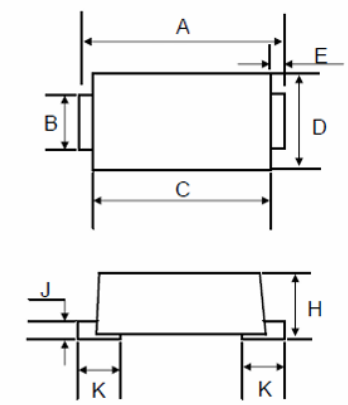
SOD4J5.0A(CA) ~ SOD4J200A(CA)

SMD Transient Voltage Suppressor Diodes

Primary characteristics		
Parameter	**Value**	**Unit**
V_R range nom.	5.0 ~ 200	V
Peak pulse power	400	W

Case dimensions



SOD-123FL

Unit mm	A	B	C	D	E	H	J	K
MIN	3.5	0.9	2.6	1.6	0.45	0.9	0.12	0.8
MAX	3.9	1.1	3.0	2.0	TYP	1.4	0.22	TYP

Features

- Glass passivated chip
- High accuracy, 5% tolerance
- Low clamping voltage
- Low leakage current
- Very fast response time
- Meet MSL lvl1, 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 and air
- Base P/N-HM AEC-Q101 qualified
- Molding compound flammability rating: UL 94 V-0

Applications

- Computers
- Telecommunication systems
- Industrial equipment
- Consumer electronics

Part numbering system

SOD4J	24	A
↓	↓	↓
Series code	Reverse standoff voltage marking (see: Characteristics table)	Unidirectional: A Bidirectional: CA

Absolute maximum ratings and general electrical characteristics (T_a=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation with a 10/1000µs waveform [1]	P_{PPM}	400	W
Peak forward surge current 8.3ms single half-sine wave [2]	I_{FSM}	40	A
Peak reverse pulse current on 10/1000 µs waveform [1]	I_{PPM}	Characteristics table	A
Operating junction temperature and storage temperature range	T_j, T_{stg}	-55 ~ 150	°C

Notes:
1) Non-repetitive current pulse fig.5 and derated 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.

Characteristics table (T_a=25°C unless otherwise specified)

