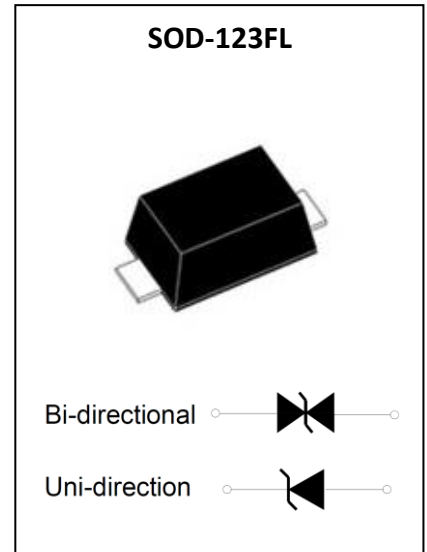


### Feature

- Glass passivated chip
- 200W peak pulse power capability with a 10/1000us waveform
- Repetitive rate (duty cycle): 0.01%
- Excellent clamping capability
- Low reverse leakage
- Very fast response time
- Lead and body according with Rohs standard
- Complies with following standards:
  - IEC 61000-4-2(ESD) immunity test level 4
    - Air discharge :  $\pm 15\text{kV}$
    - Contact discharge:  $\pm 8\text{kV}$



### Mechanical Data

- Case: SMF/SOD-123FL Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any

### Marking

- SMF
- XXCA/XXA
- XX: From 5.0 to 440

### Absolute Maximum Ratings ( $T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000 us waveform	$P_{PP}$	200	W
Peak pulse current with a 10/1000 us waveform	$I_{PP}$	See Next Table	A
Power dissipation on infinite heatsink at $T_L = 75^\circ\text{C}$	$P_D$	1.0	W
Peak forward surge current, 8.3 ms single half sinewave unidirectional only <sup>1)</sup>	$I_{FSM}$	30	A
Maximum instantaneous forward voltage at 25A for unidirectional only <sup>2)</sup>	$V_F$	3.5/6.5	V
Junction Temperature	$T_J$	-55 ~ +150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 ~ +150	$^\circ\text{C}$

1) Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum;

2)  $V_F < 3.5\text{V}$  for devices of  $V_{BR} < 200\text{V}$  and  $V_F < 6.5\text{V}$  for devices of  $V_{BR} > 201\text{V}$ .

