

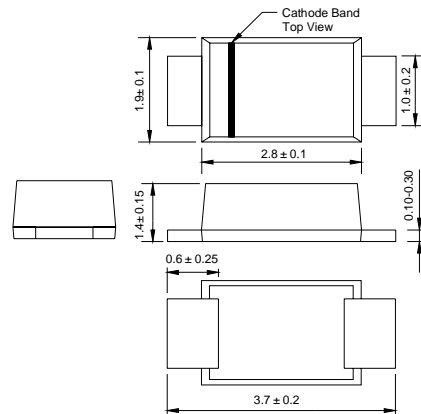
Features

- Glass Passivated Die Construction
- 400W Peak Pulse Power Dissipation
- 5.0V-100V Standoff Voltage
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability

Mechanical Data

- Case: SOD-123FL Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Marking:
Unidirectional – Device Code and Cathode Band
Bidirectional – Device Code Only
- Weight: 0.064 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version**

SOD - 123FL



Dimensions in millimeters

"C" Suffix Designates Bi-directional Devices
 "A" Suffix Designates 5% Tolerance Devices
 No Suffix Designates 10% Tolerance Devices

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation at $T_A = 25^\circ\text{C}$ (Note 1, 2, 5) Figure 3	PPPM	400	W
Peak Forward Surge Current (Note 3)	IFSM	40	A
Peak Pulse Current on 10/1000 μS Waveform (Note 1) Figure 1	IPPM	See Table 1	A
Steady State Power Dissipation (Note 2, 4)	PM(AV)	5.0	W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150	$^\circ\text{C}$

- Note: 1. Non-repetitive current pulse, per Figure 1 and derated above $T_A = 25^\circ\text{C}$ per Figure 4.
 2. Mounted on 40mm² copper pad.
 3. 8.3ms single half sine-wave duty cycle = 4 pulses per minutes maximum.
 4. Lead temperature at $75^\circ\text{C} = T_L$.
 5. Peak pulse power waveform is 10/1000 μS .

