

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR DIODE

VOLTAGE RANGE: 5.0 - 350V

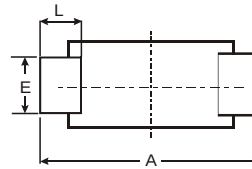
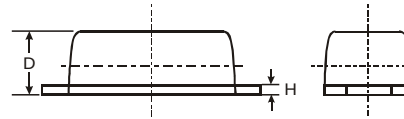
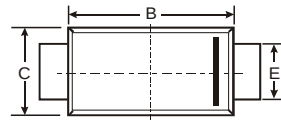
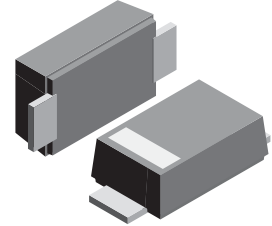
POWER: 600W

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°C unless otherwise specified

Parameter	Symbols	Value	Unit
Peak power dissipation with a 10/1000 us waveform ⁽¹⁾	P _{PP}	600	W
Peak pulse current with a 10/1000 us waveform ⁽¹⁾	I _{PP}	See Next Table	A
Power dissipation on infinite heatsink at T _A = 50 °C	P _D	5.0	W
Peak forward surge current, 8.3 ms single half sine wave unidirectional only ⁽²⁾	I _{FSM}	60	A
Typical thermal resistance junction to lead	R _{θJL}	30	°C/W
Typical thermal resistance junction to ambient	R _{θJA}	120	°C/W
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 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum ;

