

SMF5.0(C)A THRU SMF440(C)A

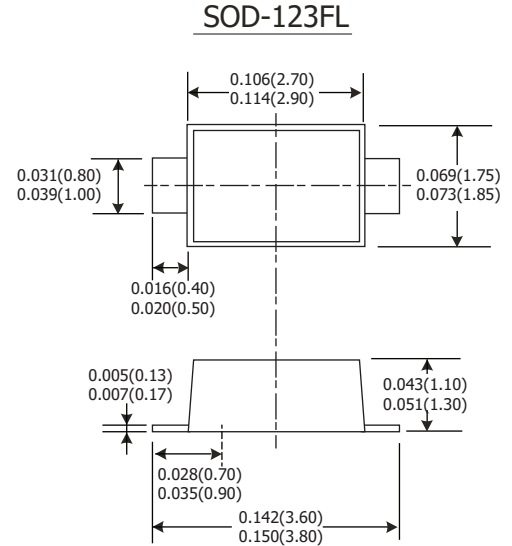
PPP 200 W
VWM 5.0 to 440 V

Features

- Glass passivated chip
- 200 W peak pulse power capability with a 10/1000 μ s waveform, repetitive rate (duty cycle):0.01%
- Excellent clamping capability
- Low reverse leakage
- Very fast response time
- Lead and body according with RoHS standard

Mechanical Data

- Case : SOD-123FL, Molded plastic
- Lead : Solderable per MIL-STD-750, method 2026
- Epoxy : UL 94V-0 rate flame retardant
- Polarity : Color band denotes cathode end except Bipolar
- Mounting position : Any



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified)

Items	Symbols	Value	Units
Peak power dissipation with a 10/1000 μ s waveform ⁽¹⁾	PPP	200	W
Peak pulse current with a 10/1000 μ s waveform ⁽¹⁾	IPP	See next table	A
Power dissipation on infinite heatsink at T _L = 75°C	P _D	1.0	W
Peak forward surge current, 8.3ms single half sinewave unidirectional only ⁽²⁾	I _{FSM}	30	A
Maximum instantaneous forward voltage at 10A for unidirectional only ⁽³⁾	V _F	3.5/6.5	V
Operating junction and storage temperature range	T _J , T _{STG}	-55 to + 150	°C

Note :

(1)Non-repetitive current pulse per Fig.5 and derated above T_A=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