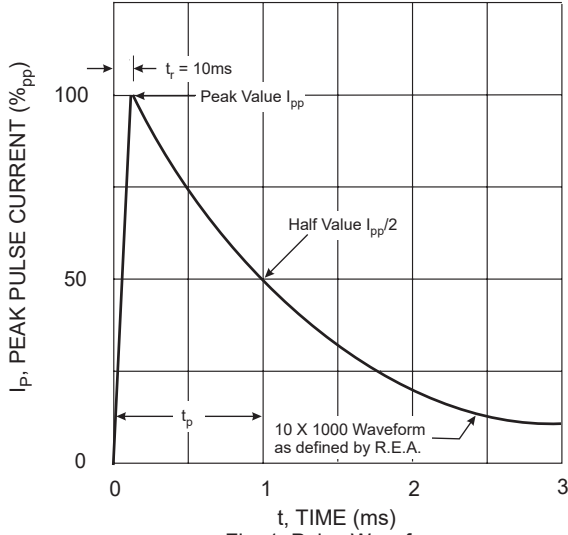


Fig. 1 Pulse Waveform

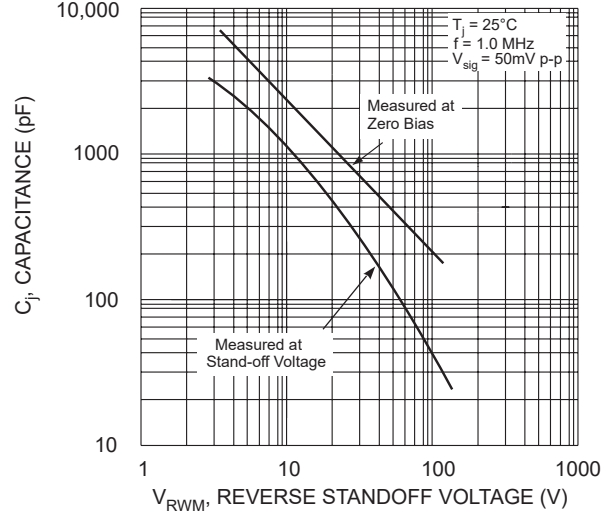


Fig. 2 Typical Junction Capacitance

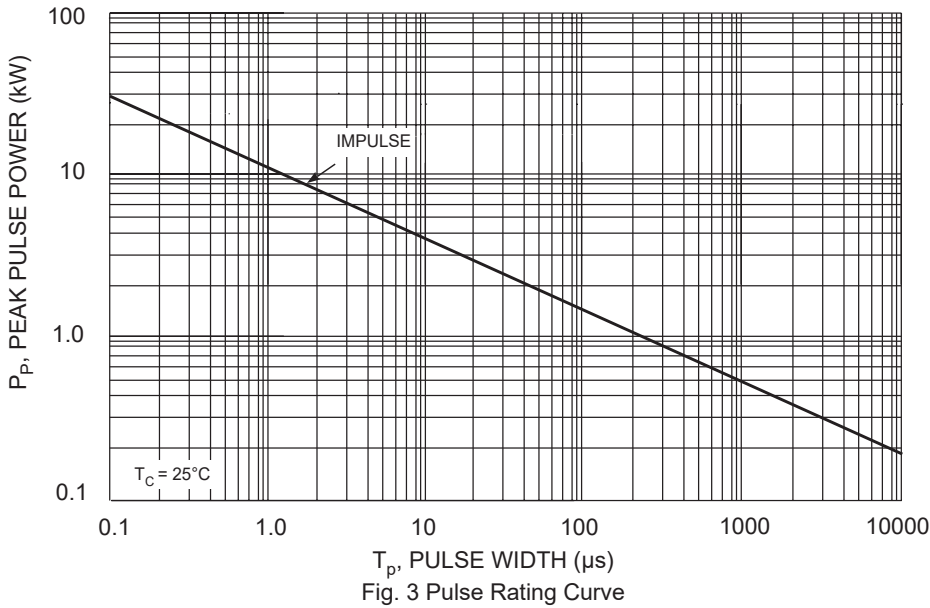


Fig. 3 Pulse Rating Curve

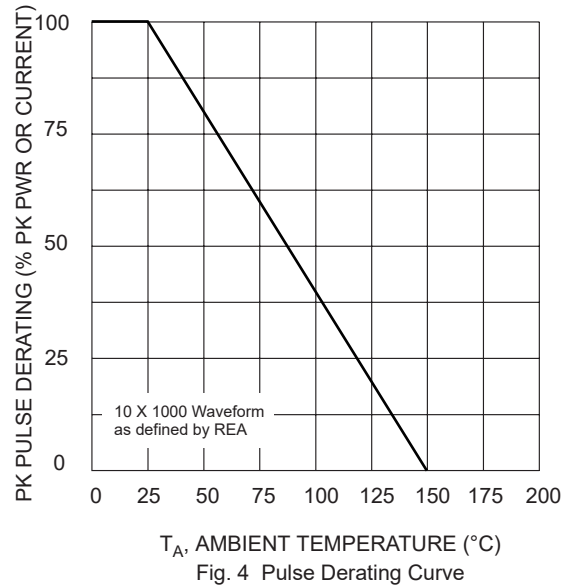


Fig. 4 Pulse Derating Curve

Electrical Specification @ Ta=25°C

Type Number		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I _T	Breakdown Voltage Max. @ I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RMW}
(Uni)	(Bi)	V _{RMW} (V)	V _{BR MIN} (V)	V _{BR MAX} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
P4FL5.0A	P4FL5.0CA	5.0	6.40	7.07	10.0	9.2	43.5	100.0
P4FL6.0A	P4FL6.0CA	6.0	6.67	7.37	10.0	10.3	38.8	100.0
P4FL6.5A	P4FL6.5CA	6.5	7.22	7.98	10.0	11.2	35.7	50.0
P4FL7.0A	P4FL7.0CA	7.0	7.78	8.60	10.0	12.0	33.3	30.0
P4FL7.5A	P4FL7.5CA	7.5	8.33	9.21	1.0	12.9	31.0	30.0
P4FL8.0A	P4FL8.0CA	8.0	8.89	9.83	1.0	13.6	29.4	10.0
P4FL8.5A	P4FL8.5CA	8.5	9.44	10.4	1.0	14.4	27.8	5.0
P4FL9.0A	P4FL9.0CA	9.0	10.0	11.1	1.0	15.4	26.0	3.0
P4FL10A	P4FL10CA	10	11.1	12.3	1.0	17.0	23.5	1.0
P4FL11A	P4FL11CA	11	12.2	13.5	1.0	18.2	22.0	1.0
P4FL12A	P4FL12CA	12	13.3	14.7	1.0	19.9	20.1	1.0
P4FL13A	P4FL13CA	13	14.4	15.9	1.0	21.5	18.6	1.0
P4FL14A	P4FL14CA	14	15.6	17.2	1.0	23.2	17.2	1.0
P4FL15A	P4FL15CA	15	16.7	18.5	1.0	24.4	16.4	1.0
P4FL16A	P4FL16CA	16	17.8	19.7	1.0	26.0	15.4	1.0
P4FL17A	P4FL17CA	17	18.9	20.9	1.0	27.6	14.5	1.0
