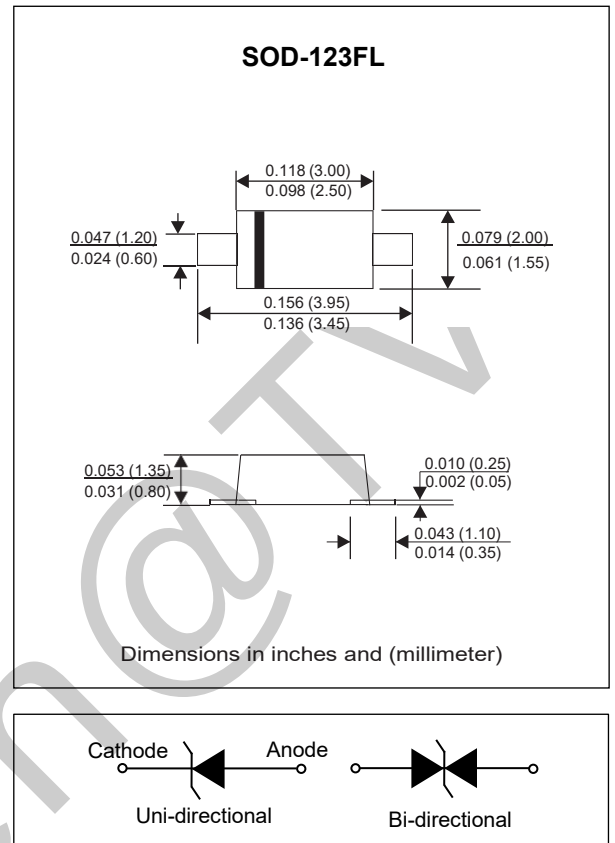


Features

- 200W peak pulse power capability with a 10/1000μs waveform, repetitive rate(duty cycle):0.01%
- Uni and Bidirectional unit
- Low leakage
- Very fast response time
- Excellent clamping capability
- RoHS compliant

Mechanical Data

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



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

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000μs waveform ⁽¹⁾	P_{PP}	200	W
Peak pulse current with a 10/1000μs waveform ⁽¹⁾	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at $T_L = 75^{\circ}\text{C}$	P_D	0.4	W
Peak forward surge current, 8.3 ms single half sine-wave unidirectional only ⁽²⁾	I_{FSM}	20	A
Maximum instantaneous forward voltage at 25 A for unidirectional only	V_F	3.5	V
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to +150	$^{\circ}\text{C}$

Note:

(1)Non-repetitive current pulse per Fig.5 and derated above $T_A= 25^{\circ}\text{C}$ per Fig.1

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

Ratings and Characteristics Curves($T = 25^{\circ}\text{C}$ unless otherwise noted)

