

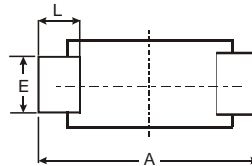
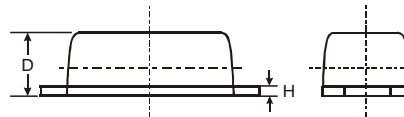
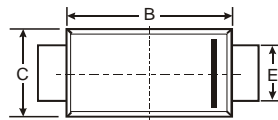
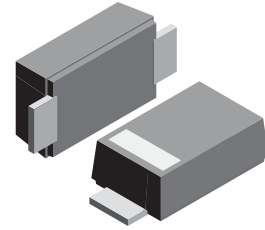
VOLTAGE RANGE: 6.8 - 440 V
POWER: 400Watts

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, Molded Plastic
- Polarity Indicator: Cathode Band
(Note: Bi-directional devices have no polarity indicator.)
- Marking: Date Code and Marking Code
See Page 2
- 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°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Non repetitive current pulse derated above T _A = 25°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} = 35A (Notes 1, 2, & 3)	V _F	3.5	V
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°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 _T	Breakdown Voltage Max. @ I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
(UNI)	(BI)	(UNI)	(BI)	V _{RWM} (V)	V _{BR MIN} (V)	V _{BR MAX} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
P4SMAFJ6.8	P4SMAFJ6.8C	6.8	6.8C	5.50	6.12	7.48	10	10.8	38.0	1000.0
P4SMAFJ6.8A	P4SMAFJ6.8CA	6.8A	6.8CA	5.80	6.45	7.14	10	10.5	40.0	1000.0
P4SMAFJ7.5	P4SMAFJ7.5C	7.5	7.5C	6.05	6.75	8.25	10	11.7	36.0	500.0
P4SMAFJ7.5A	P4SMAFJ7.5CA	7.5A	7.5CA	6.40	7.13	7.88	10	11.3	37.0	500.0
P4SMAFJ8.2	P4SMAFJ8.2C	8.2	8.2C	6.63	7.38	9.02	10	12.5	33.0	200.0
P4SMAFJ8.2A	P4SMAFJ8.2CA	8.2A	8.2CA	7.02	7.79	8.61	10	12.1	35.0	200.0
P4SMAFJ9.1	P4SMAFJ9.1C	9.1	9.1C	7.37	8.19	10.0	1.0	13.8	30.0	50.0
P4SMAFJ9.1A	P4SMAFJ9.1CA	9.1A	9.1CA	7.78	8.65	9.55	1.0	13.4	31.0	50.0
P4SMAFJ10	P4SMAFJ10C	10	10C	8.10	9.00	11.0	1.0	15.0	28.0	10.0
P4SMAFJ10A	P4SMAJ10CA	10A	10CA	8.55	9.50	10.5	1.0	14.5	29.0	10.0
P4SMAFJ11	P4SMAFJ11C	11	11C	8.92	9.90	12.1	1.0	16.2	26.0	5.0
P4SMAFJ11A	P4SMAFJ11CA	11A	11CA	9.40	10.5	11.6	1.0	15.6	27.0	5.0
P4SMAFJ12	P4SMAFJ12C	12	12C	9.72	10.8	13.2	1.0	17.3	24.0	5.0
P4SMAFJ12A	P4SMAFJ12CA	12	12CA	10.2	11.4	12.6	1.0	16.7	25.0	5.0