P4FL18A	P4FL18CA	18	20.0	22.1	1.0	29.2	13.7	1.0
P4FL20A	P4FL20CA	20	22.2	24.5	1.0	32.4	12.3	1.0
P4FL22A	P4FL22CA	22	24.4	26.9	1.0	35.5	11.3	1.0
P4FL24A	P4FL24CA	24	26.7	29.5	1.0	38.9	10.3	1.0
P4FL26A	P4FL26CA	26	28.9	31.9	1.0	42.1	9.5	1.0
P4FL28A	P4FL28CA	28	31.1	34.4	1.0	45.4	8.8	1.0
P4FL30A	P4FL30CA	30	33.3	36.8	1.0	48.4	8.3	1.0
P4FL33A	P4FL33CA	33	36.7	40.6	1.0	53.3	7.5	1.0
P4FL36A	P4FL36CA	36	40.0	44.2	1.0	58.1	6.9	1.0
P4FL40A	P4FL40CA	40	44.4	49.1	1.0	64.5	6.2	1.0
P4FL43A	P4FL43CA	43	47.8	52.8	1.0	69.4	5.8	1.0
P4FL45A	P4FL45CA	45	50.0	55.3	1.0	72.7	5.5	1.0
P4FL48A	P4FL48CA	48	53.3	58.9	1.0	77.4	5.2	1.0
P4FL51A	P4FL51CA	51	56.7	62.7	1.0	82.4	4.9	1.0
P4FL54A	P4FL54CA	54	60.0	66.3	1.0	87.1	4.6	1.0
P4FL58A	P4FL58CA	58	64.4	71.2	1.0	93.6	4.3	1.0
P4FL60A	P4FL60CA	60	66.7	73.7	1.0	96.8	4.1	1.0
P4FL64A	P4FL64CA	64	71.1	78.6	1.0	103	3.9	1.0
P4FL70A	P4FL70CA	70	77.8	86.0	1.0	113	3.5	1.0
P4FL75A	P4FL75CA	75	83.0	92.1	1.0	121	3.3	1.0
P4FL78A	P4FL78CA	78	86.0	95.8	1.0	126	3.2	1.0
P4FL85A	P4FL85CA	85	94.4	104.0	1.0	137	2.9	1.0
P4FL90A	P4FL90CA	90	100	111.0	1.0	146	2.7	1.0
P4FL100A	P4FL100CA	100	111	123.0	1.0	162	2.5	1.0

※ For Bi-directional type having VRWM of 10 Volts and less, the IR limit is double

- Notes:
1. Suffix C denotes Bi-directional device.
 2. V_{BR} measured with I_T current pulse = 300μs
 3. For Bi-Directional devices having VRWM of 10V and under, the I_R is doubled.