Fig.1-Pulse Derating Curve

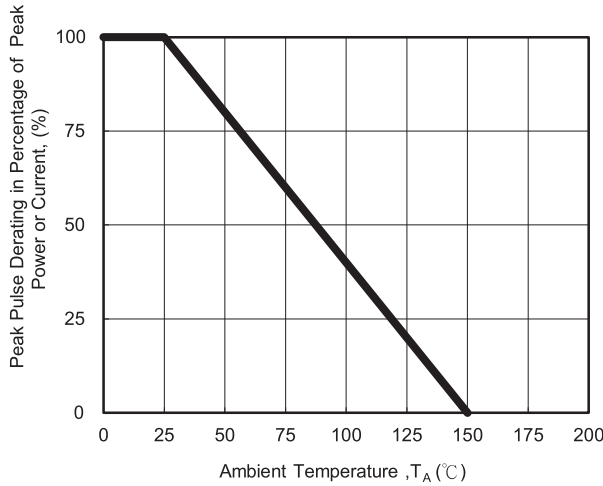


Fig.2-Maximum Non-Repetitive Surge Current

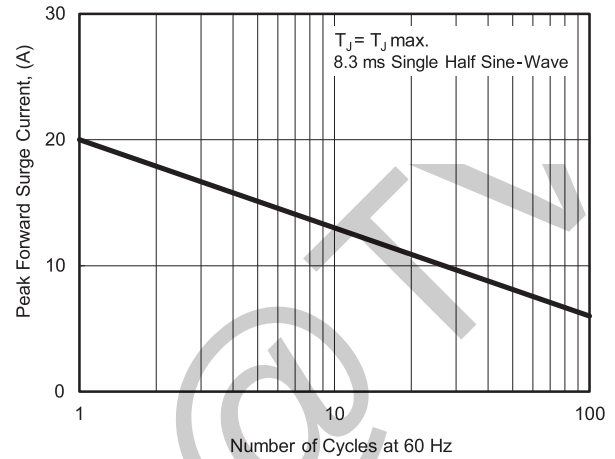


Fig.3-Steady State Power Derating Curve

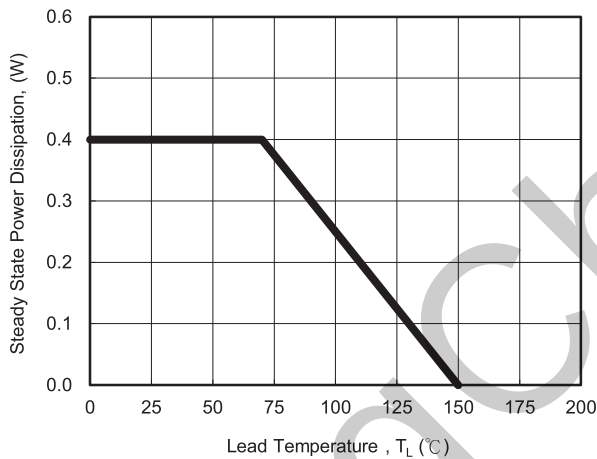


Fig.4-Peak Pulse Power Rating Curve

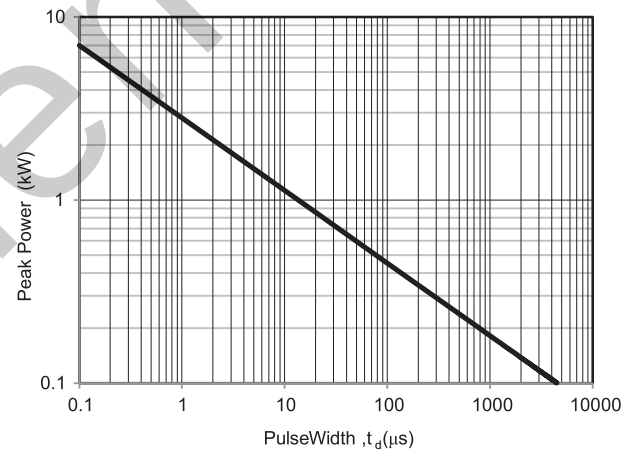


Fig.5-Pulse Waveform

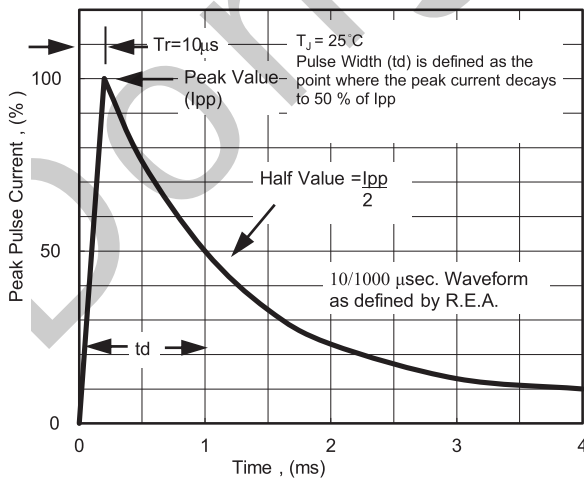
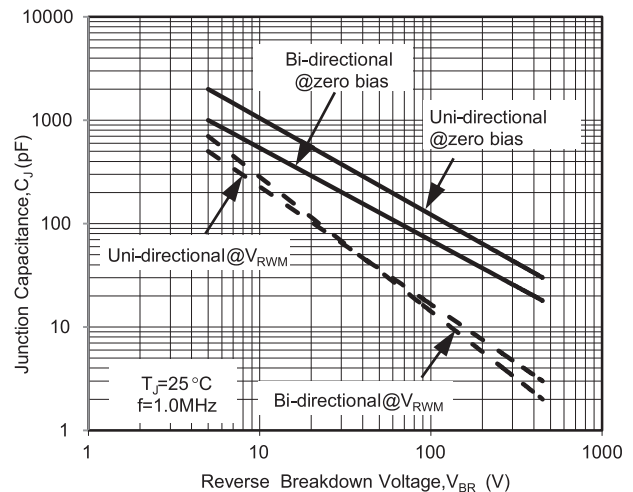


