

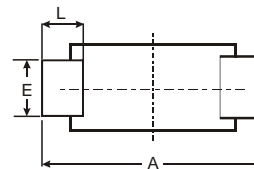
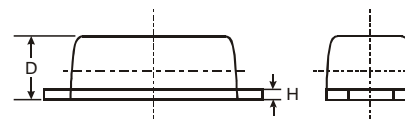
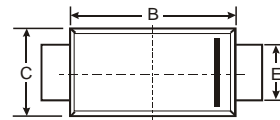
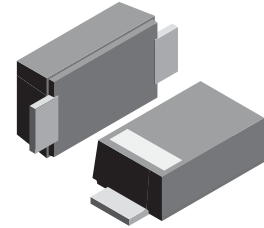
**VOLTAGE RANGE: 5.0 - 440 V**  
**POWER: 400Watts**

### Features

- Glass Passivated Die Construction
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Material: UL Flammability Classification Rating 94V-0

### Mechanical Data

- Case: SMAF, Plastic
- Terminals: Solder plated, solderable per MIL-STD, Method 2026
- Marking: Date Code and Marking Code  
See Page 2
- Polarity : Color band denotes cathode end
- Weight: 0.0018 ounce, 0.064 grams



SMAF			
Dim	Min	Max	Typ
A	4.75	4.85	4.80
B	3.68	3.72	3.70
C	2.57	2.63	2.60
D	0.097	1.03	1.00
E	1.38	1.42	1.40
H	0.13	0.17	0.15
L	0.63	0.67	0.65
All Dimensions in mm			

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

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Non repetitive current pulse derated above $T_A = 25^\circ\text{C}$ ) (Note 1)	$P_{PK}$	400	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) (Notes 1, 2, & 3)	$I_{FSM}$	40	A
Instantaneous Forward Voltage @ $I_{PP} = 35\text{A}$ (Notes 1, 2, & 3)	$V_F$	3.5	V
Operating and Storage Temperature Range	$T_j, T_{STG}$	-55 to +150	$^\circ\text{C}$

- Notes:
1. Valid provided that terminals are kept at ambient temperature.
  2. Measured with 8.3ms single half sine-wave. Duty cycle = 4 pulses per minute maximum.
  3. Unidirectional units only.



