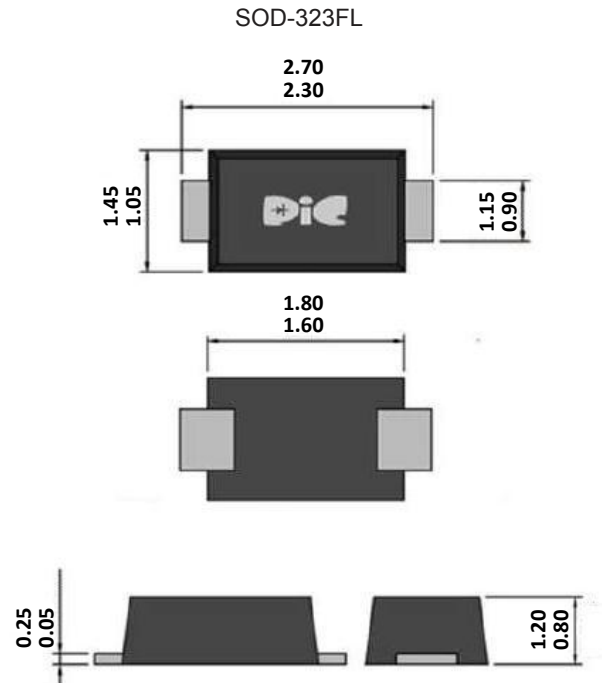


Features

- Glass passivated chip
- 200W peak pulse power capability with a 10/1000 μ s waveform, repetitive rate (duty cycle) : 0.01%.
- Low leakage
- Uni polar unit
- Excellent clamping capability
- Very fast response time
- RoHS compliant

Mechanical Data

- Epoxy: UL94V-0 rated flame retardant
- Case: Epoxy, Molded
- Terminals: Solder plated solderable per MIL-STD-750 Method 2026
- Polarity: Color band denotes cathode end except Bipolar



Maximum Ratings & Electrical Characteristic ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	UNITS
Peak Power Dissipation with a 10/1000 μ s waveform (Notes 1)	P_{PP}	200	Watts
Peak Power Dissipation with a 8/20 μ s waveform (Notes 1)	P_{PP}	1000	Watts
Peak Forward Surge Current , 8.3 ms single half sine-wave unidirectional only (Notes 2)	I_{FSM}	20	Amps
Peak Pulse Current with a 10/1000 μ s waveform (Notes 1)	I_{PP}	See Next Table	Amps
Power dissipation on infinite heatsink at $T_L = 75^\circ\text{C}$	P_D	1.0	Watts
Max. instantaneous forward voltage at 0.2A for unidirectional only	V_F	1.3	Volts
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^\circ\text{C}$

Notes :

- (1) Non-repetitive current pulse, per Fig.5 and derated above $T_A = 25^\circ\text{C}$ per Fig.1.
- (2) Measured on 8.3ms single half sine-wave, or equivalent square wave, duty cycle = 4 pulses per minutes maximum.

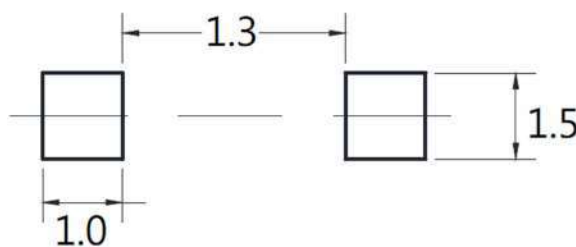
Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Part Number	Breakdown Voltage			Max.Reverse Leakage	Working Peak Reverse Voltage	Max.Reverse Surge Current	Max. Clamping Voltage
	$V_{BR} @ I_T$			$I_R @ V_{RWM}$	V_{RWM}	I_{PP}	$V_C @ I_{PP}$
	Min.	Max.	I_T				
UNI	V	V	mA	μA	V	A	V
SMF2L11A	12.2	13.5	1	2.5	11	10.99	18.2
SMF2L12A	13.3	14.7	1	2.5	12	10.05	19.9
SMF2L13A	14.4	15.9	1	1	13	9.3	21.5
SMF2L14A	15.6	17.2	1	1	14	8.62	23.2
SMF2L15A	16.7	18.5	1	1	15	8.2	24.4
SMF2L16A	17.8	19.7	1	1	16	7.69	26
SMF2L17A	18.9	20.9	1	1	17	7.25	27.6
SMF2L18A	20	22.1	1	1	18	6.85	29.2
SMF2L19A	21.1	23.3	1	1	19	6.54	30.6
SMF2L20A	22.2	24.5	1	1	20	6.17	32.4
SMF2L22A	24.4	26.9	1	1	22	5.63	35.5
SMF2L24A	26.7	29.5	1	1	24	5.14	38.9
SMF2L26A	28.9	31.9	1	1	26	4.75	42.1
SMF2L28A	31.1	34.4	1	1	28	4.41	45.4
SMF2L30A	33.3	36.8	1	1	30	4.13	48.4
SMF2L33A	36.7	40.6	1	1	33	3.75	53.3
SMF2L36A	40	44.2	1	1	36	3.44	58.1
SMF2L40A	44.4	49.1	1	1	40	3.1	64.5
SMF2L43A	47.8	52.8	1	1	43	2.88	69.4
SMF2L45A	50	55.3	1	1	45	2.75	72.7
SMF2L48A	53.3	58.9	1	1	48	2.58	77.4

Notes :

(1) The available parts are "A" type only, the parts without A (V_{BR} is $\pm 10\%$) is not available.