P4SMAFJ13	P4SMAFJ13C	13	13C	10.5	11.7	14.3	1.0	19.0	22.0	5.0
P4SMAFJ13A	P4SMAFJ13CA	13A	13CA	11.1	12.4	13.7	1.0	18.2	23.0	5.0
P4SMAFJ15	P4SMAFJ15C	15	15C	12.1	13.5	16.5	1.0	22.0	19.0	5.0
P4SMAFJ15A	P4SMAFJ15CA	15A	15CA	12.8	14.3	15.8	1.0	21.2	20.0	5.0
P4SMAFJ16	P4SMAFJ16C	16	16C	12.9	14.4	17.6	1.0	23.5	18.0	5.0
P4SMAFJ16A	P4SMAFJ16CA	16A	16CA	13.6	15.2	16.8	1.0	22.5	19.0	5.0
P4SMAFJ18	P4SMAFJ18C	18	18C	14.5	16.2	19.8	1.0	26.5	16.0	5.0
P4SMAFJ18A	P4SMAFJ18CA	18A	18CA	15.3	17.1	18.9	1.0	25.2	17.0	5.0
P4SMAFJ20	P4SMAFJ20C	20	20C	16.2	18.0	22.0	1.0	29.1	14.0	5.0
P4SMAFJ20A	P4SMAFJ20CA	20A	20CA	17.1	19.0	21.0	1.0	27.7	15.0	5.0
P4SMAFJ22	P4SMAFJ22C	22C	22C	17.8	19.8	24.2	1.0	31.9	13.0	5.0
P4SMAFJ22A	P4SMAFJ22CA	22A	22CA	18.8	20.9	23.1	1.0	30.6	14.0	5.0
P4SMAFJ24	P4SMAFJ24C	24	24C	19.4	21.6	26.4	1.0	34.7	12.0	5.0
P4SMAFJ24A	P4SMAFJ24CA	24A	24CA	20.5	22.8	25.2	1.0	33.2	13.0	5.0
P4SMAFJ27	P4SMAFJ27C	27	27C	21.8	24.3	29.7	1.0	39.1	11.0	5.0
P4SMAFJ27A	P4SMAFJ27CA	27A	27CA	23.1	25.7	28.4	1.0	37.5	11.2	5.0
P4SMAFJ30	P4SMAFJ30C	30	30C	24.3	27.0	33.0	1.0	43.5	10.0	5.0
P4SMAFJ30A	P4SMAFJ30CA	30A	30CA	25.6	28.5	31.5	1.0	41.4	10.0	5.0
P4SMAFJ33	P4SMAFJ33C	33	33C	26.8	29.7	36.3	1.0	47.7	9.0	5.0
P4SMAFJ33A	P4SMAFJ33CA	33A	33CA	28.2	31.4	34.7	1.0	45.7	9.0	5.0
P4SMAFJ36	P4SMAFJ36C	36	36C	29.1	32.4	39.6	1.0	52.0	8.0	5.0
P4SMAFJ36A	P4SMAFJ36CA	36A	36CA	30.8	34.2	37.8	1.0	49.9	8.4	5.0
P4SMAFJ39	P4SMAFJ39C	39	39C	31.6	35.1	42.9	1.0	56.4	7.4	5.0
P4SMAFJ39A	P4SMAFJ39CA	39A	39CA	33.3	37.1	41.0	1.0	53.9	7.8	5.0
P4SMAFJ43	P4SMAFJ43C	43	43C	34.8	38.7	47.3	1.0	61.9	6.8	5.0
P4SMAFJ43A	P4SMAFJ43CA	43A	43CA	36.8	40.9	45.2	1.0	59.3	7.1	5.0
P4SMAFJ47	P4SMAFJ47C	47	47C	38.1	42.3	51.7	1.0	67.8	6.2	5.0
P4SMAFJ47A	P4SMAFJ47CA	47A	47CA	40.8	44.7	49.4	1.0	64.8	5.0	5.0
P4SMAFJ51	P4SMAFJ51C	51	51C	41.3	45.9	56.1	1.0	73.5	5.7	5.0
P4SMAFJ51A	P4SMAFJ51CA	51A	51CA	43.6	48.5	53.6	1.0	70.1	6.0	5.0



