

Power TVS in SOD-123FL

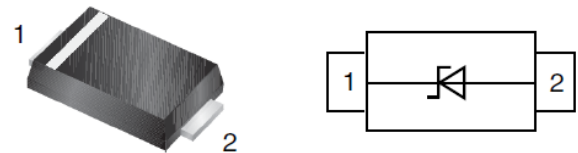
Features

- Glass passivated chip
- 400W peak pulse power(10/1000us)
- High accuracy, 5% tolerance
- Uni and Bidirectional unit
- Low clamping voltage
- Low Leakage current
- Very fast response time
- Meet MSL level1, per J-STD-020, LF maximum peak of 260°C
- JESD22-A114-B ESD Voltage:HBM 15KV
- ESD Voltage :MM 0.4KV
- ESD-immunity acc. IEC 61000-4-2 ±30KV contact ±30KV air
- Base P/N-HM AEC-Q101 qualified

Bidirectional



Unidirectional



Mechanical Data

- **Case:** SOD-123FL (plastic package).
RoHS compliant
- **Molding Compound Flammability Rating:** **FREE**
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
260 °C/10 sec. at terminals



RoHS
COMPLIANT
HALOGEN
FREE

Applications

- Computers
- Telecom system
- Industrial equipments
- Consumer electronic applications
- Other VCC bus and I/O interfaces

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

Parameter	Symbol	Value	Unit
Peak pulse power dissipation with a 10/1000us waveform ⁽¹⁾	P _{PP}	400	W
Maximum peak reverse pulse current a 10/1000us waveform ⁽¹⁾	I _{PP}	See Next Table	A
Peak forward surge current 8.3ms single half sine-wave ⁽²⁾	I _{FSM}	40	A
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	°C

Notes:

- 1.Non-repetitive current pulse,per Fig.5 and detated above TA=25°C per Fig.1
- 2.Measured on 8.3ms single half sine-wave,or equivalent square wave,duty cycle=4 pulses per minute maximum