TYPE		Marking		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I <sub>T</sub>	Breakdown Voltage Max. @ I <sub>T</sub>	Test Current	Maximum Clamping Voltage @I <sub>PP</sub>	Peak Pulse Current	Reverse Leakage @V <sub>RWM</sub>
(Uni)	(Bi)	(Uni)	(Bi)	V <sub>RWM</sub> (V)	V <sub>BR MIN</sub> (V)	V <sub>BR MAX</sub> (V)	I <sub>T</sub> (mA)	V <sub>C</sub> (V)	I <sub>PP</sub> (A)	I <sub>R</sub> (uA)
SMAFJ5.0	SMAFJ5.0C	HD	TD	5.0	6.40	7.55	10.0	9.6	41.7	800.0
SMAFJ5.0A	SMAFJ5.0CA	HE	TE	5.0	6.40	7.25	10.0	9.2	43.5	800.0
SMAFJ6.0	SMAFJ6.0C	HF	TF	6.0	6.67	8.45	10.0	11.4	35.1	800.0
SMAFJ6.0A	SMAFJ6.0CA	HG	TG	6.0	6.67	7.67	10.0	10.3	38.8	800.0
SMAFJ6.5	SMAFJ6.5C	HH	TH	6.5	7.22	9.14	10.0	12.3	32.5	500.0
SMAFJ6.5A	SMAFJ6.5CA	HK	TK	6.5	7.22	8.30	10.0	11.2	35.7	500.0
SMAFJ7.0	SMAFJ7.0C	HL	TL	7.0	7.78	9.86	10.0	13.3	30.1	200.0
SMAFJ7.0A	SMAFJ7.0CA	HM	TM	7.0	7.78	8.95	10.0	12.0	33.3	200.0
SMAFJ7.5	SMAFJ7.5C	HN	TN	7.5	8.33	10.67	1.0	14.3	28.0	100.0
SMAFJ7.5A	SMAFJ7.5CA	HP	TP	7.5	8.33	9.58	1.0	12.9	31.0	100.0
SMAFJ8.0	SMAFJ8.0C	HQ	TQ	8.0	8.89	11.3	1.0	15.0	26.7	50.0
SMAFJ8.0A	SMAFJ8.0CA	HR	TR	8.0	8.89	10.23	1.0	13.6	29.4	50.0
SMAFJ8.5	SMAFJ8.5C	HS	TS	8.5	9.44	11.92	1.0	15.9	25.2	20.0
SMAFJ8.5A	SMAFJ8.5CA	HT	TT	8.5	9.44	10.82	1.0	14.4	27.8	20.0
SMAFJ9.0	SMAFJ9.0C	HU	TU	9.0	10.0	12.6	1.0	16.9	23.7	10.0
SMAFJ9.0A	SMAFJ9.0CA	HV	TV	9.0	10.0	11.5	1.0	15.4	26.0	10.0
SMAFJ10	SMAFJ10C	HW	TW	10	11.1	14.1	1.0	18.8	21.3	5.0
SMAFJ10A	SMAFJ10CA	HX	TX	10	11.1	12.8	1.0	17.0	23.5	5.0
SMAFJ11	SMAFJ11C	HY	TY	11	12.2	15.4	1.0	20.1	19.9	5.0
SMAFJ11A	SMAFJ11CA	HZ	TZ	11	12.2	14.0	1.0	18.2	22.0	5.0
SMAFJ12	SMAFJ12C	ID	UD	12	13.3	16.9	1.0	22.0	18.2	5.0
SMAFJ12A	SMAFJ12CA	IE	UE	12	13.3	15.3	1.0	19.9	20.1	5.0
SMAFJ13	SMAFJ13C	IF	UF	13	14.4	18.2	1.0	23.8	16.8	5.0
SMAFJ13A	SMAFJ13CA	IG	UG	13	14.4	16.5	1.0	21.5	18.6	5.0
SMAFJ14	SMAFJ14C	IH	UH	14	15.6	19.8	1.0	25.8	15.5	5.0
SMAFJ14A	SMAFJ14CA	IK	UK	14	15.6	17.9	1.0	23.2	17.2	5.0
SMAFJ15	SMAFJ15C	IL	UL	15	16.7	21.1	1.0	26.9	14.9	5.0
SMAFJ15A	SMAFJ15CA	IM	UM	15	16.7	19.2	1.0	24.4	16.4	5.0
SMAFJ16	SMAFJ16C	IN	UN	16	17.8	22.6	1.0	28.8	13.9	5.0
SMAFJ16A	SMAFJ16CA	IP	UP	16	17.8	20.5	1.0	26.0	15.4	5.0
SMAFJ17	SMAFJ17C	IQ	UQ	17	18.9	23.9	1.0	30.5	13.1	5.0
SMAFJ17A	SMAFJ17CA	IR	UR	17	18.9	21.7	1.0	27.6	14.5	5.0
SMAFJ18	SMAFJ18C	IS	US	18	20.0	25.3	1.0	32.2	12.4	5.0
SMAFJ18A	SMAFJ18CA	IT	UT	18	20.0	23.3	1.0	29.2	13.7	5.0
SMAFJ20	SMAFJ20C	IU	UU	20	22.2	28.1	1.0	35.8	11.2	5.0
SMAFJ20A	SMAFJ20CA	IV	UV	20	22.2	25.5	1.0	32.4	12.3	5.0
SMAFJ22	SMAFJ22C	IW	UW	22	24.4	30.9	1.0	39.4	10.2	5.0