Part number (UNI)	Part number (BI)	Marking		Stand off voltage	Breakdown voltage @I_T		Test current	Maximum clamping voltage @I_{PPM}	Peak pulse surge current	Maximum reverse leakage @V_{WM}
				V_{WM}	V_{BR}					
					MIN	MAX	I_T	V_C	I_{PPM}	I_R
		UNI	**BI**	V	V	V	mA	V	A	μA
SOD4J5.0A	SOD4J5.0CA	4AE	4WE	5.0	6.40	7.07	10	9.2	43.5	800
SOD4J6.0A	SOD4J6.0CA	4AG	4WG	6.0	6.67	7.37	10	10.3	38.8	800
SOD4J6.5A	SOD4J6.5CA	4AK	4WK	6.5	7.22	7.98	10	11.2	35.7	500
SOD4J7.0A	SOD4J7.0CA	4AM	4WM	7.0	7.78	8.60	10	12.0	33.3	200
SOD4J7.5A	SOD4J7.5CA	4AP	4WP	7.5	8.33	9.21	1.0	12.9	31.0	100
SOD4J8.0A	SOD4J8.0CA	4AR	4WR	8.0	8.89	9.83	1.0	13.6	29.4	50
SOD4J8.5A	SOD4J8.5CA	4AT	4WT	8.5	9.44	10.4	1.0	14.4	27.8	10
SOD4J9.0A	SOD4J9.0CA	4AV	4WV	9.0	10.0	11.1	1.0	15.4	26.0	5.0
SOD4J10A	SOD4J10CA	4AX	4WX	10	11.1	12.3	1.0	17.0	23.5	1.0
SOD4J11A	SOD4J11CA	4AZ	4WZ	11	12.2	13.5	1.0	18.2	22.0	1.0
SOD4J12A	SOD4J12CA	4BE	4XE	12	13.3	14.7	1.0	19.9	20.1	1.0
SOD4J13A	SOD4J13CA	4BG	4XG	13	14.4	15.9	1.0	21.5	18.6	1.0
SOD4J14A	SOD4J14CA	4BK	4XK	14	15.6	17.2	1.0	23.2	17.2	1.0
SOD4J15A	SOD4J15CA	4BM	4XM	15	16.7	18.5	1.0	24.4	16.4	1.0
SOD4J16A	SOD4J16CA	4BP	4XP	16	17.8	19.7	1.0	26.0	15.4	1.0
SOD4J17A	SOD4J17CA	4BR	4XR	17	18.9	20.9	1.0	27.6	14.5	1.0
SOD4J18A	SOD4J18CA	4BT	4XT	18	20.0	22.1	1.0	29.2	13.7	1.0
SOD4J20A	SOD4J20CA	4BV	4XV	20	22.2	24.5	1.0	32.4	12.3	1.0
SOD4J22A	SOD4J22CA	4BX	4XX	22	24.4	26.9	1.0	35.5	11.3	1.0
SOD4J24A	SOD4J24CA	4BZ	4XZ	24	26.7	29.5	1.0	38.9	10.3	1.0
SOD4J26A	SOD4J26CA	4CE	4YE	26	28.9	31.9	1.0	42.1	9.5	1.0
SOD4J28A	SOD4J28CA	4CG	4YG	28	31.1	34.4	1.0	45.4	8.8	1.0
SOD4J30A	SOD4J30CA	4CK	4YK	30	33.3	36.8	1.0	48.4	8.3	1.0
SOD4J33A	SOD4J33CA	4CM	4YM	33	36.7	40.6	1.0	53.3	7.5	1.0
SOD4J36A	SOD4J36CA	4CP	4YP	36	40.0	44.2	1.0	58.1	6.9	1.0
SOD4J40A	SOD4J40CA	4CR	4YR	40	44.4	49.1	1.0	64.5	6.2	1.0
SOD4J43A	SOD4J43CA	4CT	4YT	43	47.8	52.8	1.0	69.4	5.8	1.0
SOD4J45A	SOD4J45CA	4CV	4YV	45	50.0	55.3	1.0	72.7	5.5	1.0
SOD4J48A	SOD4J48CA	4CX	4YX	48	53.3	58.9	1.0	77.4	5.2	1.0
SOD4J51A	SOD4J51CA	4CZ	4YZ	51	56.7	62.7	1.0	82.4	4.9	1.0
SOD4J54A	SOD4J54CA	4RE	4ZE	54	60.0	66.3	1.0	87.1	4.6	1.0
SOD4J58A	SOD4J58CA	4RG	4ZG	58	64.4	71.2	1.0	93.6	4.3	1.0
SOD4J60A	SOD4J60CA	4RK	4ZK	60	66.7	73.7	1.0	96.8	4.1	1.0
SOD4J64A	SOD4J64CA	4RM	4ZM	64	71.1	78.6	1.0	103	3.9	1.0
SOD4J70A	SOD4J70CA	4RP	4ZP	70	77.8	86.0	1.0	113	3.5	1.0
SOD4J75A	SOD4J75CA	4RR	4ZR	75	83.3	92.1	1.0	121	3.3	1.0
SOD4J78A	SOD4J78CA	4RT	4ZT	78	86.7	95.8	1.0	126	3.2	1.0
SOD4J85A	SOD4J85CA	4RV	4ZV	85	94.4	104	1.0	137	2.2	1.0
SOD4J90A	SOD4J90CA	4RX	4ZX	90	100	111	1.0	146	2.1	1.0
SOD4J100A	SOD4J100CA	4RZ	4ZZ	100	111	123	1.0	162	1.9	1.0
SOD4J110A	SOD4J110CA	4SE	4VE	110	122	135	1.0	177	1.7	1.0
SOD4J120A	SOD4J120CA	4SG	4VG	120	133	147	1.0	193	1.6	1.0
SOD4J130A	SOD4J130CA	4SK	4VK	130	144	159	1.0	209	1.4	1.0
SOD4J150A	SOD4J150CA	4SM	4VM	150	167	185	1.0	243	1.2	1.0
SOD4J160A	SOD4J160CA	4SP	4VP	160	178	197	1.0	259	1.2	1.0
SOD4J170A	SOD4J170CA	4SR	4VR	170	189	209	1.0	275	1.09	1.0
SOD4J180A	SOD4J180CA	4ST	4VT	180	201	222	1.0	292	1.4	1.0
SOD4J200A	SOD4J200CA	4SV	4VV	200	224	247	1.0	324	1.2	1.0

Typical characteristics (T_a=25°C unless otherwise specified)