TYPE		Marking		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 _{RWM}
(UNI)	(BI)	(UNI)	(BI)	V _{RWM} (V)	V _{BR MIN} (V)	V _{BR MAX} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
P4SMAFJ56	P4SMAFJ56C	56	56C	45.4	50.4	61.6	1.0	80.5	5.2	5.0
P4SMAFJ56A	P4SMAFJ56CA	56A	56CA	47.8	53.2	58.8	1.0	77.0	5.5	5.0
P4SMAFJ62	P4SMAFJ62C	62	62C	50.2	55.8	68.2	1.0	89.0	4.7	5.0
P4SMAFJ62A	P4SMAFJ62CA	62A	62CA	53.0	58.9	65.1	1.0	85.0	5.0	5.0
P4SMAFJ68	P4SMAFJ68C	68	68C	55.1	61.2	74.8	1.0	98.0	4.3	5.0
P4SMAFJ68A	P4SMAFJ68CA	68A	68CA	58.1	64.6	71.4	1.0	92.0	4.6	5.0
P4SMAFJ75	P4SMAFJ75C	75	75C	60.7	67.5	82.5	1.0	108	3.9	5.0
P4SMAFJ75A	P4SMAFJ75CA	75A	75CA	64.1	71.3	78.8	1.0	103	4.1	5.0
P4SMAFJ82	P4SMAFJ82C	82	82C	66.4	73.8	90.2	1.0	118	3.6	5.0
P4SMAFJ82A	P4SMAFJ82CA	82A	82CA	70.4	77.9	86.1	1.0	113	3.7	5.0
P4SMAFJ91	P4SMAFJ91C	91	91C	73.7	81.9	100	1.0	131	3.2	5.0
P4SMAFJ91A	P4SMAFJ91CA	91A	91CA	77.8	86.5	95.5	1.0	125	3.4	5.0
P4SMAFJ100	P4SMAFJ100C	100	100C	81.0	90.0	110	1.0	144	2.9	5.0
P4SMAFJ100A	P4SMAFJ100CA	100A	100CA	85.5	95.0	105	1.0	137	3.1	5.0
P4SMAFJ110	P4SMAFJ110C	110	110C	89.2	99.0	121	1.0	158	2.7	5.0
P4SMAFJ110A	P4SMAFJ110CA	110A	110CA	94.0	105	116	1.0	152	2.8	5.0
P4SMAFJ120	P4SMAFJ120C	120	120C	97.2	108	132	1.0	173	2.4	5.0
P4SMAFJ120A	P4SMAFJ120CA	120A	120CA	102	114	126	1.0	165	2.5	5.0
P4SMAFJ130	P4SMAFJ130C	130	130C	105	117	143	1.0	187	2.2	5.0
P4SMAFJ130A	P4SMAFJ130CA	130A	130CA	111	124	137	1.0	179	2.3	5.0
P4SMAFJ150	P4SMAFJ150C	150	150C	121	135	165	1.0	215	2.0	5.0
P4SMAFJ150A	P4SMAFJ150CA	150A	150CA	128	143	158	1.0	207	2.0	5.0
P4SMAFJ160	P4SMAFJ160C	160	160C	130	144	176	1.0	230	1.8	5.0
P4SMAFJ160A	P4SMAFJ160CA	160A	160CA	136	152	168	1.0	219	1.9	5.0
P4SMAFJ170	P4SMAFJ170C	170	170C	138	153	187	1.0	244	1.7	5.0
P4SMAFJ170A	P4SMAFJ170CA	170A	170CA	145	162	179	1.0	234	1.8	5.0
P4SMAFJ180	P4SMAFJ180C	180	180C	146	162	198	1.0	258	1.6	5.0
P4SMAFJ180A	P4SMAFJ180CA	180A	180CA	154	171	189	1.0	246	1.7	5.0
P4SMAFJ200	P4SMAFJ200C	200	200C	162	180	220	1.0	287	1.5	5.0
P4SMAFJ200A	P4SMAFJ200CA	200A	200CA	171	190	210	1.0	274	1.53	5.0
P4SMAFJ220	P4SMAFJ220C	220	220C	175	198	242	1.0	344	1.16	5.0
P4SMAFJ220A	P4SMAFJ220CA	220A	220CA	185	209	231	1.0	328	1.22	5.0
P4SMAFJ250	P4SMAFJ250C	250	250C	202	225	275	1.0	360	1.1	5.0
P4SMAFJ250A	P4SMAFJ250CA	250A	250CA	214	237	263	1.0	344	1.16	5.0
P4SMAFJ300	P4SMAFJ300C	300	300C	243	270	330	1.0	430	0.93	5.0
P4SMAFJ300A	P4SMAFJ300CA	300A	300CA	256	285	315	1.0	414	0.97	5.0
P4SMAFJ350	P4SMAFJ350C	350	350C	284	315	385	1.0	504	0.79	5.0
P4SMAFJ350A	P4SMAFJ350CA	350A	350CA	300	333	368	1.0	482	0.83	5.0
P4SMAFJ400	P4SMAFJ400C	400	400C	324	360	440	1.0	574	0.70	5.0
P4SMAFJ400A	P4SMAFJ400CA	400A	400CA	342	380	420	1.0	548	0.73	5.0
P4SMAFJ440	P4SMAFJ440C	440	440C	356	396	484	1.0	631	0.63	5.0
P4SMAFJ440A	P4SMAFJ440CA	440A	440CA	376	418	462	1.0	602	0.65	5.0