TYPE		Marking		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I <sub>T</sub>	Breakdown Voltage Max. @ I <sub>T</sub>	Test Current	Maximum Clamping Voltage @I <sub>PP</sub>	Peak Pulse Current	Reverse Leakage @V <sub>RWM</sub>
(Uni)	(Bi)	(Uni)	(Bi)	V <sub>RWM</sub> (V)	V <sub>BR</sub> MIN(V)	V <sub>BR</sub> MAX(V)	I <sub>T</sub> (mA)	V <sub>C</sub> (V)	I <sub>PP</sub> (A)	I <sub>R</sub> (uA)
SMAFJ22A	SMAFJ22CA	IX	UX	22	24.4	28.0	1.0	35.5	11.3	5.0
SMAFJ24	SMAFJ24C	IY	UY	24	26.7	33.8	1.0	43.0	9.3	5.0
SMAFJ24A	SMAFJ24CA	IZ	UZ	24	26.7	30.7	1.0	38.9	10.3	5.0
SMAFJ26	SMAFJ26C	JD	VD	26	28.9	36.6	1.0	46.6	8.6	5.0
SMAFJ26A	SMAFJ26CA	JE	VE	26	28.9	33.2	1.0	42.1	9.5	5.0
SMAFJ28	SMAFJ28C	JF	VF	28	31.1	39.4	1.0	50.0	8.0	5.0
SMAFJ28A	SMAFJ28CA	JG	VG	28	31.1	35.8	1.0	45.4	8.8	5.0
SMAFJ30	SMAFJ30C	JH	VH	30	33.3	42.2	1.0	53.5	7.5	5.0
SMAFJ30A	SMAFJ30CA	JK	VK	30	33.3	38.3	1.0	48.4	8.3	5.0
SMAFJ33	SMAFJ33C	JL	VL	33	36.7	46.5	1.0	59.0	6.8	5.0
SMAFJ33A	SMAFJ33CA	JM	VM	33	36.7	42.2	1.0	53.3	7.5	5.0
SMAFJ36	SMAFJ36C	JN	VN	36	40.0	50.7	1.0	64.3	6.2	5.0
SMAFJ36A	SMAFJ36CA	JP	VP	36	40.0	46.0	1.0	58.1	6.9	5.0
SMAFJ40	SMAFJ40C	JQ	VQ	40	44.4	56.3	1.0	71.4	5.6	5.0
SMAFJ40A	SMAFJ40CA	JR	VR	40	44.4	51.1	1.0	64.5	6.2	5.0
SMAFJ43	SMAFJ43C	JS	VS	43	47.7	60.5	1.0	76.7	5.2	5.0
SMAFJ43A	SMAFJ43CA	JT	VT	43	47.8	54.9	1.0	69.4	5.8	5.0
SMAFJ45	SMAFJ45C	JU	VU	45	50.0	63.3	1.0	80.3	5.0	5.0
SMAFJ45A	SMAFJ45CA	JV	VV	45	50.0	57.5	1.0	72.7	5.5	5.0
SMAFJ48	SMAFJ48C	JW	VW	48	53.3	67.5	1.0	85.5	4.7	5.0
SMAFJ48A	SMAFJ48CA	JX	VX	48	53.3	61.3	1.0	77.4	5.2	5.0
SMAFJ51	SMAFJ51C	JY	VY	51	56.7	71.8	1.0	91.1	4.4	5.0
SMAFJ51A	SMAFJ51CA	JZ	VZ	51	56.7	65.2	1.0	82.4	4.9	5.0
SMAFJ54	SMAFJ54C	RD	WD	54	60.0	76.0	1.0	96.3	4.2	5.0
SMAFJ54A	SMAFJ54CA	RE	WE	54	60.0	69.0	1.0	87.1	4.6	5.0
SMAFJ58	SMAFJ58C	RF	WF	58	64.4	81.6	1.0	103	3.9	5.0
SMAFJ58A	SMAFJ58CA	RG	WG	58	64.4	74.1	1.0	93.6	4.3	5.0
SMAFJ60	SMAFJ60C	RH	WH	60	66.7	84.5	1.0	107	3.7	5.0
SMAFJ60A	SMAFJ60CA	RK	WK	60	66.7	76.7	1.0	96.8	4.1	5.0
SMAFJ64	SMAFJ64C	RL	WL	64	71.1	90.1	1.0	114	3.5	5.0
SMAFJ64A	SMAFJ64CA	RM	WM	64	71.1	81.8	1.0	103	3.9	5.0
SMAFJ70	SMAFJ70C	RN	WN	70	77.8	98.6	1.0	125	3.2	5.0
SMAFJ70A	SMAFJ70CA	RP	WP	70	77.8	89.5	1.0	113	3.5	5.0
SMAFJ75	SMAFJ75C	RQ	WQ	75	83.0	105.7	1.0	134	3.0	5.0
SMAFJ75A	SMAFJ75CA	RR	WR	75	83.0	95.8	1.0	121	3.3	5.0
SMAFJ78	SMAFJ78C	RS	WS	78	86.0	109.8	1.0	139	2.9	5.0
SMAFJ78A	SMAFJ78CA	RT	WT	78	86.0	99.7	1.0	126	3.2	5.0
SMAFJ85	SMAFJ85C	RU	WU	85	94.0	119.2	1.0	151	2.6	5.0
SMAFJ85A	SMAFJ85CA	RV	WV	85	94.0	108.2	1.0	137	2.9	5.0
SMAFJ90	SMAFJ90C	RW	WW	90	100	126.5	1.0	160	2.5	5.0
SMAFJ90A	SMAFJ90CA	RX	WX	90	100	115.5	1.0	146	2.7	5.0



