

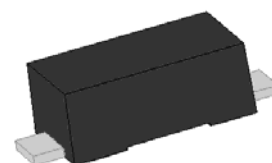


DESCRIPTION:

The JEBxxD1F series are designed to protect sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events.

FEATURES

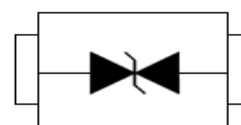
- ✧ 4800W to 9500W Peak pulse power dissipation on 1.2/50 μ s-8/20 μ s@2 Ω waveform
- ✧ For small surface mounted applications
- ✧ Response time is typically < 1ns
- ✧ Low clamping voltage
- ✧ Low leakage current
- ✧ RoHS compliant



SOD-123FL

MAIN APPLICATIONS

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



PIN Configuration

PROTECTION SOLUTION TO MEET

- ✧ IEC61000-4-2 (ESD) $\pm$ 30kV (air), $\pm$ 30kV (contact)
- ✧ IEC61000-4-5 (Lightning) 300A to 350A (1.2/50 μ s-8/20 μ s@2 Ω)

MECHANICAL CHARACTERISTICS

- ✧ SOD-123FL package
- ✧ Molding compound flammability rating : UL 94V-0
- ✧ Typical weight: 0.0168g/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 on 1.2/50 μs -8/20 μs @2 Ω waveform	P_{PP}	4800 to 9500	W
Peak pulse current on 1.2/50 μs -8/20 μs @2 Ω waveform	I_{PP}	300 to 350	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	$Co^{①}$	$P_{PP}^{②}$	$V_C@I_{PP}$	$I_{PP}^{③}$
Bi-Polar	Bi	V	μA	min(V)	max(V)	mA	typ (pF)	W	max(V)	A
JEB07D1F	07BF	7	1.0	8.0	10.0	1	1100	4800	16.0	300
JEB12D1F	12BF	12	1.0	13.0	15.0	1	620	7500	25.0	300
JEB15D1F	15BF	15	1.0	16.5	19.5	1	470	9500	27.0	350
JEB18D1F	18BF	18	1.0	19.5	23.5	1	400	9000	30.0	300

① $f=1\text{MHz}$, $V_{DC}=0\text{V}$, $V_{RMS}=0.1\text{V}$

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

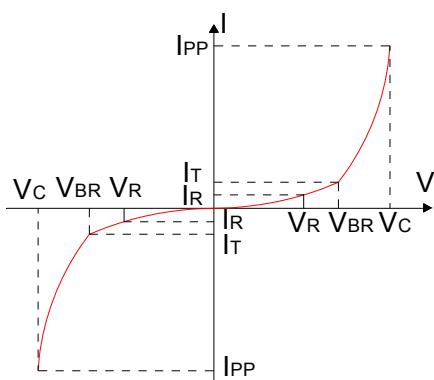
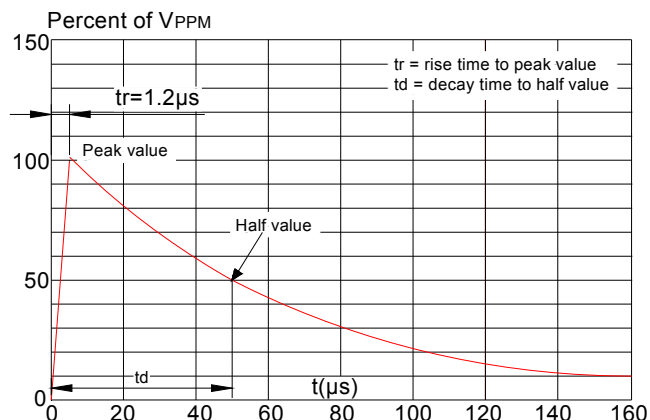
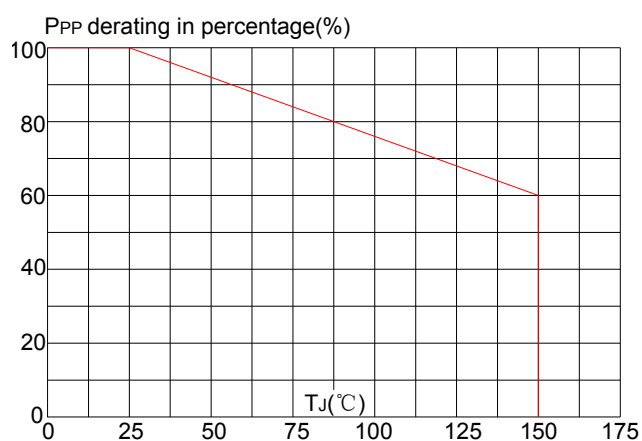
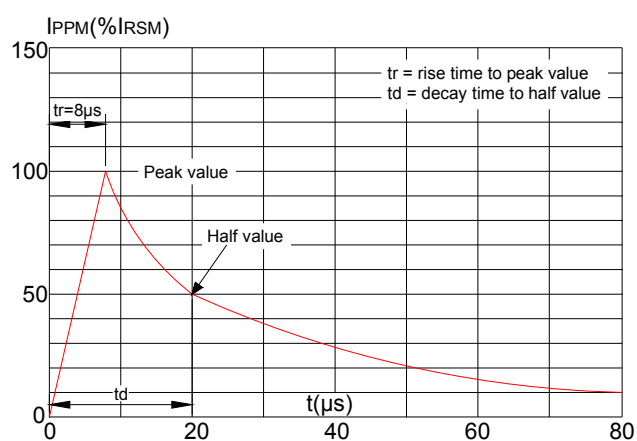
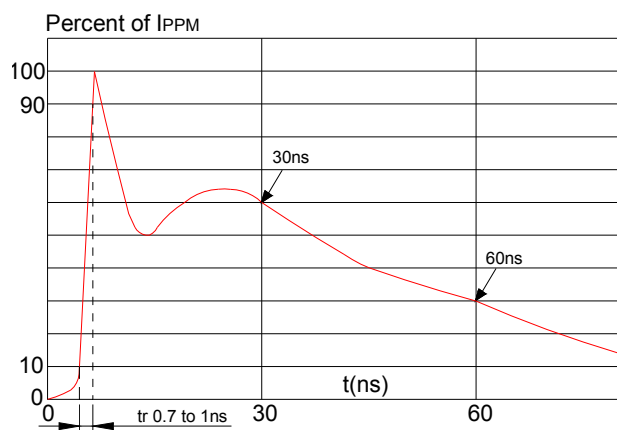
③ Peak pulse current (Surge waveform: 1.2/50 μs -8/20 μs @2 Ω)