Fig.6-Typical Junction Capacitance



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

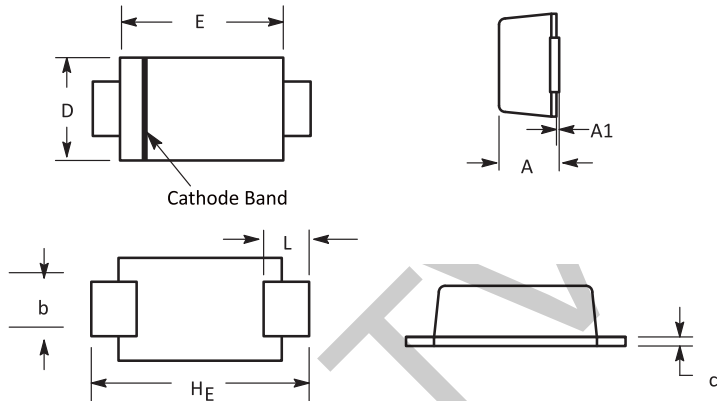
PART NUMBER		REVERSE STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE VBR(V)MAX.@IT		TEST CURRENT	REVERSE LEAKAGE @VRWM	PEAK PULSE CURRENT	MAXIMUM CLAMPING VOLTAGE @Ipp
Bidirection	Unidirectiona	VRWM (V)	VBR Min.(V)	VBR Max.(V)	IT (mA)	IR(μA)	Ipp(A)	Vc (v)
SMF3.3CA	SMF3.3A	3.3	4.1	4.75	10	500	27.40	7.3
SMF5.0CA	SMF5.0A	5.0	6.4	7.25	10	500	21.74	9.2
SMF6.0CA	SMF6.0A	6.0	6.67	7.67	10	500	19.42	10.3
SMF6.5CA	SMF 6.5A	6.5	7.22	8.30	10	300	17.86	11.2
SMF7.0CA	SMF7.0 A	7.0	7.78	8.95	10	100	16.67	12.0
SMF7.5CA	SMF7.5A	7.5	8.33	9.58	1	50	15.50	12.9
SMF8.0CA	SMF8.0A	8.0	8.89	10.23	1	50	14.71	13.6
SMF8.5CA	SMF8.5 A	8.5	9.44	10.82	1	10	13.89	14.4
SMF9.0CA	SMF9.0 A	9.0	10.00	11.50	1	1	12.99	15.4
SMF10CA	SMF10A	10.0	11.1	12.30	1	1	11.76	17.0
SMF11CA	SMF11A	11.0	12.20	14.00	1	1	10.99	18.2
SMF12CA	SMF12A	12.0	13.30	14.70	1	1	10.05	19.9
SMF13CA	SMF13A	13.0	14.40	16.50	1	1	9.30	21.5
SMF14CA	SMF14A	14.0	15.60	17.20	1	1	8.62	23.2
SMF15CA	SMF15A	15.0	16.70	19.20	1	1	8.20	24.4
SMF16CA	SMF16A	16.0	17.80	19.70	1	1	7.69	26.0
SMF17CA	SMF17A	17.0	18.90	21.70	1	1	7.25	27.6
SMF18CA	SMF18A	18.0	20.00	23.30	1	1	6.85	29.2
SMF20CA	SMF20A	20.0	22.20	25.50	1	1	6.17	32.4
SMF22CA	SMF22A	22.0	24.40	28.00	1	1	5.63	35.5
SMF24CA	SMF24A	24.0	26.70	30.70	1	1	5.14	38.9
SMF26CA	SMF26A	26.0	28.90	33.20	1	1	4.75	42.1
SMF28CA	SMF28A	28.0	31.10	35.80	1	1	4.41	45.4
SMF30CA	SMF30A	30.0	33.30	38.30	1	1	4.13	48.4
SMF33CA	SMF33A	33.0	36.70	42.20	1	1	3.75	53.3