TYPE		Marking		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I <sub>T</sub>	Breakdown Voltage Max. @ I <sub>T</sub>	Test Current	Maximum Clamping Voltage @I <sub>PP</sub>	Peak Pulse Current	Reverse Leakage @V <sub>RWM</sub>
(Uni)	(Bi)	(Uni)	(Bi)	V <sub>RWM</sub> (V)	V <sub>BR MIN</sub> (V)	V <sub>BR MAX</sub> (V)	I <sub>T</sub> (mA)	V <sub>C</sub> (V)	I <sub>PP</sub> (A)	I <sub>R</sub> (uA)
SMAFJ100	SMAFJ100C	RY	WY	100	111	141.0	1.0	179	2.2	5.0
SMAFJ100A	SMAFJ100CA	RZ	WZ	100	111	128.0	1.0	162	2.5	5.0
SMAFJ110	SMAFJ110C	SD	XD	110	122	154.5	1.0	196	2.0	5.0
SMAFJ110A	SMAFJ110CA	SE	XE	110	122	140.5	1.0	177	2.3	5.0
SMAFJ120	SMAFJ120C	SF	XF	120	133	169.0	1.0	214	1.9	5.0
SMAFJ120A	SMAFJ120CA	SG	XG	120	133	153.0	1.0	193	2.1	5.0
SMAFJ130	SMAFJ130C	SH	XH	130	144	182.5	1.0	231	1.7	5.0
SMAFJ130A	SMAFJ130CA	SK	XK	130	144	165.5	1.0	209	1.9	5.0
SMAFJ150	SMAFJ150C	SL	XL	150	167	211.5	1.0	268	1.5	5.0
SMAFJ150A	SMAFJ150CA	SM	XM	150	167	192.5	1.0	243	1.6	5.0
SMAFJ160	SMAFJ160C	SN	XN	160	178	226.0	1.0	287	1.4	5.0
SMAFJ160A	SMAFJ160CA	SP	XP	160	178	205.0	1.0	259	1.5	5.0
SMAFJ170	SMAFJ170C	SQ	XQ	170	189	239.5	1.0	304	1.3	5.0
SMAFJ170A	SMAFJ170CA	SR	XR	170	189	217.5	1.0	275	1.5	5.0
SMAFJ180	SMAFJ180C	SS	XS	180	200	253.8	1.0	321	1.2	5.0
SMAFJ180A	SMAFJ180CA	ST	XT	180	200	230.4	1.0	290	1.4	5.0
SMAFJ190	SMAFJ190C	SU	XU	190	211	267.9	1.0	339	1.2	5.0
SMAFJ190A	SMAFJ190CA	SV	XV	190	211	243.2	1.0	306	1.3	5.0
SMAFJ200	SMAFJ200C	SW	XW	200	222	282.0	1.0	356	1.1	5.0
SMAFJ200A	SMAFJ200CA	SX	XX	200	222	256.0	1.0	322	1.2	5.0
SMAFJ210	SMAFJ210C	SY	XY	210	233	296.1	1.0	375	1.1	5.0
SMAFJ210A	SMAFJ210CA	SZ	XZ	210	233	268.8	1.0	339	1.2	5.0
SMAFJ220	SMAFJ220C	ZD	YD	220	244	310.2	1.0	392	1.0	5.0
SMAFJ220A	SMAFJ220CA	ZE	YE	220	244	281.6	1.0	355	1.1	5.0
SMAFJ250	SMAFJ250C	ZF	YF	250	278	342.5	1.0	447	0.9	5.0
SMAFJ250A	SMAFJ250CA	ZG	YG	250	278	309.0	1.0	403	1.0	5.0
SMAFJ300	SMAFJ300C	ZH	YH	300	333	411.0	1.0	535	0.7	5.0
SMAFJ300A	SMAFJ300CA	ZK	YK	300	333	371.0	1.0	484	0.8	5.0
SMAFJ350	SMAFJ350C	ZL	YL	350	389	479.5	1.0	624	0.6	5.0
SMAFJ350A	SMAFJ350CA	ZM	YM	350	389	432.0	1.0	565	0.7	5.0
SMAFJ400	SMAFJ400C	ZN	YN	400	444	548.0	1.0	687	0.6	5.0
SMAFJ400A	SMAFJ400CA	ZP	YP	400	444	494.0	1.0	645	0.6	5.0
SMAFJ440	SMAFJ440C	ZQ	YQ	440	489	602.8	1.0	786	0.5	5.0
SMAFJ440A	SMAFJ440CA	ZR	YR	440	489	543.0	1.0	710	0.6	5.0

