

SMF5.0(C)A-T to SMF220(C)A-T

200Watts

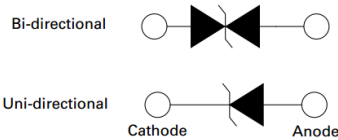
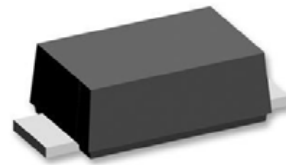
Automotive Transient Voltage Suppressors

PROSEMI offers AEC-Q101 qualified TVS diode device is specially designed to protect sensitive electronic devices from lightning and other transient voltage induced voltage transient events.



Features

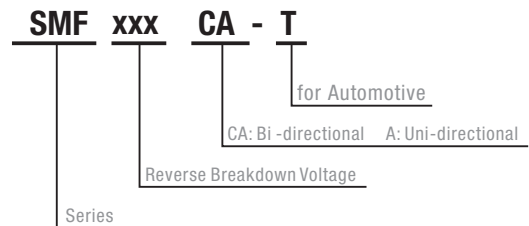
- Low profile package
- Very fast response time
- Unidirectional(A) and Bidirectional(CA) Protection
- AEC-Q101 qualified available
- Excellent Clamping Capability
- Glass Passivated Junction
- Built-in Strain relief



Applications

- I/O Interfaces
- Power lines
- Computers & Consumer Electronics
- Automotive and Telecommunication
- Industrial Electronics

Part Numbering System



Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 10/1000\mu s$) (see Note1,2&3)	P_{PPM}	200	Watts
Peak pulse current (10/1000 μs) (see Note2&3)	I_{PPM}	See Electrical Characteristics	A
Peak Forward surge current (see Note4&5)	I_{FSM}	20	A
Power Dissipation on infinite heat sink $T_A = 50^\circ C$ (Fig5)	P_D	1.0	W
Operating Junction Temperature range	T_J	-55 ~ +150	$^\circ C$
Typical Thermal Resistance	$R_{\theta JA}$	180	$^\circ C/W$

Note1: Peak Pulse Power Rating as Pulse Width ,perFig1.

Note2: Peak Pusle Power or Current Derated above $T_A=25^\circ C$ Per Fig. 2 and Non-Repetitive Current Pulse,Per Fig.3.

Note3: Mounted on 5.0x5.0mm² copper pad to each terminal.

Note4: 8.3ms Single Half Sine Wave or Equivalent Square Wave

Note5: Maximum Forward Surge Current only for Unidirectional Device per Fig6.