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
UNI-POLAR	BI-POLAR	UNI	BI	$V_{RWM}(V)$	Min.(V)	Max.(V)	$I_T(mA)$	$V_{C MAX.}(V)$	$I_{PP}(A)$	$I_R(\mu A)$
SMAF6J5.0A	SMAF6J5.0CA	KE	AE	5.0	6.40	7.00	10	9.2	65.3	800
SMAF6J6.0A	SMAF6J6.0CA	KG	AG	6.0	6.67	7.37	10	10.3	58.3	800
SMAF6J6.5A	SMAF6J6.5CA	KK	AK	6.5	7.22	7.98	10	11.2	53.6	500
SMAF6J7.0A	SMAF6J7.0CA	KM	AM	7.0	7.78	8.60	10	12.0	50.0	200
SMAF6J7.5A	SMAF6J7.5CA	KP	AP	7.5	8.33	9.21	1	12.9	46.6	100
SMAF6J8.0A	SMAF6J8.0CA	KR	AR	8.0	8.89	9.83	1	13.6	44.2	50
SMAF6J8.5A	SMAF6J8.5CA	KT	AT	8.5	9.44	10.40	1	14.4	41.7	20
SMAF6J9.0A	SMAF6J9.0CA	KV	AV	9.0	10.00	11.10	1	15.4	39.0	10
SMAF6J10A	SMAF6J10CA	KX	AX	10.0	11.10	12.30	1	17.0	35.3	5
SMAF6J11A	SMAF6J11CA	KZ	AZ	11.0	12.20	13.50	1	18.2	33.0	1
SMAF6J12A	SMAF6J12CA	LE	BE	12.0	13.30	14.70	1	19.9	30.2	1
SMAF6J13A	SMAF6J13CA	LG	BG	13.0	14.40	15.90	1	21.5	28.0	1
SMAF6J14A	SMAF6J14CA	LK	BK	14.0	15.60	17.20	1	23.2	25.9	1
SMAF6J15A	SMAF6J15CA	LM	BM	15.0	16.70	18.50	1	24.4	24.6	1
SMAF6J16A	SMAF6J16CA	LP	BP	16.0	17.80	19.70	1	26.0	23.1	1
SMAF6J17A	SMAF6J17CA	LR	BR	17.0	18.90	20.90	1	27.6	21.8	1
SMAF6J18A	SMAF6J18CA	LT	BT	18.0	20.00	22.10	1	29.2	20.6	1
SMAF6J20A	SMAF6J20CA	LV	BV	20.0	22.20	24.50	1	32.4	18.6	1
SMAF6J22A	SMAF6J22CA	LX	BX	22.0	24.40	26.90	1	35.5	16.9	1
SMAF6J24A	SMAF6J24CA	LZ	BZ	24.0	26.70	29.50	1	38.9	15.5	1
SMAF6J26A	SMAF6J26CA	ME	CE	26.0	28.90	31.90	1	42.1	14.3	1
SMAF6J28A	SMAF6J28CA	MG	CG	28.0	31.10	34.40	1	45.4	13.3	1
SMAF6J30A	SMAF6J30CA	MK	CK	30.0	33.50	36.80	1	48.4	12.4	1
SMAF6J33A	SMAF6J33CA	MM	CM	33.0	36.70	40.60	1	53.3	11.3	1
SMAF6J36A	SMAF6J36CA	MP	CP	36.0	40.00	44.20	1	58.1	10.4	1
SMAF6J40A	SMAF6J40CA	MR	CR	40.0	44.40	49.10	1	64.5	9.3	1
SMAF6J43A	SMAF6J43CA	MT	CT	43.0	47.80	52.80	1	69.4	8.7	1
SMAF6J45A	SMAF6J45CA	MV	CV	45.0	50.00	55.30	1	72.7	8.3	1
SMAF6J48A	SMAF6J48CA	MX	CX	48.0	53.30	58.90	1	77.4	7.8	1
SMAF6J51A	SMAF6J51CA	MZ	CZ	51.0	56.70	62.70	1	82.4	7.3	1
SMAF6J54A	SMAF6J54CA	NE	DE	54.0	60.00	66.30	1	87.1	6.9	1
SMAF6J58A	SMAF6J58CA	NG	DG	58.0	64.40	71.20	1	93.6	6.5	1
SMAF6J60A	SMAF6J60CA	NK	DK	60.0	66.70	73.70	1	96.8	6.2	1
SMAF6J64A	SMAF6J64CA	NM	DM	64.0	71.10	78.60	1	103.0	5.9	1
SMAF6J70A	SMAF6J70CA	NP	DP	70.0	77.80	86.00	1	113.0	5.3	1
SMAF6J75A	SMAF6J75CA	NR	DR	75.0	83.30	92.10	1	121.0	5.0	1
SMAF6J78A	SMAF6J78CA	NT	DT	78.0	86.70	95.80	1	126.0	4.8	1
SMAF6J85A	SMAF6J85CA	NV	DV	85.0	94.4	104.0	1	137.0	4.4	1
SMAF6J90A	SMAF6J90CA	NX	DX	90.0	100.0	111.0	1	146.0	4.1	1
SMAF6J100A	SMAF6J100CA	NZ	DZ	100.0	111.0	123.0	1	162.0	3.7	1
SMAF6J110A	SMAF6J110CA	PE	EE	110.0	122.0	135.0	1	177.0	3.4	1
SMAF6J120A	SMAF6J120CA	PG	EG	120.0	133.0	147.0	1	193.0	3.1	1
SMAF6J130A	SMAF6J130CA	PK	EK	130.0	144.0	159.0	1	209.0	2.9	1
SMAF6J150A	SMAF6J150CA	PM	EM	150.0	167.0	185.0	1	243.0	2.5	1
SMAF6J160A	SMAF6J160CA	PP	EP	160.0	178.0	197.0	1	259.0	2.3	1
SMAF6J170A	SMAF6J170CA	PR	ER	170.0	189.0	209.0	1	275.0	2.2	1
SMAF6J180A	SMAF6J180CA	PT	ET	180.0	201.0	222.0	1	292.0	2.1	1
SMAF6J190A	SMAF6J190CA	PA	EC	190.0	209.0	243.0	1	308.0	2.0	1
SMAF6J200A	SMAF6J200CA	PV	EV	200.0	224.0	247.0	1	324.0	1.9	1
SMAF6J210A	SMAF6J210CA	PB	ED	210.0	231.0	268.0	1	340.0	1.8	1
SMAF6J220A	SMAF6J220CA	PX	EX	220.0	246.0	272.0	1	356.0	1.7	1
SMAF6J250A		PZ		250.0	279.0	309.0	1	405.0	1.5	1
SMAF6J300A		QE		300.0	335.0	371.0	1	486.0	1.3	1
SMAF6J350A		QG		350.0	391.0	432.0	1	567.0	1.1	1