## Ratings and Characteristic Curves $T_A=25^\circ\text{C}$ unless otherwise noted

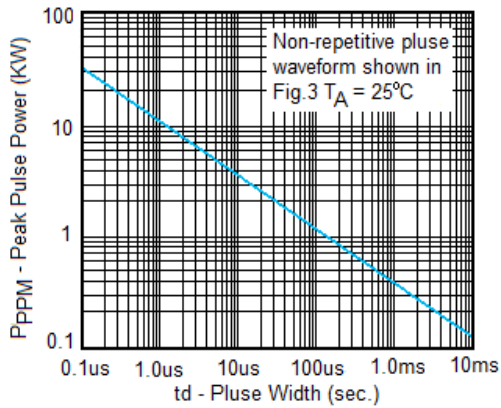


Fig. 1 Peak Pulse Power Rating

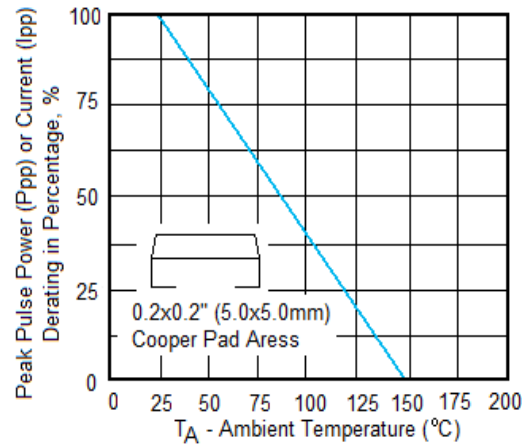


Fig. 2 Pulse Derating Curve

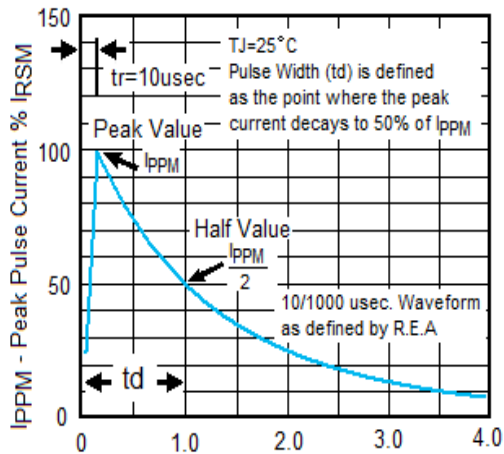


Fig. 3 Pulse Waveform

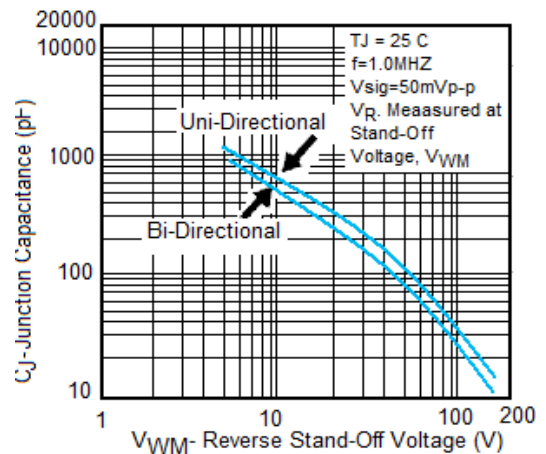


Fig. 4- Typical Junction Capacitance