(3)V_F<3.5V for devices of V_{BR}<200V and V_F<6.5V for devices of V_{BR}>201V



RATINGS AND CHARACTERISTIC CURVES SMF5.0(C)A THRU SMF440(C)A

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Max. Clamping Voltage @ I_{PP}	Max. Peak Pulse Current	Max. Reverse Leakage @ V_{RWM}
UNI-POLAR	BI-POLAR	UNI	BI	$V_{RWM}(V)$	Min.(V)	Max.(V)	$I_T(mA)$	$V_{C MAX.}(V)$	$I_{PP}(A)$	$I_R(\mu A)$
SMF5.0A	SMF5.0CA	KE	AE	5	6.4	7	10	9.2	21.7	800
SMF6.0A	SMF6.0CA	KG	AG	6	6.67	7.37	10	10.3	19.4	800
SMF6.5A	SMF6.5CA	KK	AK	6.5	7.22	7.98	10	11.2	17.86	500
SMF7.0A	SMF7.0CA	KM	AM	7	7.78	8.6	10	12	16.67	200
SMF7.5A	SMF7.5CA	KP	AP	7.5	8.33	9.21	1	12.9	15.5	100
SMF8.0A	SMF8.0CA	KR	AR	8	8.89	9.83	1	13.6	14.7	50
SMF8.5A	SMF8.5CA	KT	AT	8.5	9.44	10.4	1	14.4	13.89	20
SMF9.0A	SMF9.0CA	KV	AV	9	10	11.1	1	15.4	12.99	10
SMF10A	SMF10CA	KX	AX	10	11.1	12.3	1	17	11.76	5
SMF11A	SMF11CA	KZ	AZ	11	12.2	13.5	1	18.2	10.99	2.5
SMF12A	SMF12CA	LE	BE	12	13.3	14.7	1	19.9	10.05	2.5
SMF13A	SMF13CA	LG	BG	13	14.4	15.9	1	21.5	9.3	1
SMF14A	SMF14CA	LK	BK	14	15.6	17.2	1	23.2	8.6	1
SMF15A	SMF15CA	LM	BM	15	16.7	18.5	1	24.4	8.2	1
SMF16A	SMF16CA	LP	BP	16	17.8	19.7	1	26	7.69	1
SMF17A	SMF17CA	LR	BR	17	18.9	20.9	1	27.6	7.2	1
SMF18A	SMF18CA	LT	BT	18	20	22.1	1	29.2	6.8	1
SMF20A	SMF20CA	LV	BV	20	22.2	24.5	1	32.4	6.17	1
SMF22A	SMF22CA	LX	BX	22	24.4	26.9	1	35.5	5.6	1
SMF24A	SMF24CA	LZ	BZ	24	26.7	29.5	1	38.9	5.1	1
SMF26A	SMF26CA	ME	CE	26	28.9	31.9	1	42.1	4.75	1
SMF28A	SMF28CA	MG	CG	28	31.1	34.4	1	45.4	4.4	1
SMF30A	SMF30CA	MK	CK	30	33.5	36.8	1	48.4	4.1	1
SMF33A	SMF33CA	MM	CM	33	36.7	40.6	1	53.3	3.75	1
SMF36A	SMF36CA	MP	CP	36	40	44.2	1	58.1	3.4	1
SMF40A	SMF40CA	MR	CR	40	44.4	49.1	1	64.5	3.1	1
SMF43A	SMF43CA	MT	CT	43	47.8	52.8	1	69.4	2.88	1
SMF45A	SMF45CA	MV	CV	45	50	55.3	1	72.7	2.75	1
SMF48A	SMF48CA	MX	CX	48	53.3	58.9	1	77.4	2.58	1
SMF51A	SMF51CA	MZ	CZ	51	56.7	62.7	1	82.4	2.4	1
SMF54A	SMF54CA	NE	DE	54	60	66.3	1	87.1	2.3	1
SMF58A	SMF58CA	NG	DG	58	64.4	71.2	1	93.6	2.1	1
SMF60A	SMF60CA	NK	DK	60	66.7	73.7	1	96.8	1.8	1
SMF64A	SMF64CA	NM	DM	64	71.1	78.6	1	103	1.7	1
SMF70A	SMF70CA	NP	DP	70	77.8	86	1	113	1.5	1
SMF75A	SMF75CA	NR	DR	75	83.3	92.1	1	121	1.4	1
SMF78A	SMF78CA	NT	DT	78	86.7	95.8	1	126	1.4	1
SMF85A	SMF85CA	NV	DV	85	94.4	104	1	137	1.3	1
SMF90A	SMF90CA	NX	DX	90	100	111	1	146	1.2	1
SMF100A	SMF100CA	NZ	DZ	100	111	123	1	162	1.1	1
SMF110A	SMF110CA	PE	EE	110	122	135	1	177	1	1
SMF120A	SMF120CA	PG	EG	120	133	147	1	193	0.9	1
SMF130A	SMF130CA	PK	EK	130	144	159	1	209	0.8	1
SMF150A	SMF150CA	PM	EM	150	167	185	1	243	0.7	1
SMF160A	SMF160CA	PP	EP	160	178	197	1	259	0.7	1
SMF170A	SMF170CA	PR	ER	170	189	209	1	275	0.6	1
SMF180A	SMF180CA	PT	ET	180	201	222	1	292	0.5	1
SMF190A	SMF190CA	PV	EV	190	209	232	1	308	0.5	1
SMF200A	SMF200CA	PX	EX	200	224	247	1	324	0.5	1
SMF210A	SMF210CA	PZ	EZ	210	231	268	1	340	0.4	1
SMF220A	SMF220CA	QE	FE	220	246	272	1	356	0.4	1
SMF250A	SMF250CA	QG	FG	250	279	309	1	405	0.4	1
SMF300A	SMF300CA	QK	FK	300	335	371	1	486	0.4	1
SMF350A	SMF350CA	QM	FM	350	391	432	1	567	0.35	1
SMF400A	SMF400CA	QP	FP	400	447	494	1	648	0.31	1
SMF440A	SMF440CA	QR	FR	440	492	543	1	713	0.28	1