## Electrical Characteristics (T<sub>a</sub>=25°C unless otherwise specified)

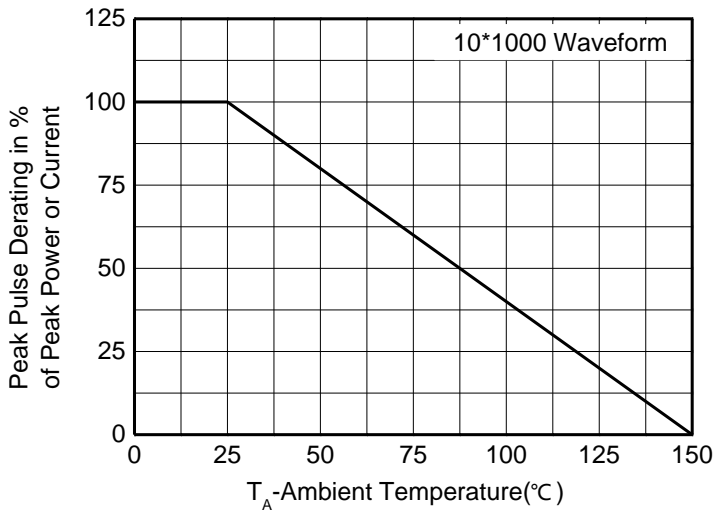
Part Number	Part Number	Reverse Stand-off Voltage VR (V)	Breakdown Voltage VBR (Volts) @ IT		Test Current IT (mA)	Maximum Clamping Voltage VC @ IPP (Volts)	Maximum Peak Pulse Current IPP (A)	Maximum Reverse Leakage IR @ VR (μA)
			MIN	MAX				
UNI	BI							
SMFJ5.0A	SMFJ5.0CA	5	6.4	7	10	9.2	21.7	800
SMFJ6.0A	SMFJ6.0CA	6	6.67	7.37	10	10.3	19.4	800
SMFJ6.5A	SMFJ6.5CA	6.5	7.22	7.98	10	11.2	17.6	500
SMFJ7.0A	SMFJ7.0CA	7	7.78	8.6	10	12	16.6	200
SMFJ7.5A	SMFJ7.5CA	7.5	8.33	9.21	1	12.9	15.5	100
SMFJ8.0A	SMFJ8.0CA	8	8.89	9.83	1	13.6	14.7	50
SMFJ8.5A	SMFJ8.5CA	8.5	9.44	10.4	1	14.4	13.9	20
SMFJ9.0A	SMFJ9.0CA	9	10	11.1	1	15.4	13	10
SMFJ10A	SMFJ10CA	10	11.1	12.3	1	17	11.7	5
SMFJ11A	SMFJ11CA	11	12.2	13.5	1	18.2	11	1
SMFJ12A	SMFJ12CA	12	13.3	14.7	1	19.9	10	1
SMFJ13A	SMFJ13CA	13	14.4	15.9	1	21.5	9.3	1
SMFJ14A	SMFJ14CA	14	15.6	17.2	1	23.2	8.6	1
SMFJ15A	SMFJ15CA	15	16.7	18.5	1	24.4	8.2	1
SMFJ16A	SMFJ16CA	16	17.8	19.7	1	26	7.7	1
SMFJ17A	SMFJ17CA	17	18.9	20.9	1	27.6	7.2	1
SMFJ18A	SMFJ18CA	18	20	22.1	1	29.2	6.8	1
SMFJ20A	SMFJ20CA	20	22.2	24.5	1	32.4	6.1	1
SMFJ22A	SMFJ22CA	22	24.4	26.9	1	35.5	5.6	1
SMFJ24A	SMFJ24CA	24	26.7	29.5	1	38.9	5.1	1
SMFJ26A	SMFJ26CA	26	28.9	31.9	1	42.1	4.7	1
SMFJ28A	SMFJ28CA	28	31.1	34.4	1	45.4	4.4	1
SMFJ30A	SMFJ30CA	30	33.3	36.8	1	48.4	4.1	1
SMFJ33A	SMFJ33CA	33	36.7	40.6	1	53.3	3.7	1
SMFJ36A	SMFJ36CA	36	40	44.2	1	58.1	3.4	1
SMFJ40A	SMFJ40CA	39	44.4	49.1	1	64.5	23.1	1
SMFJ43A	SMFJ43CA	42	47.8	52.8	1	69.4	2.9	1
SMFJ45A	SMFJ45CA	45	50	55.3	1	72.7	2.7	1
SMFJ48A	SMFJ48CA	48	53.3	58.9	1	77.4	2.6	1
SMFJ51A	SMFJ51CA	51	56.7	62.7	1	82.4	2.4	1
SMFJ54A	SMFJ54CA	54	60	66.3	1	87.1	2.3	1
SMFJ58A	SMFJ58CA	58	64.4	71.2	1	93.6	2.1	1
SMFJ60A	SMFJ60CA	62	66.7	73.7	1	96.8	2	1
SMFJ64A	SMFJ64CA	66	71.1	78.6	1	103	1.9	1
SMFJ70A	SMFJ70CA	70	77.8	86	1	113	1.7	1
SMFJ75A	SMFJ75CA	75	83.3	92.1	1	121	1.8	1
SMFJ78A	SMFJ78CA	78	86.7	95.8	1	126	1.5	1
SMFJ85A	SMFJ85CA	85	94.4	104	1	137	1.4	1