Suggested Pad Layout



Unit: millimeters

Rating & Characteristic Curves

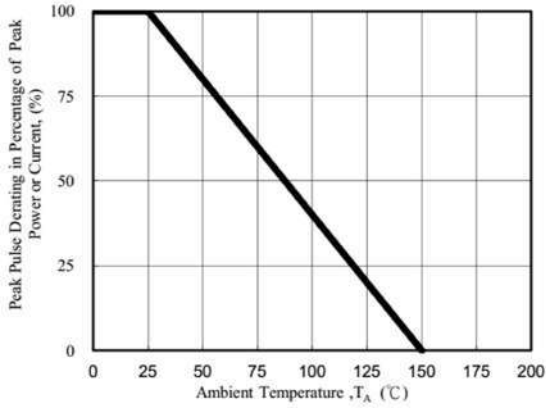


Fig. 1 Pulse Derating Curve

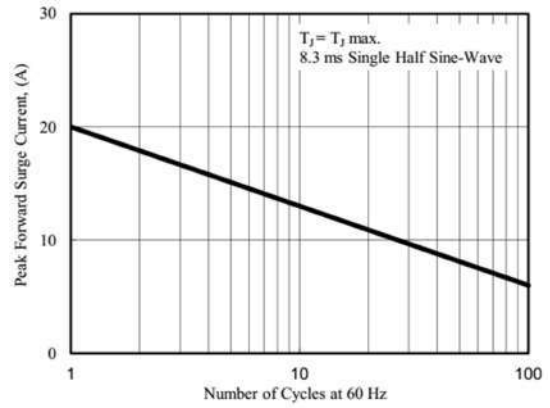


Fig. 2 Max. Non-Repetitive Surge Current

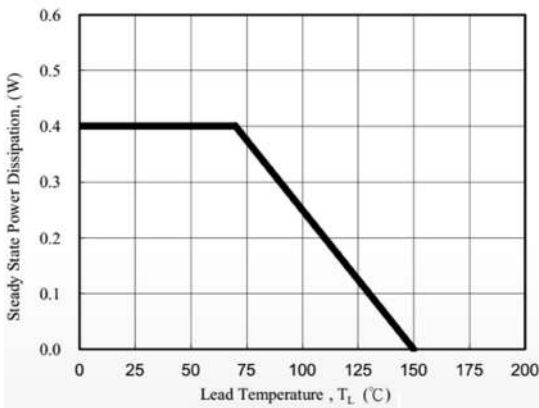


Fig. 3 Steady State Power Derating Curve

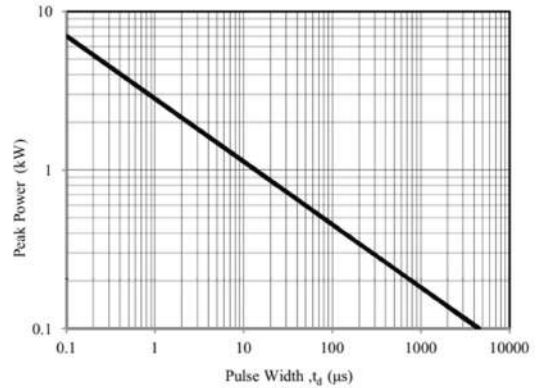


Fig. 4 Peak Pulse Power Rating Curve

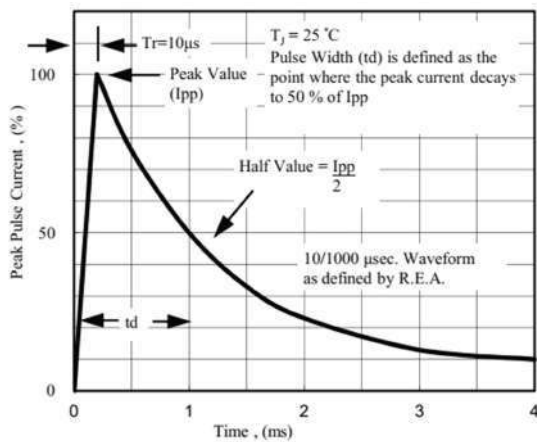


Fig. 5 Pulse Waveform

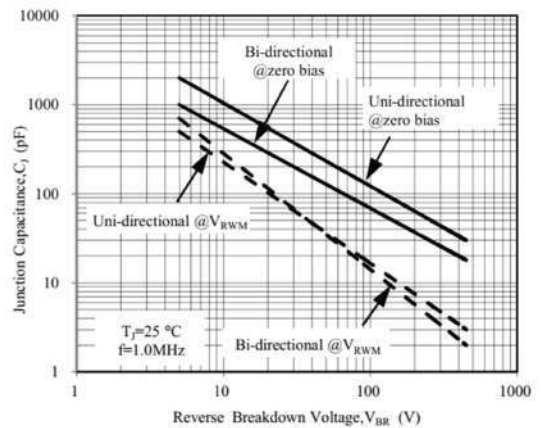
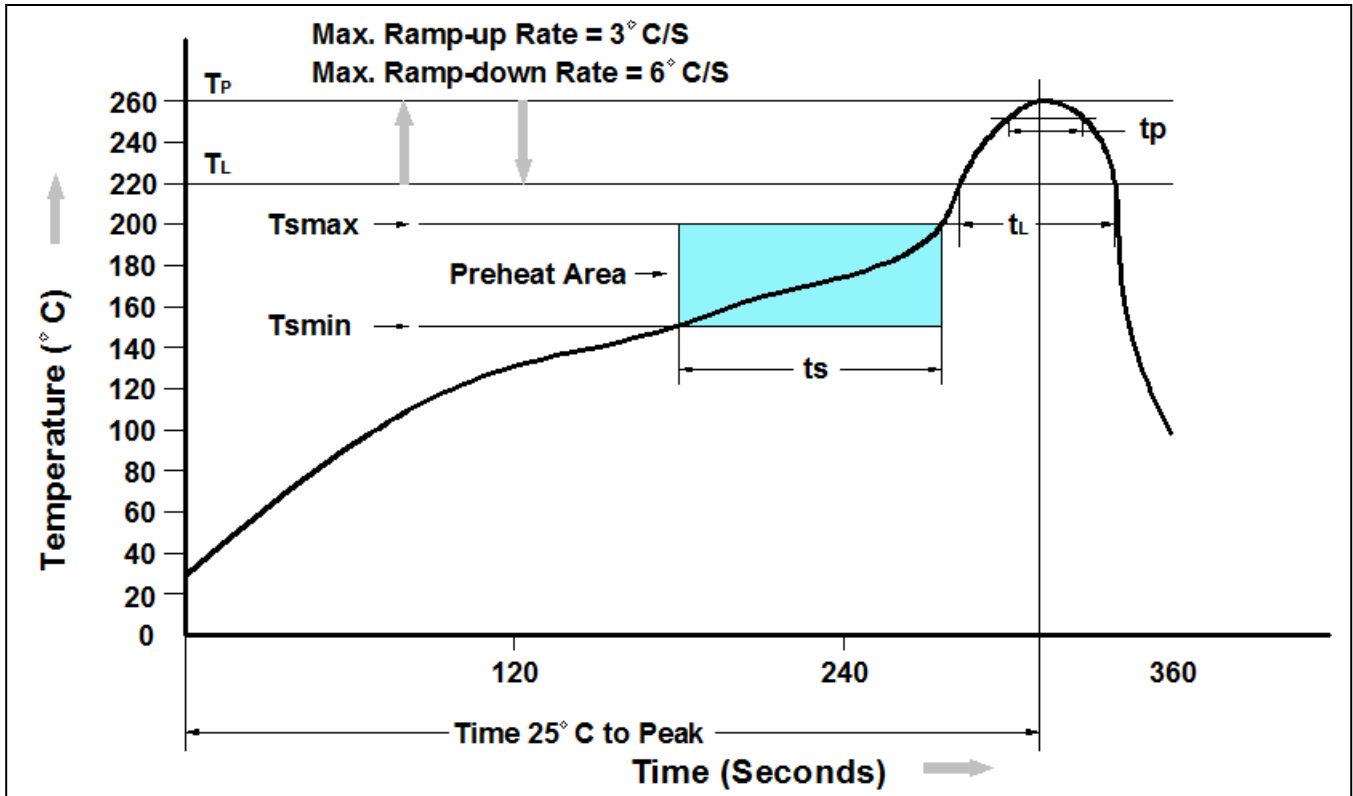


Fig. 6 Typical Junction Capacitance

Recommend IR Reflow Soldering Thermal Profile



Profile Feature	Pb-Free Assembly Profile
Temperature Min. (T _{smin})	150°C
Temperature Max. (T _{smax})	200°C
Time (t _s) from (T _{smin} to T _{smax})	60-120 seconds
Average Ramp-up Rate (t _L to t _P)	3°C/second max.
Liquidous Temperature (T _L)	217°C
Time (t _L) Maintained Above (T _L)	60 – 150 seconds
Peak Temperature	260°C +0°C / -5°C
Time (t _P) within 5°C of actual Peak Temperature	30 seconds
Ramp-down Rate (T _P to T _L)	6°C/second max
Time 25°C to Peak Temperature	8 minutes max.

Ordering Information

Part Number	Description	Quantity
SMF2L11A ~ SMF2L48A	SOD-323FL Reel	3000 pcs

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