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

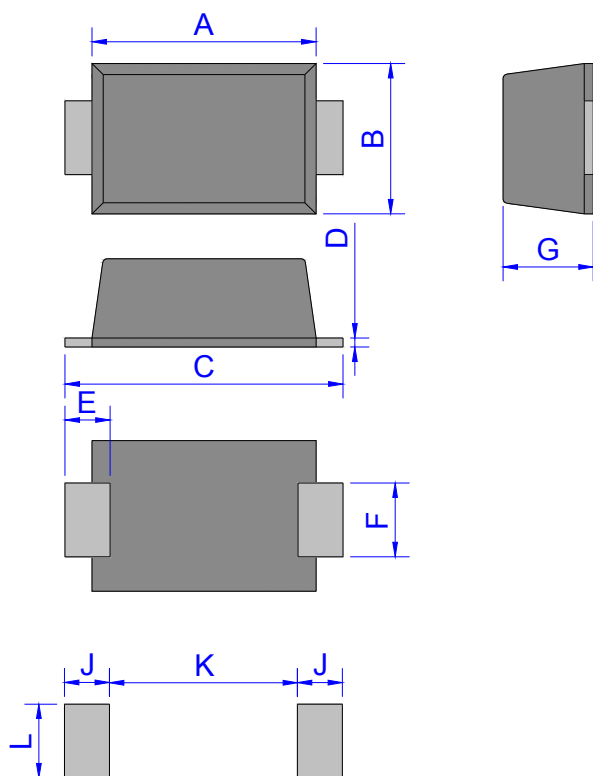
V_C : Clamping voltage -- Peak voltage measured across the suppressor at a specified I_{PP}

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 (Bi-directional)

FIG.2: Pulse waveform (1.2/50 μs)

FIG.3: Pulse derating curve

FIG.4: Pulse waveform

FIG.5: ESD clamping (30kV contact)


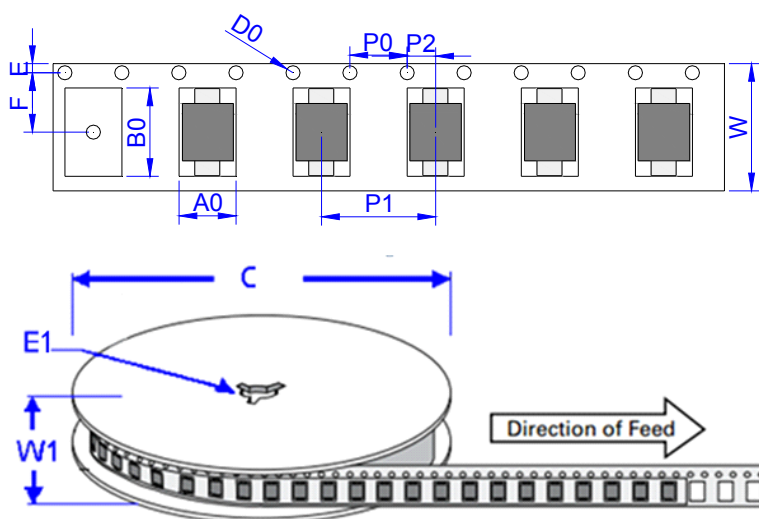
PACKAGE MECHANICAL DATA



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	

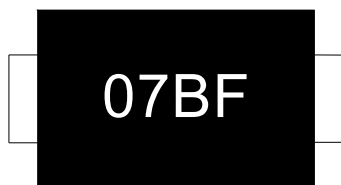
TAPE AND REEL SPECIFICATION-SOD-123FL



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.	PACKAGE	REEL (PCS)	DESCRIPTION
JEBxxD1F	0.0168	SOD-123FL	3000	7 inch reel pack

MARKING CODE



07BF : Device Marking Code

Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelectronics Co.,Ltd assumes no responsibility for the consequences of use without consideration for such information nor use beyond it.

Information mentioned in this document is subject to change without notice, apart from that when an agreement is signed, Jiangsu JieJie complies with the agreement.

Products and information provided in this document have no infringement of patents. Jiangsu JieJie assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information.

This document is the 1.1st version which is made in 5-Nov.-2019. This document supersedes and replaces all information previously supplied.

 is a registered trademark of Jiangsu JieJie Microelectronics Co.,Ltd.

Copyright©2019 Jiangsu JieJie Microelectronics Co.,Ltd. Printed All rights reserved.