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

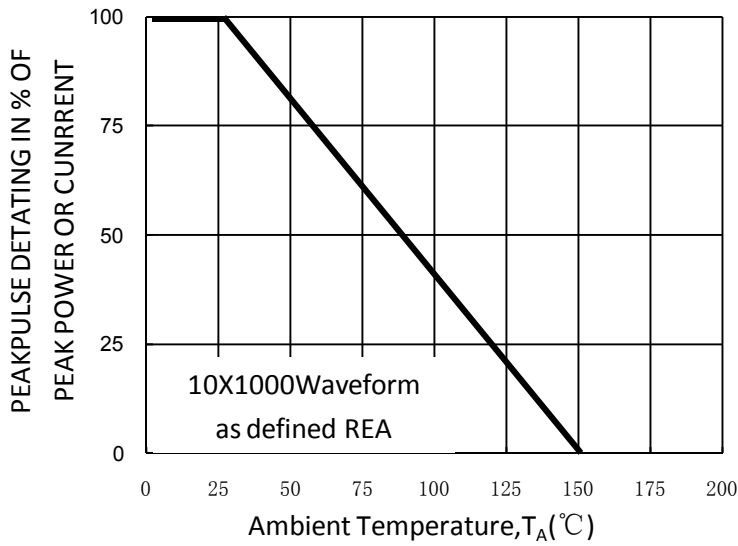


Fig. 1-Pulse Derating Curve

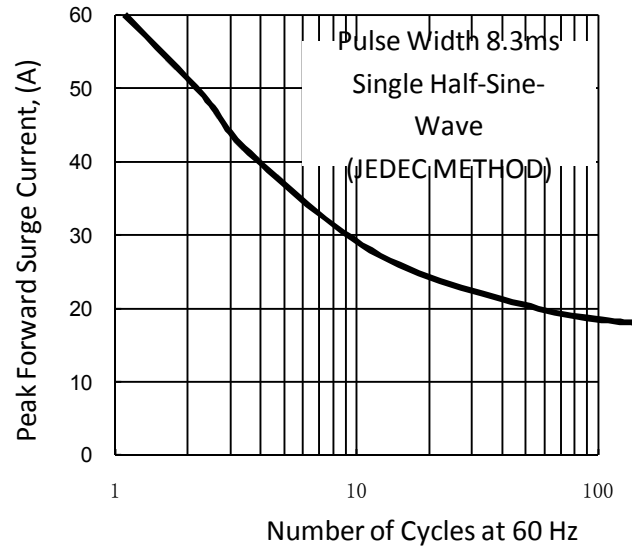


Fig. 2-Maximum Non-Repetitive Surge Current

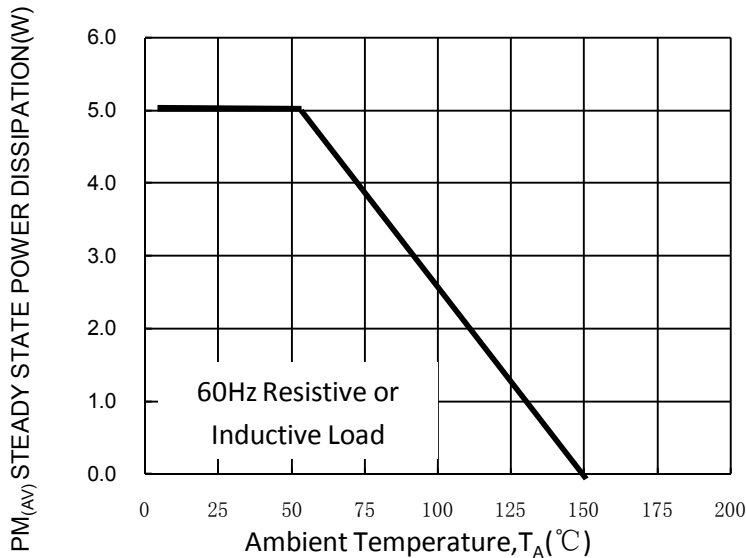