## Electrical Characteristics (T<sub>a</sub>=25°C unless otherwise specified)

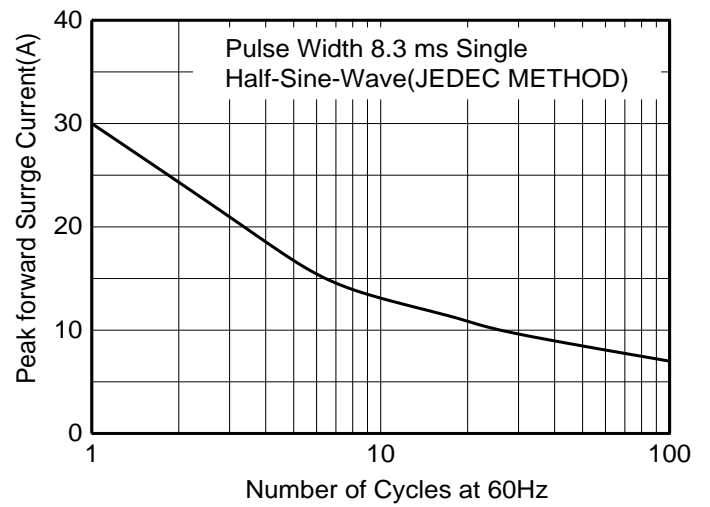
Part Number	Part Number	Reverse Stand-off Voltage VR (V)	Breakdown Voltage VBR (Volts) @ IT		Test Current IT (mA)	Maximum Clamping Voltage VC @ IPP (Volts)	Maximum Peak Pulse Current IPP (A)	Maximum Reverse Leakage IR @ VR (μA)
			MIN	MAX				
SMFJ90A	SMFJ90CA	90	100	111	1	146	1.3	1
SMFJ100A	SMFJ100CA	100	111	123	1	162	1.2	1
SMFJ110A	SMFJ110CA	110	122	135	1	177	1.1	1
SMFJ120A	SMFJ120CA	120	133	147	1	193	1	1
SMFJ130A	SMFJ130CA	130	144	159	1	209	0.9	1
SMFJ150A	SMFJ150CA	150	167	185	1	243	0.8	1
SMFJ160A	SMFJ160CA	160	178	197	1	259	0.7	1
SMFJ170A	SMFJ170CA	170	189	209	1	275	0.7	1
SMFJ180A	SMFJ180CA	180	201	222	1	292	0.7	1
SMFJ190A	SMFJ190CA	190	211	233	1	306	0.6	1
SMFJ200A	SMFJ200CA	200	224	247	1	324	0.6	1
SMFJ210A	SMFJ210CA	210	233	258	1	324	0.6	1
SMFJ220A	SMFJ220CA	220	246	272	1	356	0.5	1
SMFJ250A		250	279	309	1	405	0.5	1
SMFJ300A		300	335	371	1	486	0.4	1
SMFJ350A		350	391	432	1	567	0.3	1
SMFJ400A		400	447	494	1	648	0.3	1
SMFJ440A		440	492	543	1	713	0.3	1