SMF36CA	SMF36A	36.0	40.00	46.00	1	1	3.44	58.1
SMF40CA	SMF40A	40.0	44.40	51.10	1	1	3.10	64.5
SMF43CA	SMF43A	43.0	47.8	52.8	1	1	2.88	69.4
SMF45CA	SMF45A	45.0	50.00	57.50	1	1	2.75	72.7
SMF48CA	SMF48A	48.0	53.30	58.90	1	1	2.58	77.4
SMF51CA	SMF51A	51.0	56.70	65.20	1	1	2.43	82.4
SMF54CA	SMF54A	54.0	60.00	69.00	1	1	2.30	87.1
SMF58CA	SMF58A	58.0	64.4	71.2	1	1	2.14	93.6
SMF60CA	SMFJ60A	60.0	66.7	73.7	1	1	2.07	96.8
SMF64CA	SMF64A	64.0	71.10	81.80	1	1	1.94	103.0
SMF70CA	SMF70A	70.0	77.8	95.1	1	1	1.77	113.0
SMF75CA	SMF75A	75.0	83.3	92.1	1	1	1.65	121.0
SMF78CA	SMF78A	78.0	86.70	99.70	1	1	1.59	126.0
SMF85CA	SMF85A	85.0	94.40	108.2	1	1	1.46	137.0
SMF90CA	SMF90A	90.0	100.0	111.0	1	1	1.37	146.0
SMF100CA	SMF100A	100.0	111.00	123.0	1	1	1.23	162.0
SMF110CA	SMF110A	110.0	122.00	135.00	1	1	1.13	177.0
SMF120CA	SMF120A	110.0	133.00	147.00	1	1	1.04	193.0
SMF130CA	SMF110A	130.0	144.00	159.00	1	1	0.96	209.0
SMF150CA	SMF150A	150.0	167.00	185.00	1	1	0.82	243.0
SMF160CA	SMF160A	160.0	178.00	197.00	1	1	0.77	259.0
SMF170CA	SMF170A	170.0	189.00	209.00	1	1	0.73	275.0
SMF180CA	SMF180A	180.0	201.00	222.0	1	1	0.68	292.0
SMF190CA	SMF190A	190.0	211.00	233.00	1	1	0.65	308.0

SOD-123FL Package Dimension

DIM	MILLIMETERS		INCHES	
	Min.	Max.	Min.	Max.
A	0.95	1.45	0.037	0.057
A1	0.00	0.10	0.000	0.004
b	0.70	1.20	0.028	0.047
c	0.05	0.30	0.002	0.012
D	1.50	2.00	0.059	0.079
E	2.50	2.90	0.098	0.114
L	0.35	0.90	0.014	0.035
H _E	3.40	3.90	0.134	0.154

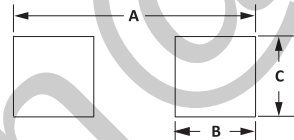
NOTES:

1. Dimensions are exclusive of mold flash and metal burrs
2. Cathode Band is only applicable to the unidirectional package