Fig.1 Forward current derating curve

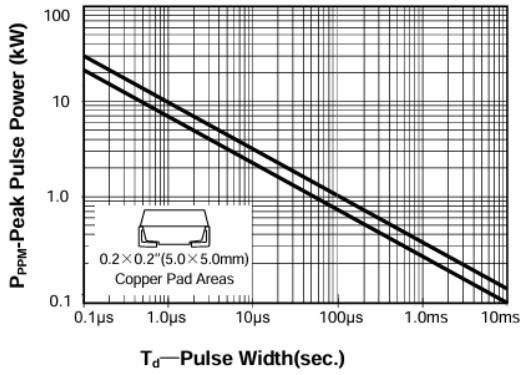


Fig.2 Pulse derating curve

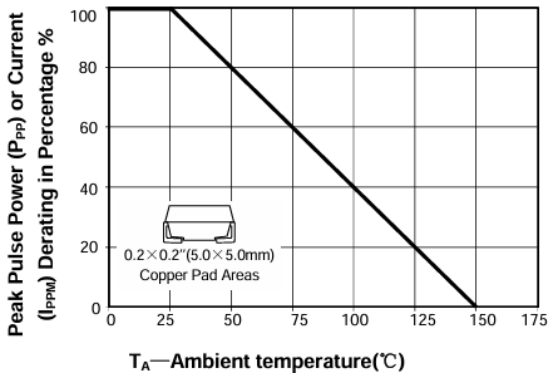


Fig.3 Typical forward characteristics

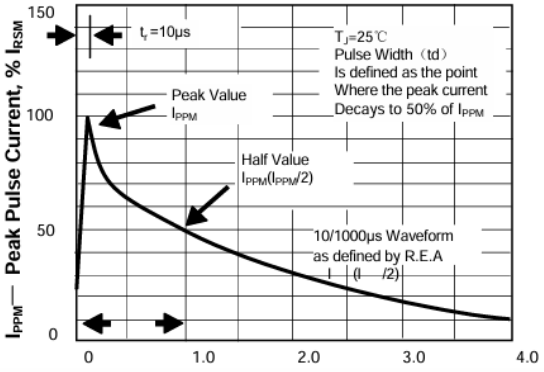


Fig.4 Typical junction capacitance

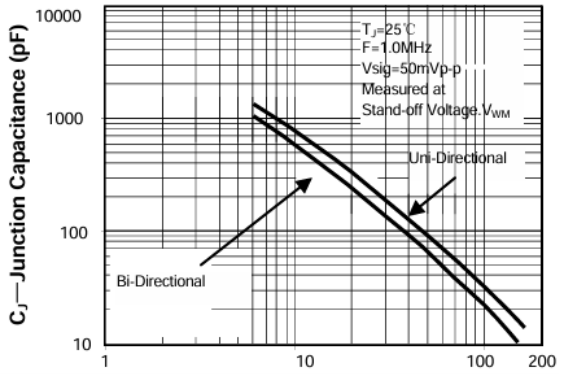


Fig.5 Transient thermal impedance

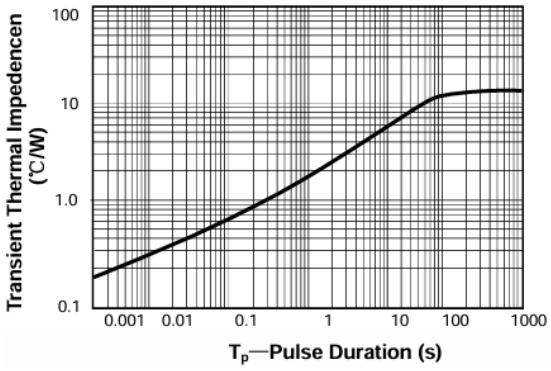
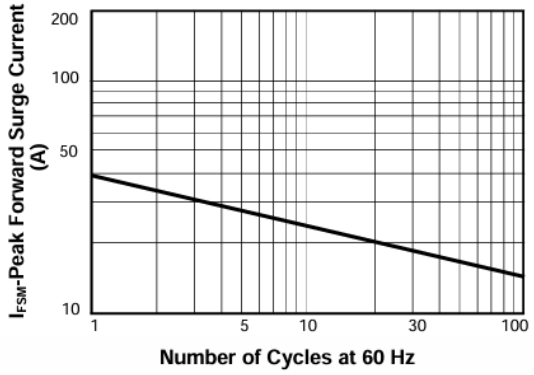
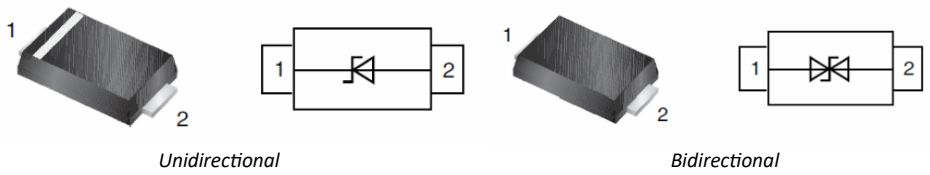


Fig.6 Typical forward characteristics

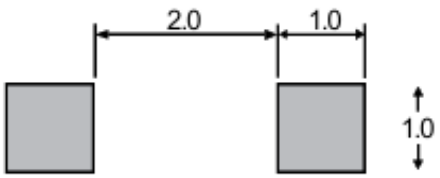


Pin configuration



Unidirectional *Bidirectional*

Suggested soldering pad layout



Ordering information

Part Number	Package	Shipping Quantity	Dimensions
SOD4J5.0A(CA) ~ SOD4J200A(CA)	SOD-123FL	**3 000 pcs / reel**	---

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