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

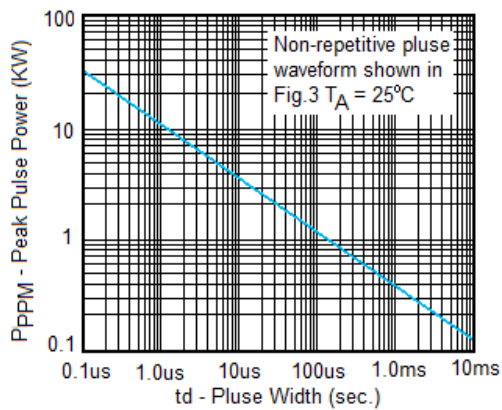


Fig. 1 Peak Pulse Power Rating

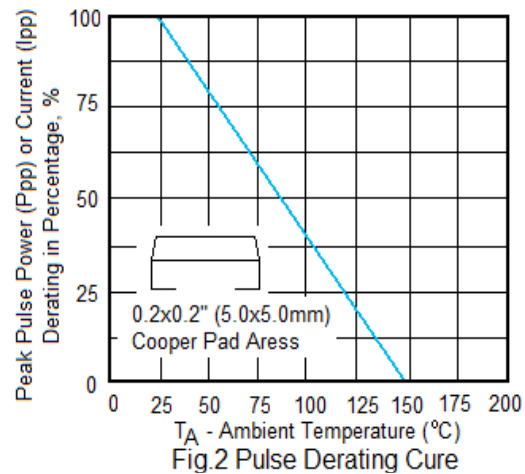


Fig. 2 Pulse Derating Curve

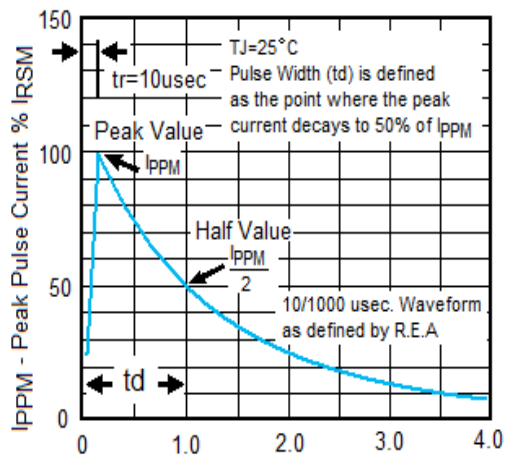


Fig. 3 Pulse Waveform

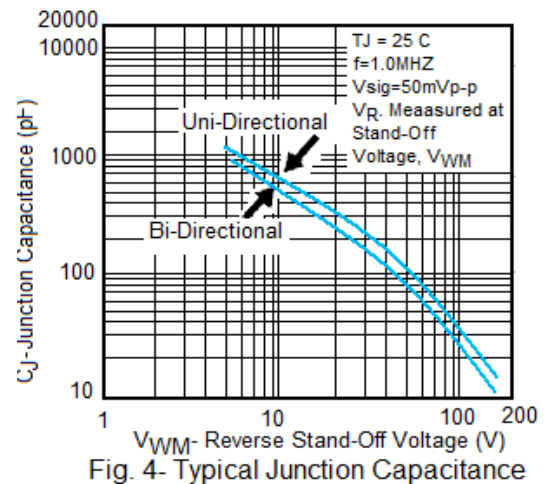


Fig. 4 - Typical Junction Capacitance