**Typical Characteristics**

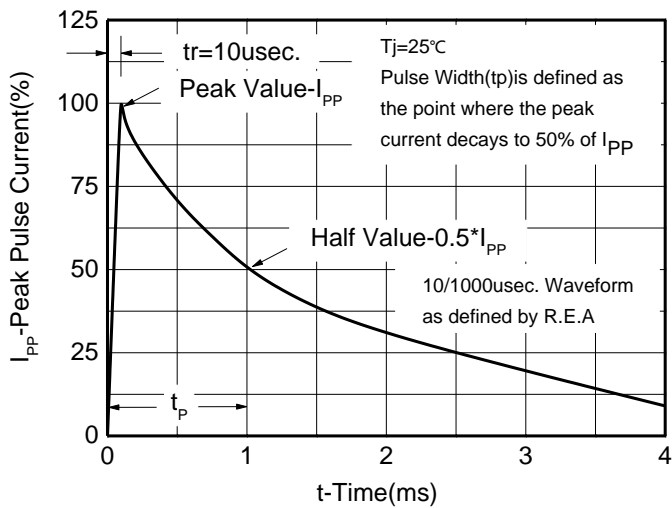
**Pluse Derating Curve**



**Maximum Nor-Repetitive Surge Current**



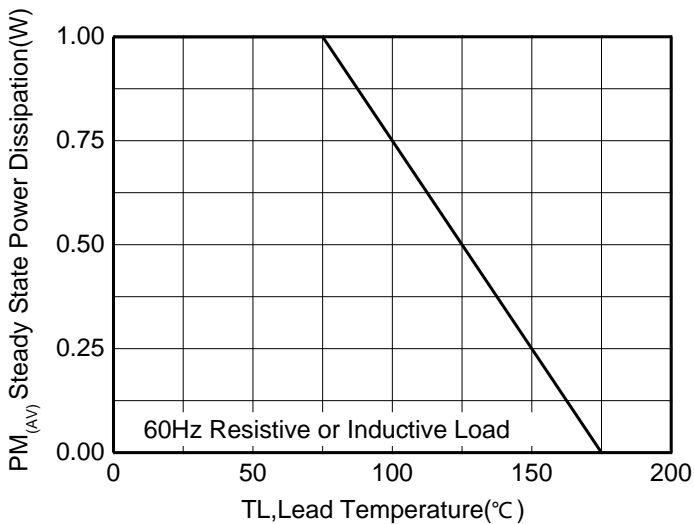
**Pulse Waveform**



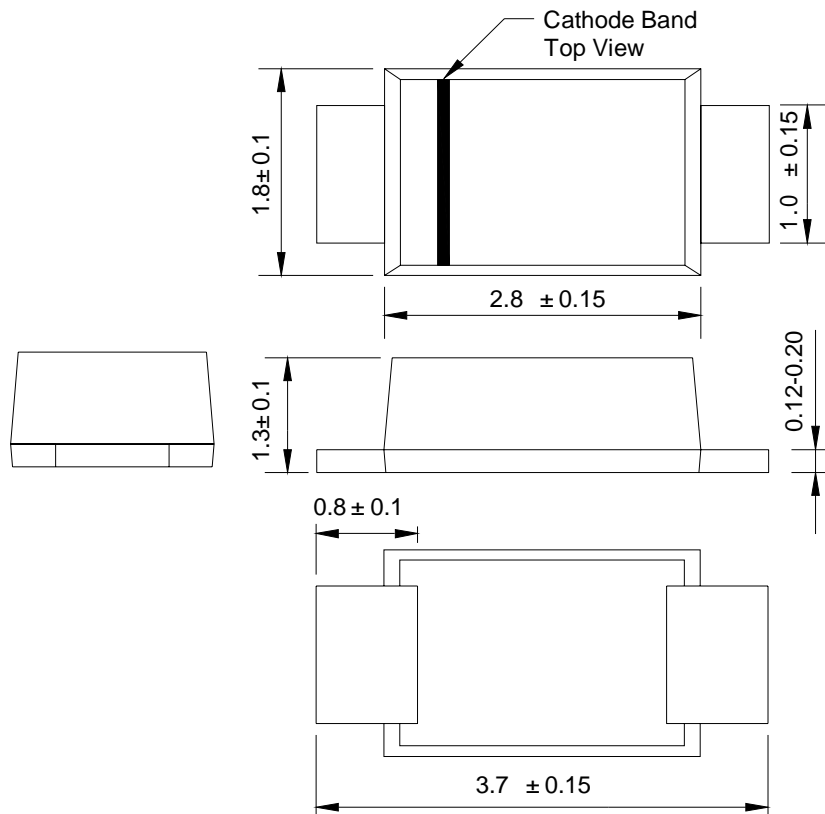
**Peak Pulse Power Rating**



**Steady State Power Dissipation**

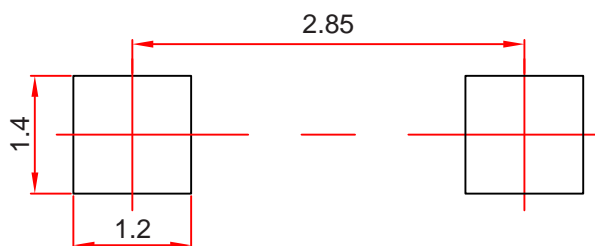


**SOD-123FL Package Outline Dimensions**



Dimensions in millimeters

**SOD-123FL Suggested Pad Layout**



**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$  mm.
3. The pad layout is for reference purposes only.

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)