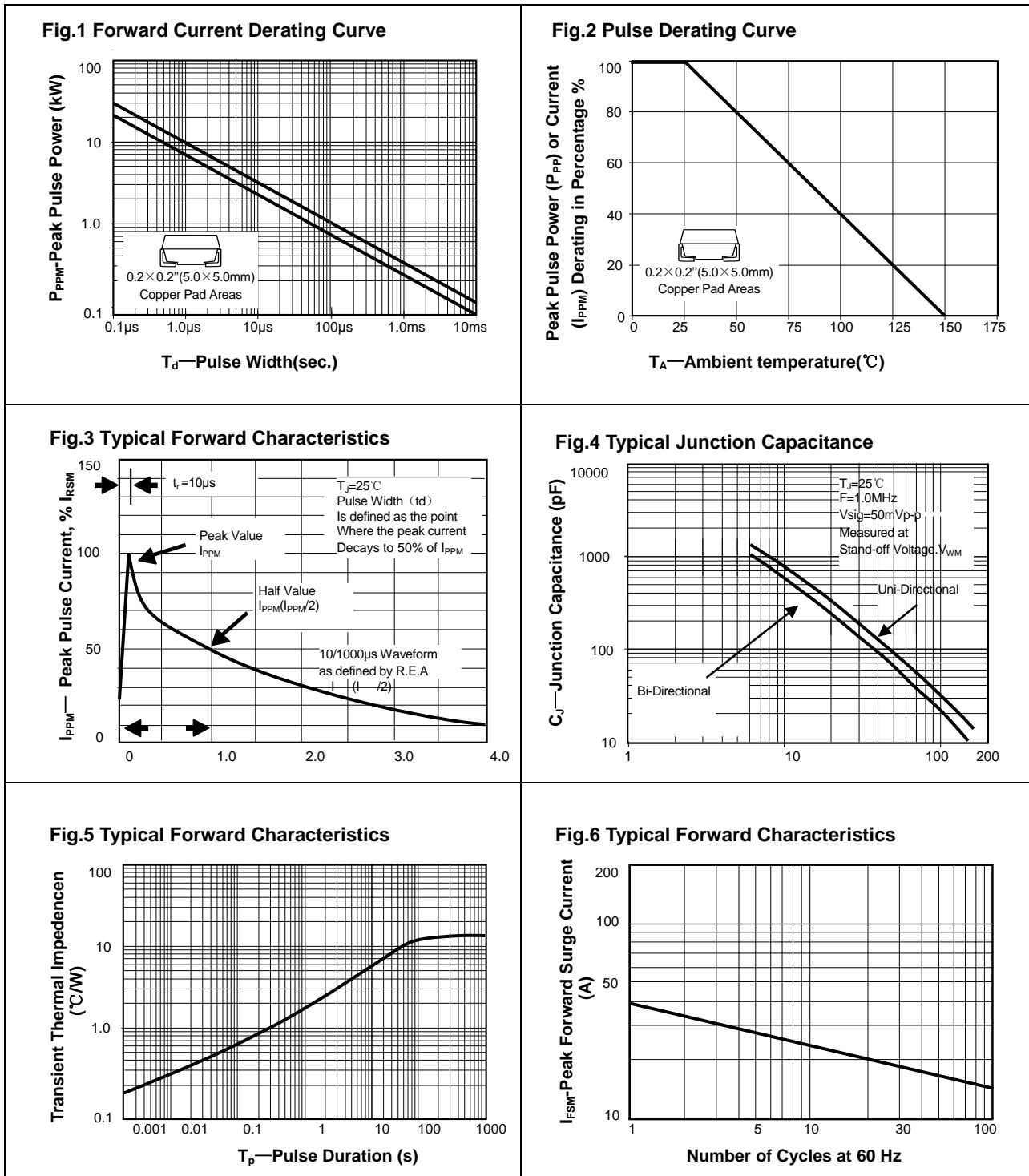
Electrical Characteristics

(T_A = 25 °C unless otherwise specified)

