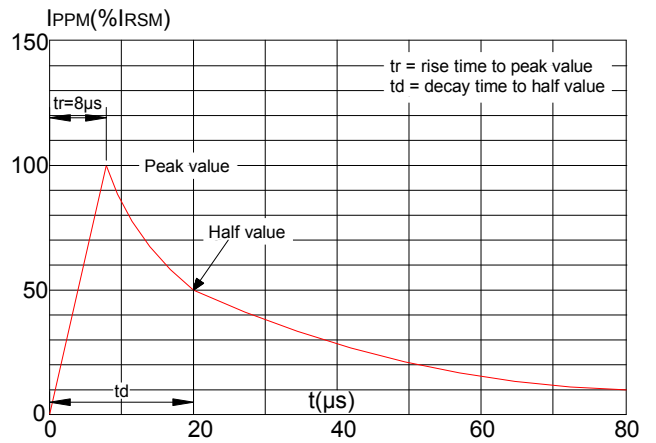
**FIG.2:V- I curve characteristics (Uni-directional with negative resistance)**



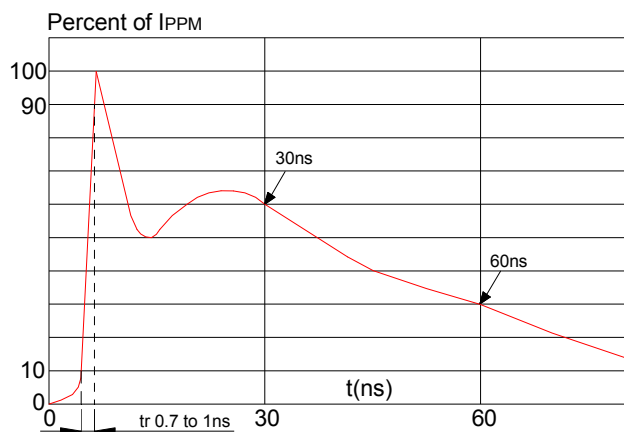
**FIG.3: Pulse waveform (1.2/50 $\mu\text{s}$ )**



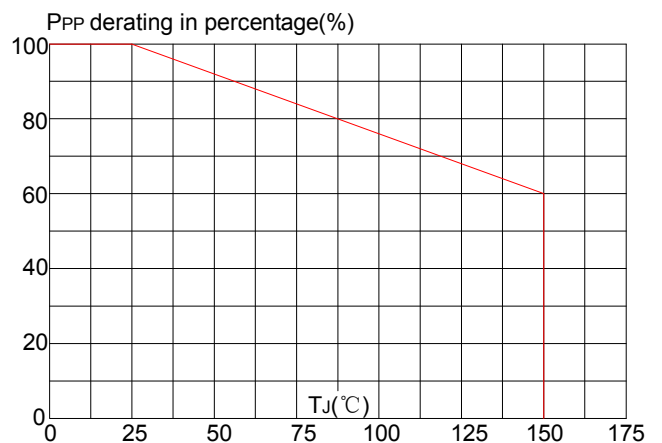
**FIG.4: Pulse waveform**



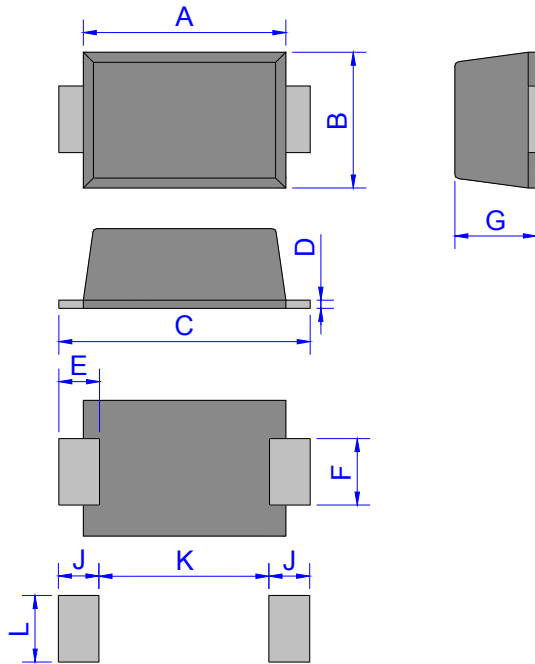
**FIG.5: ESD clamping (30kV contact)**



**FIG.6: Pulse derating curve**



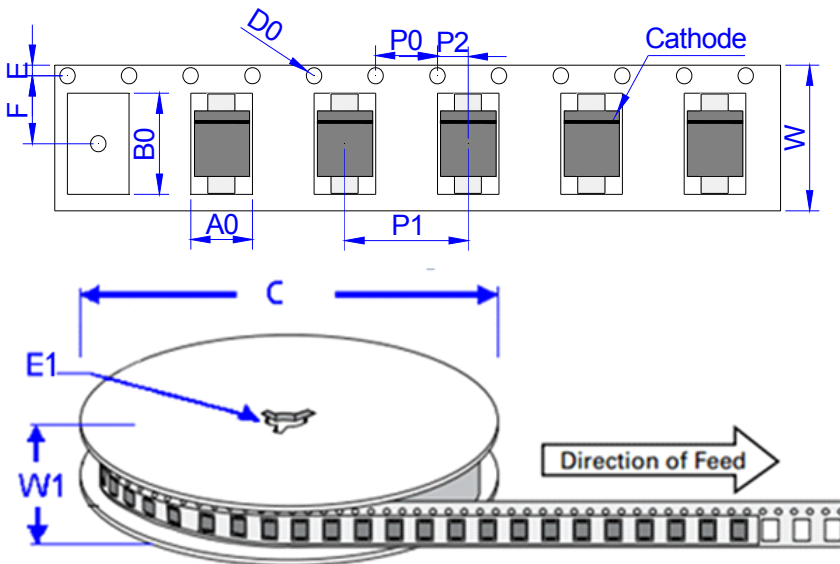
PACKAGE MECHANICAL DATA



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	0.70	1.00	0.028	0.039
J	1.30		0.051	
K		1.70		0.067
L	1.30		0.051	

SOD-123FLT

TAPE AND REEL SPECIFICATION-SOD-123FLT



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
JEUxxD1FT	0.0144	3000	150,000	7 inch reel pack

**MARKING CODE**

J07U : Device Marking Code

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