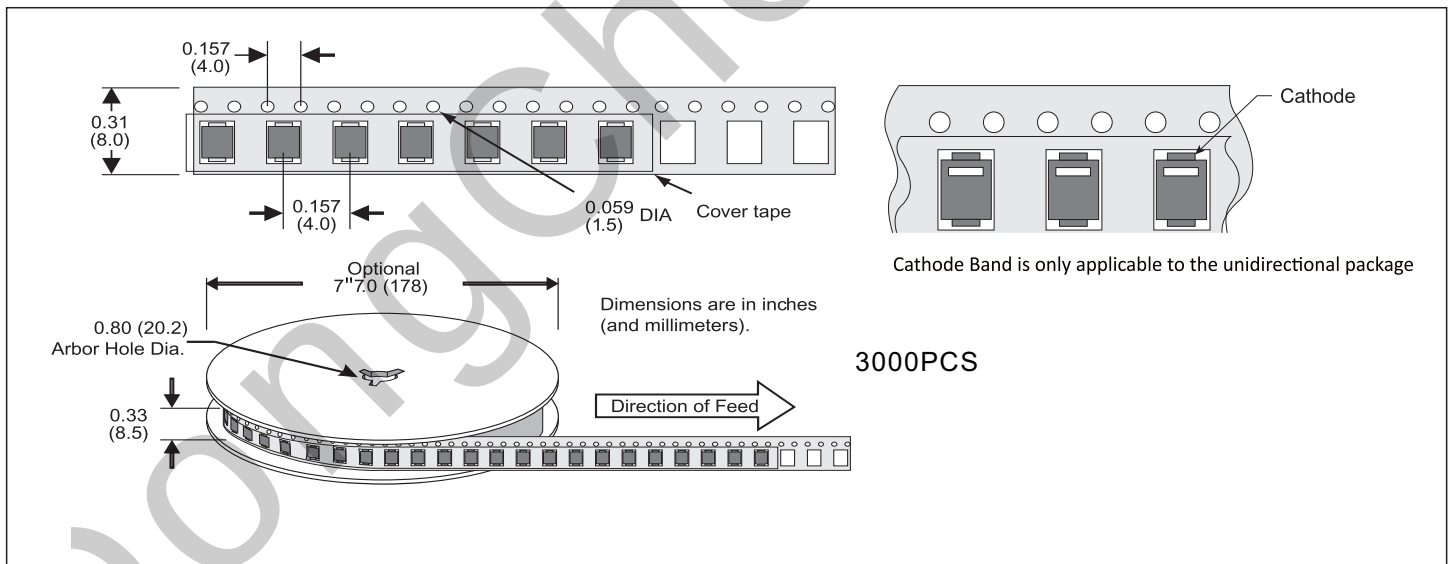


RECOMMENDED PAD LAYOUT DIMENSIONS

DIM	MILLIMETERS	INCHES
A	4.19	0.165
B	0.91	0.036
C	1.22	0.048



Tape and Reel Specification



ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SMFxx(C)A	SOD-123FL	3000PCS	7"

Important Notice

DongChen Electronics reserves the right to make changes without further notice to any products herein.

DongChen Electronics makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does DongChen Electronics assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.

“Typical” parameters which may be provided in DongChen Electronics data sheets and/or specifications can and do vary in different applications and actual performance may vary over time.

All operating parameters, including “Typicals,” must be validated for each customer application by the customer’s technical experts.

DongChen Electronics does not convey any license under its patent rights nor the rights of others.

The products listed in this document are designed to be used with ordinary electronic equipment or devices.

Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, aerospace machinery, nuclear-reactor controllers, fuel controllers, and other safety devices), please be sure to consult with our sales representative in advance.

Head Office

Contact Information:

DongChen Electronics Co.,Ltd.

Address: 2F., No.407, Sec. 2, Longgang Rd.,Zhongli Dist.,
Taoyuan City 32097, Taiwan (R.O.C.)

Tel: 03-284-1808

Fax: 03-284-1404

Mail:dc@dongchen.com.tw

Web:www.dongchen.com.tw