Fig. 3-Steady State Power Derating Curve

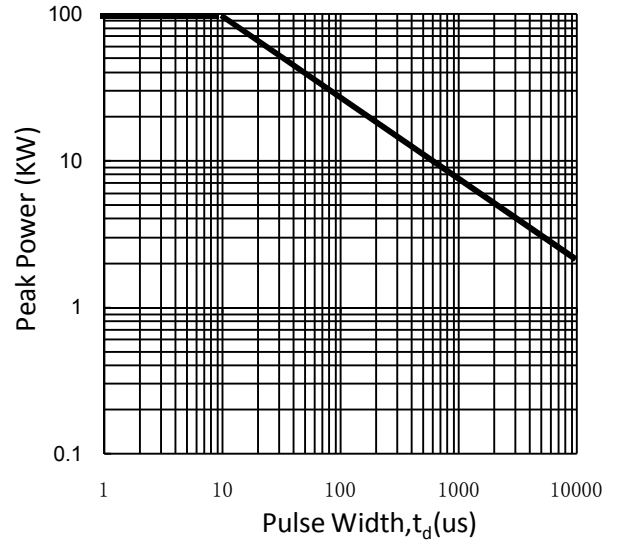


Fig. 4-Peak Pulse Power Rating Curve

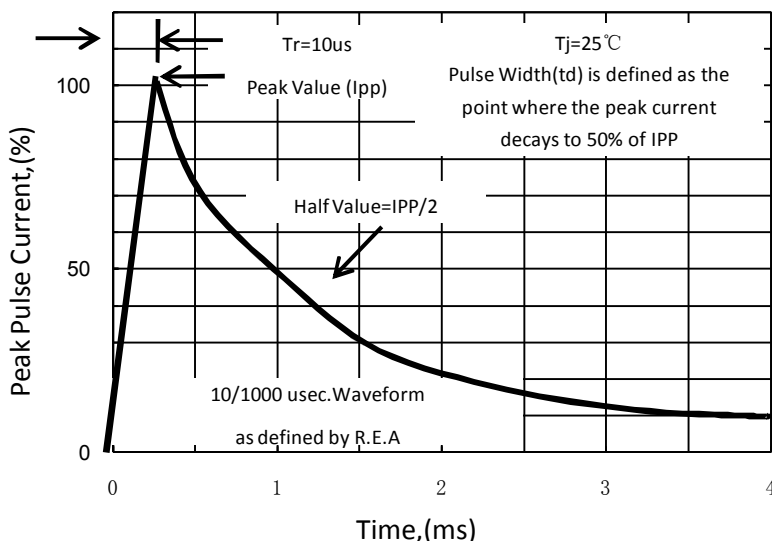


Fig. 5-Pulse Waveform

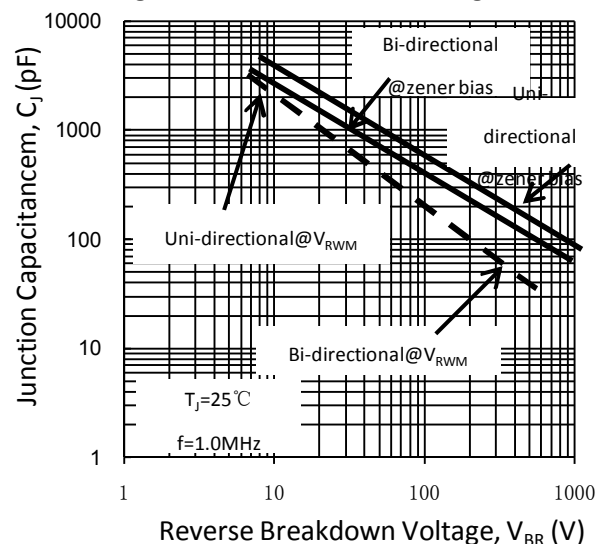


Fig. 6-Typical Junction Capacitance