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FIG.1-PULSE DERATING CURVE

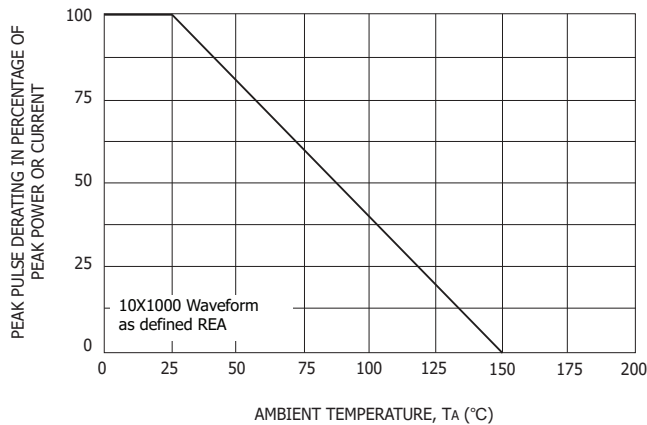


FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

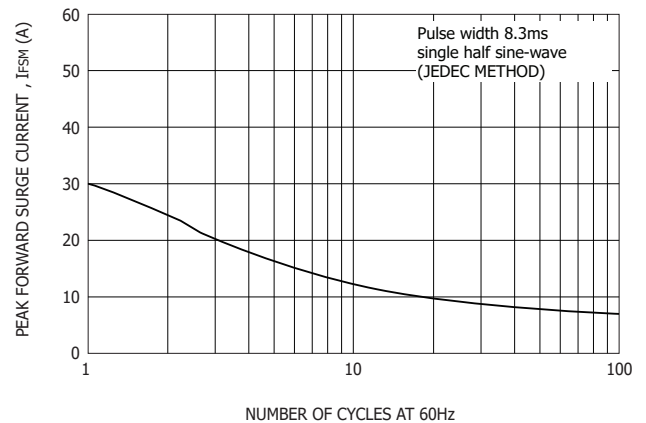


FIG.3-STEADY STATE POWER DERATING CURVE

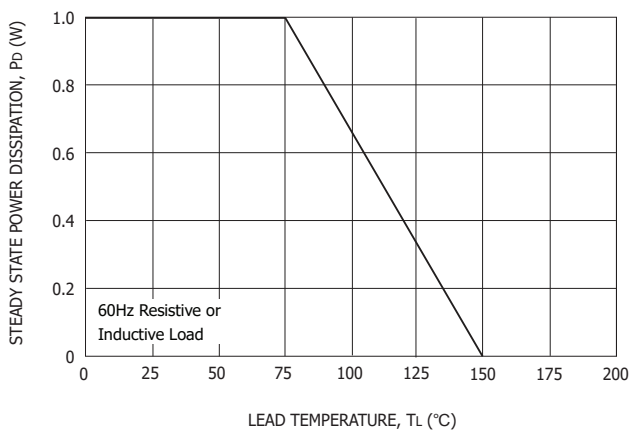


FIG.4-PEAK PULSE POWER RATING CURVE

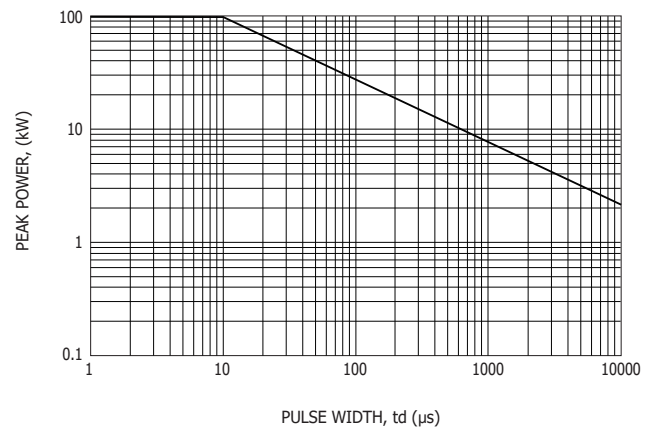


FIG.5-PULSE WAVEFORM

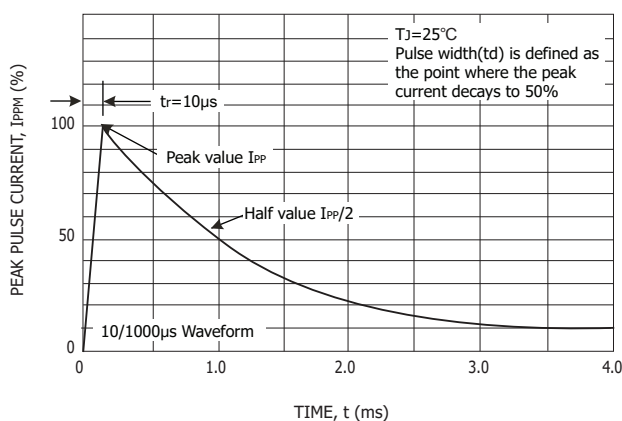


FIG.6-TYPICAL JUNCTION CAPACITANCE

