

SMAF6J5.0(C)A-T THRU SMAF6J350A-T

600Watts

Automotive Transient Voltage Suppressors

PROSEMI offers AEC-Q101 qualified Transient Voltage Suppressor devices is specially designed to protect sensitive electronic devices from lightning and other transient voltage induced voltage transient events.



Features

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



SMAF

Mechanical Data

- Case:SMAF 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
- System: Accreditation through IATF16949 System
- High reliability grade(AEC-Q101 qualified)

Maximum Ratings & Characteristics

Ratings at 25°C ambient temperature unless other wise 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 TL = 75 °C	P _D	5.0	W
Peak forward surge current, 8.3 ms single half sinewave unidirectional only ⁽²⁾	I _{FSM}	60	A
Maximum instantaneous forward voltage at 25 A 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 TA= 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;

3)V_F<3.5V for devices of VBR<200V and V_F<6.5V for devices of VBR>201V.

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

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Characteristic Curves

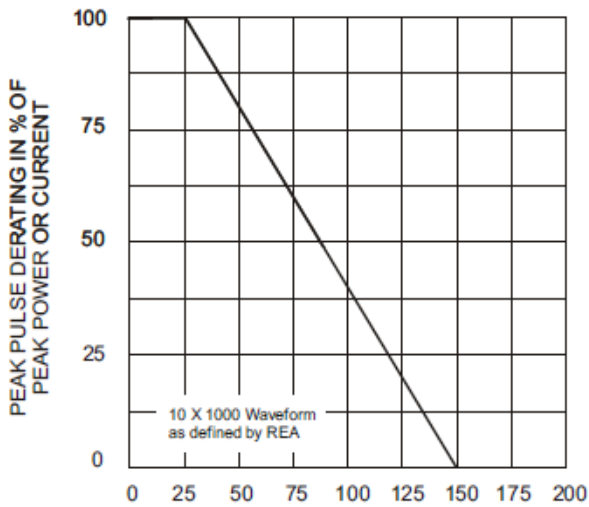


Fig. 1 - Pulse Derating Curve

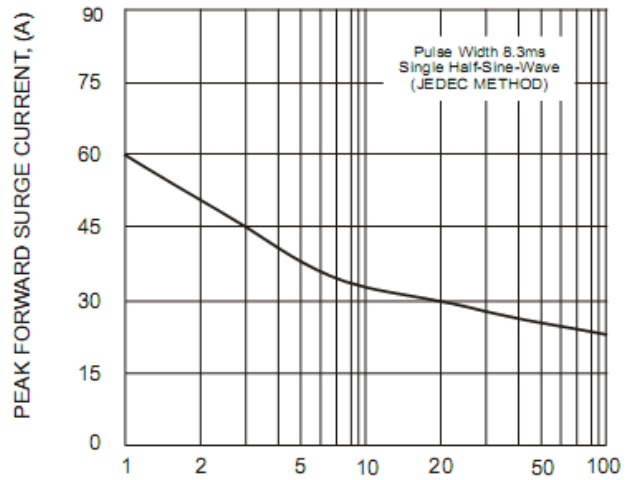


Fig. 2 - Maximum Non-Repetitive Surge Current

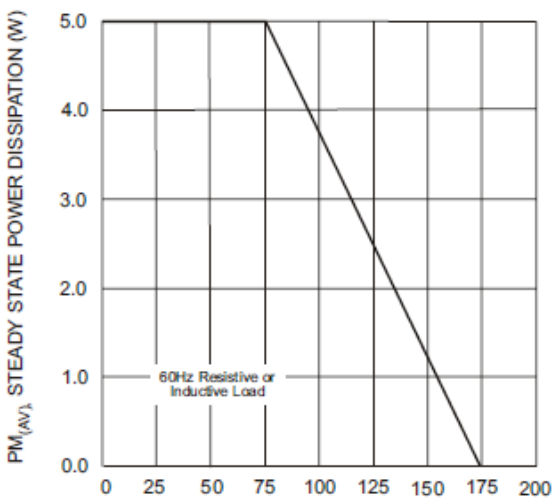


Fig. 3 - Steady State Power Derating Curve

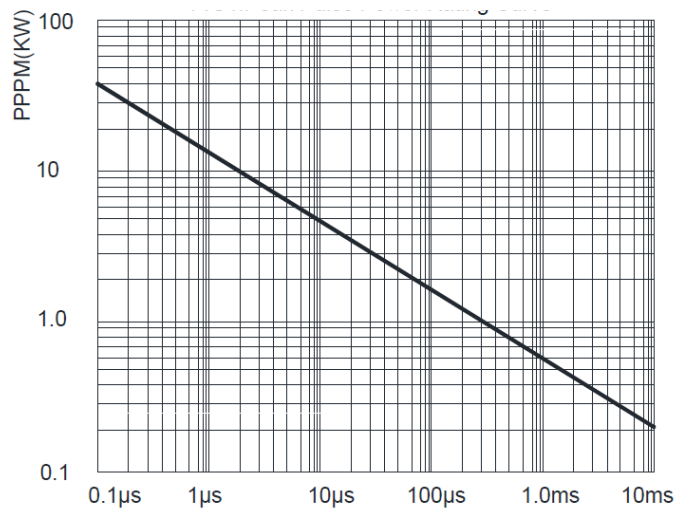


Fig. 4 - Peak Pulse Power Rating Curve

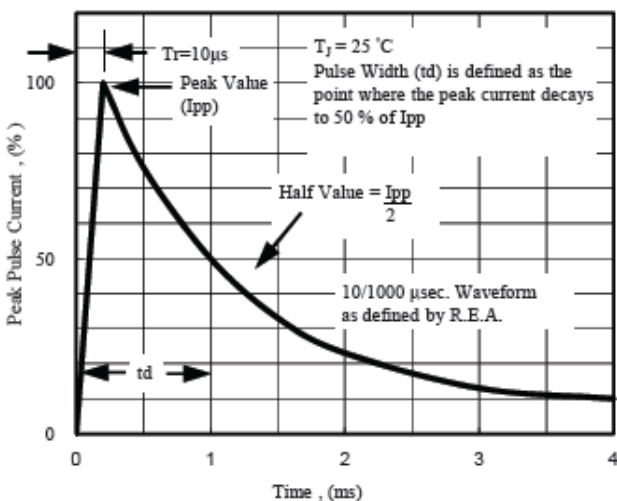


Fig. 5 - Pulse Waveform

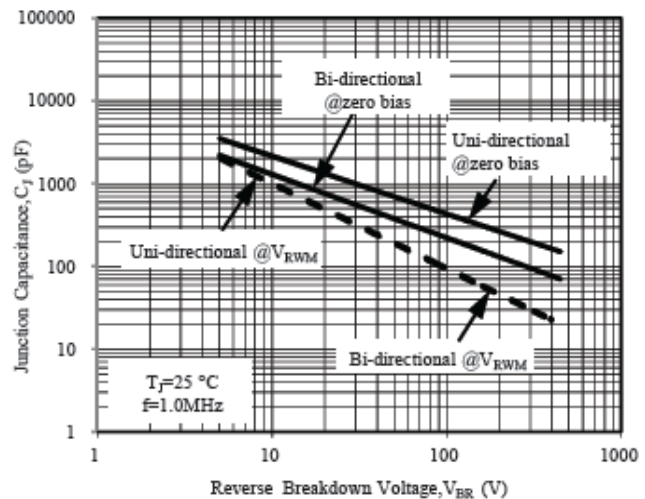


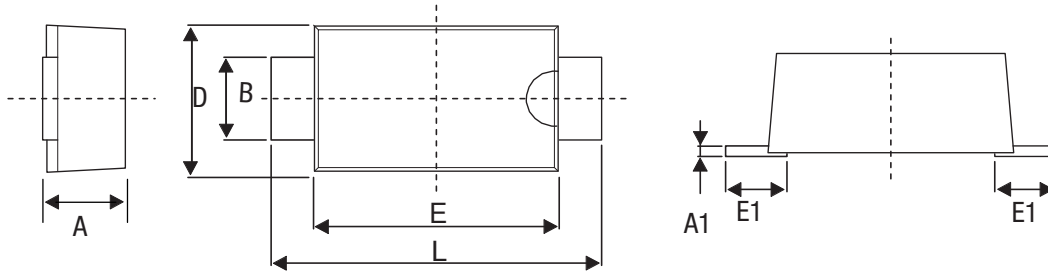
Fig. 6 - Typical Junction Capacitance

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Dimensions (Unit: mm)



A		A1		B		E		E1		D		L	
Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1.00	1.40	0.10	0.30	1.30	1.60	3.30	3.70	0.60	1.20	2.40	2.80	4.35	4.85

Package Information

Qty: 3,000/Tape and reel

Part Numbering System