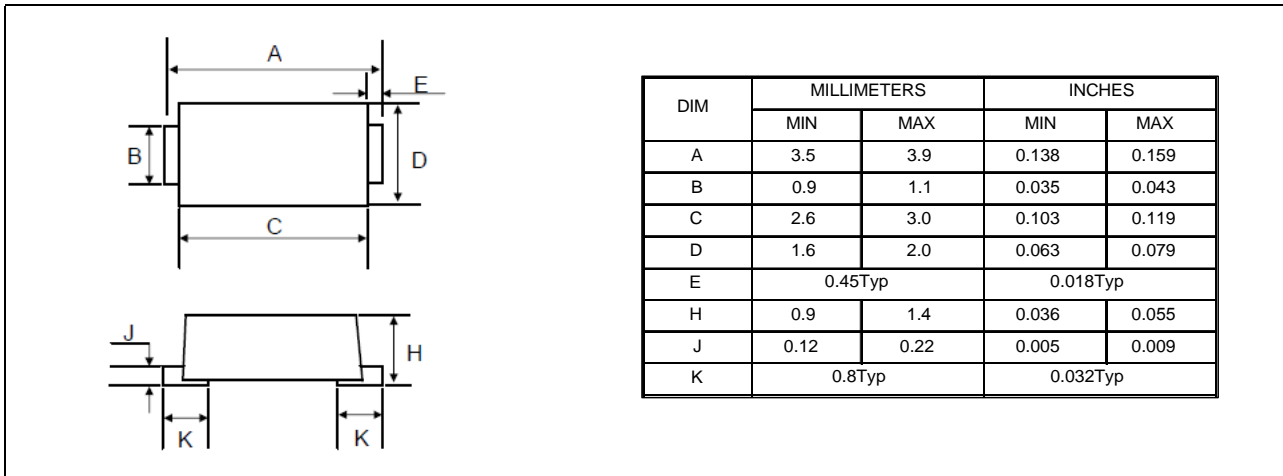
Device type		Device marking code		Breakdown voltage V _(BR) (Volts) ⁽¹⁾		Test current at I _T (mA)	Stand-off voltage V _{WM} (Volts)	Max. reverse leakage at V _{WM} I _D ⁽³⁾ (uA)	Max. peak pulse surge current I _{PPM} ⁽²⁾ (A)	Max. clamping voltage at I _{PPM} V _C (Volts)
				Min	Max					
UNI	BI	UNI	BI	Min	Max					
SOD4J5.0A	SOD4J5.0CA	4AE	4WE	6.40	7.07	10	5.0	800	43.5	9.2
SOD4J6.0A	SOD4J6.0CA	4AG	4WG	6.67	7.37	10	6.0	800	38.8	10.3
SOD4J6.5A	SOD4J6.5CA	4AK	4WK	7.22	7.98	10	6.5	500	35.7	11.2
SOD4J7.0A	SOD4J7.0CA	4AM	4WM	7.78	8.60	10	7.0	200	33.3	12.0
SOD4J7.5A	SOD4J7.5CA	4AP	4WP	8.33	9.21	1.0	7.5	100	31.0	12.9
SOD4J8.0A	SOD4J8.0CA	4AR	4WR	8.89	9.83	1.0	8.0	50	29.4	13.6
SOD4J8.5A	SOD4J8.5CA	4AT	4WT	9.44	10.4	1.0	8.5	10	27.8	14.4
SOD4J9.0A	SOD4J9.0CA	4AV	4WV	10.0	11.1	1.0	9.0	5.0	26.0	15.4
SOD4J10A	SOD4J10CA	4AX	4WX	11.1	12.3	1.0	10	1.0	23.5	17.0
SOD4J11A	SOD4J11CA	4AZ	4WZ	12.2	13.5	1.0	11	1.0	22.0	18.2
SOD4J12A	SOD4J12CA	4BE	4XE	13.3	14.7	1.0	12	1.0	20.1	19.9
SOD4J13A	SOD4J13CA	4BG	4XG	14.4	15.9	1.0	13	1.0	18.6	21.5
SOD4J14A	SOD4J14CA	4BK	4XK	15.6	17.2	1.0	14	1.0	17.2	23.2
SOD4J15A	SOD4J15CA	4BM	4XM	16.7	18.5	1.0	15	1.0	16.4	24.4
SOD4J16A	SOD4J16CA	4BP	4XP	17.8	19.7	1.0	16	1.0	15.4	26.0
SOD4J17A	SOD4J17CA	4BR	4XR	18.9	20.9	1.0	17	1.0	14.5	27.6
SOD4J18A	SOD4J18CA	4BT	4XT	20.0	22.1	1.0	18	1.0	13.7	29.2
SOD4J20A	SOD4J20CA	4BV	4XV	22.2	24.5	1.0	20	1.0	12.3	32.4
SOD4J22A	SOD4J22CA	4BX	4XX	24.4	26.9	1.0	22	1.0	11.3	35.5
SOD4J24A	SOD4J24CA	4BZ	4XZ	26.7	29.5	1.0	24	1.0	10.3	38.9
SOD4J26A	SOD4J26CA	4CE	4YE	28.9	31.9	1.0	26	1.0	9.5	42.1
SOD4J28A	SOD4J28CA	4CG	4YG	31.1	34.4	1.0	28	1.0	8.8	45.4
SOD4J30A	SOD4J30CA	4CK	4YK	33.3	36.8	1.0	30	1.0	8.3	48.4
SOD4J33A	SOD4J33CA	4CM	4YM	36.7	40.6	1.0	33	1.0	7.5	53.3
SOD4J36A	SOD4J36CA	4CP	4YP	40.0	44.2	1.0	36	1.0	6.9	58.1
SOD4J40A	SOD4J40CA	4CR	4YR	44.4	49.1	1.0	40	1.0	6.2	64.5
SOD4J43A	SOD4J43CA	4CT	4YT	47.8	52.8	1.0	43	1.0	5.8	69.4
SOD4J45A	SOD4J45CA	4CV	4YV	50.0	55.3	1.0	45	1.0	5.5	72.7
SOD4J48A	SOD4J48CA	4CX	4YX	53.3	58.9	1.0	48	1.0	5.2	77.4
SOD4J51A	SOD4J51CA	4CZ	4YZ	56.7	62.7	1.0	51	1.0	4.9	82.4
SOD4J54A	SOD4J54CA	4RE	4ZE	60.0	66.3	1.0	54	1.0	4.6	87.1
SOD4J58A	SOD4J58CA	4RG	4ZG	64.4	71.2	1.0	58	1.0	4.3	93.6
SOD4J60A	SOD4J60CA	4RK	4ZK	66.7	73.7	1.0	60	1.0	4.1	96.8
SOD4J64A	SOD4J64CA	4RM	4ZM	71.1	78.6	1.0	64	1.0	3.9	103
SOD4J70A	SOD4J70CA	4RP	4ZP	77.8	86.0	1.0	70	1.0	3.5	113
SOD4J75A	SOD4J75CA	4RR	4ZR	83.3	92.1	1.0	75	1.0	3.3	121
SOD4J78A	SOD4J78CA	4RT	4ZT	86.7	95.8	1.0	78	1.0	3.2	126
SOD4J85A	SOD4J85CA	4RV	4ZV	94.4	104	1.0	85	1.0	2.2	137
SOD4J90A	SOD4J90CA	4RX	4ZX	100	111	1.0	90	1.0	2.1	146

Device type		Device marking code		Breakdown voltage $V_{(BR)}$ (Volts) ⁽¹⁾		Test current at I_T (mA)	Stand-off voltage V_{WM} (Volts)	Max. reverse leakage at V_{WM} $I_D^{(3)}$ (uA)	Max. peak pulse surge current $I_{PPM}^{(2)}$ (A)	Max. clamping voltage at I_{PPM} V_C (Volts)
UNI	BI	UNI	BI	Min.	Max.					
SOD4J100A	SOD4J100CA	4RZ	4ZZ	111	123	1.0	100	1.0	1.9	162
SOD4J110A	SOD4J110CA	4SE	4VE	122	135	1.0	110	1.0	1.7	177
SOD4J120A	SOD4J120CA	4SG	4VG	133	147	1.0	120	1.0	1.6	193
SOD4J130A	SOD4J130CA	4SK	4VK	144	159	1.0	130	1.0	1.4	209
SOD4J150A	SOD4J150CA	4SM	4VM	167	185	1.0	150	1.0	1.2	243
SOD4J160A	SOD4J160CA	4SP	4VP	178	197	1.0	160	1.0	1.2	259
SOD4J170A	SOD4J170CA	4SR	4VR	189	209	1.0	170	1.0	1.09	275
SOD4J180A	SOD4J180CA	4ST	4VT	201	222	1.0	180	1.0	1.4	292
SOD4J200A	SOD4J200CA	4SV	4VV	224	247	1.0	200	1.0	1.2	324

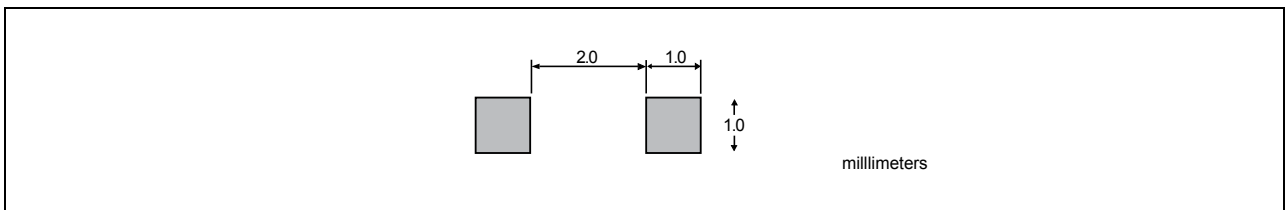
Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)



Package Dimensions



Pad Dimensions



Marking



Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
SOD4J Series	SOD-123FL	Tape and reel	3000pcs / reel	EIA STD RS-481

Revision history

Date	Revision	Changes
23-May-2020	1.0	Initial release

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