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Electrical Characteristics

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 (μ A) @ V_R
Uni	Bi	Uni	Bi		Min.	Max.				
SMF5.0A-T	SMF5.0CA-T	FET	KET	5.0	6.40	7.00	10	9.2	21.74	400
SMF6.0A-T	SMF6.0CA-T	FGT	KGT	6.0	6.67	7.37	10	10.3	19.42	400
SMF6.5A-T	SMF6.5CA-T	FKT	KKT	6.5	7.22	7.98	10	11.2	17.86	250
SMF7.0A-T	SMF7.0CA-T	FMT	KMT	7.0	7.78	8.60	10	12.0	16.67	100
SMF7.5A-T	SMF7.5CA-T	FPT	KPT	7.5	8.33	9.21	1	12.9	15.50	50
SMF8.0A-T	SMF8.0CA-T	FRT	KRT	8.0	8.89	9.83	1	13.6	14.71	25
SMF8.5A-T	SMF8.5CA-T	FTT	KTT	8.5	9.44	10.40	1	14.4	13.89	10
SMF9.0A-T	SMF9.0CA-T	FVT	KVT	9.0	10.00	11.10	1	15.4	12.99	5.0
SMF10A-T	SMF10CA-T	FXT	KXT	10	11.10	12.30	1	17.0	11.76	2.5
SMF11A-T	SMF11CA-T	FZT	KZT	11	12.20	13.50	1	18.2	10.99	2.5
SMF12A-T	SMF12CA-T	HET	LET	12	13.30	14.70	1	19.9	10.05	2.5
SMF13A-T	SMF13CA-T	HGT	LGT	13	14.40	15.90	1	21.5	9.30	1
SMF14A-T	SMF14CA-T	HKT	LKT	14	15.60	17.20	1	23.2	8.62	1
SMF15A-T	SMF15CA-T	HMT	LMT	15	16.70	18.50	1	24.4	8.20	1
SMF16A-T	SMF16CA-T	HPT	LPT	16	17.80	19.70	1	26.0	7.69	1
SMF17A-T	SMF17CA-T	HRT	LRT	17	18.90	20.90	1	27.6	7.25	1
SMF18A-T	SMF18CA-T	HTT	LTT	18	20.00	22.10	1	29.2	6.85	1
SMF19A-T	SMF19CA-T	HBT	LBT	19	21.10	23.30	1	30.6	6.54	1
SMF20A-T	SMF20CA-T	HVT	LVT	20	22.20	24.50	1	32.4	6.17	1
SMF22A-T	SMF22CA-T	HXT	LXT	22	24.40	26.90	1	35.5	5.63	1
SMF24A-T	SMF24CA-T	HZT	LZT	24	26.70	29.50	1	38.9	5.14	1
SMF26A-T	SMF26CA-T	JET	MET	26	28.90	31.90	1	42.1	4.75	1
SMF28A-T	SMF28CA-T	JGT	MGT	28	31.10	34.40	1	45.4	4.41	1
SMF30A-T	SMF30CA-T	JKT	MKT	30	33.30	36.80	1	48.4	4.13	1
SMF33A-T	SMF33CA-T	JMT	MMT	33	36.70	40.60	1	53.3	3.75	1
SMF36A-T	SMF36CA-T	JPT	MPT	36	40.00	44.20	1	58.1	3.44	1
SMF40A-T	SMF40CA-T	JRT	MRT	40	44.40	49.10	1	64.5	3.10	1
SMF43A-T	SMF43CA-T	JTT	MTT	43	47.80	52.80	1	69.4	2.88	1
SMF45A-T	SMF45CA-T	JVT	MVT	45	50.00	55.30	1	72.7	2.75	1
SMF48A-T	SMF48CA-T	JXT	MXT	48	53.30	58.90	1	77.4	2.58	1
SMF51A-T	SMF51CA-T	JZT	MZT	51	56.70	62.70	1	82.4	2.43	1
SMF54A-T	SMF54CA-T	XET	NET	54	60.00	66.30	1	87.1	2.30	1
SMF58A-T	SMF58CA-T	XGT	NGT	58	64.40	71.20	1	93.6	2.14	1
SMF60A-T	SMF60CA-T	XKT	NKT	60	66.70	73.70	1	96.8	2.07	1
SMF64A-T	SMF64CA-T	XMT	NMT	64	71.10	78.60	1	103.0	1.94	1
SMF70A-T	SMF70CA-T	XPT	NPT	70	77.80	86.00	1	113.0	1.77	1
SMF75A-T	SMF75CA-T	XRT	NRT	75	83.30	92.10	1	121.0	1.65	1
SMF78A-T	SMF78CA-T	XTT	NTT	78	86.70	95.80	1	126.0	1.59	1
SMF80A-T	SMF80CA-T	XBT	NBT	80	88.80	97.60	1	129.0	1.55	1
SMF85A-T	SMF85CA-T	XVT	NVT	85	94.40	104.0	1	137.0	1.46	1
SMF90A-T	SMF90CA-T	XXT	NXT	90	100.0	111.0	1	146.0	1.37	1
SMF100A-T	SMF100CA-T	XZT	NZT	100	111.0	123.0	1	162.0	1.23	1
SMF110A-T	SMF110CA-T	TET	PET	110	122.0	135.0	1	177.0	1.13	1
SMF120A-T	SMF120CA-T	TGT	PGT	120	133.0	147.0	1	193.0	1.04	1
SMF130A-T	SMF130CA-T	TKT	PKT	130	144.0	159.0	1	209.0	0.96	1
SMF140A-T	SMF140CA-T	TBT	PBT	140	155.0	171.0	1	224.0	0.89	1
SMF150A-T	SMF150CA-T	TMT	PMT	150	167.0	185.0	1	243.0	0.82	1
SMF160A-T	SMF160CA-T	TPT	PPT	160	178.0	197.0	1	259.0	0.77	1
SMF170A-T	SMF170CA-T	TRT	PRT	170	189.0	209.0	1	275.0	0.73	1
SMF180A-T	SMF180CA-T	TTT	PTT	180	200.0	220.0	1	292.0	0.68	1
SMF190A-T	SMF190CA-T	TVT	PVT	190	211.0	232.0	1	308.0	0.65	1
SMF200A-T	SMF200CA-T	TXT	PXT	200	224.0	247.0	1	324.0	0.62	1
SMF220A-T	SMF220CA-T	TZT	PZT	220	246.0	272.0	1	356.0	0.56	1

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Typical Characteristics

Figure 1: Peak Pulse Power Rating Curve

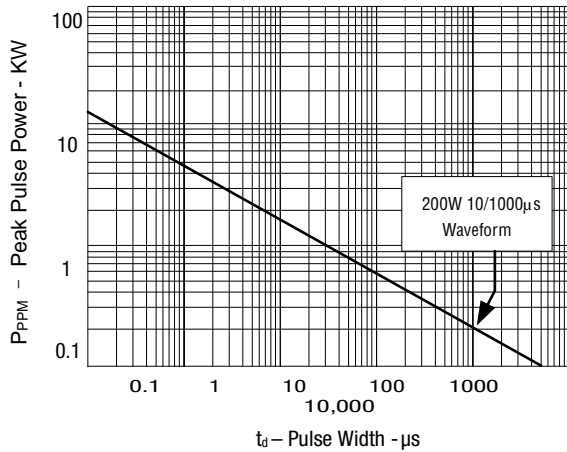


Figure 2: Pulse Derating Curve

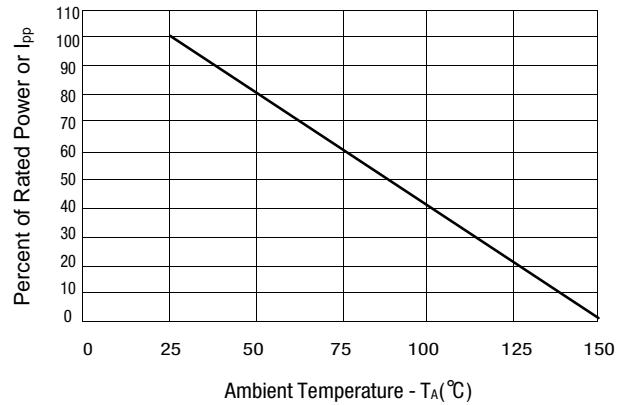


Figure 3: Pulse Waveform

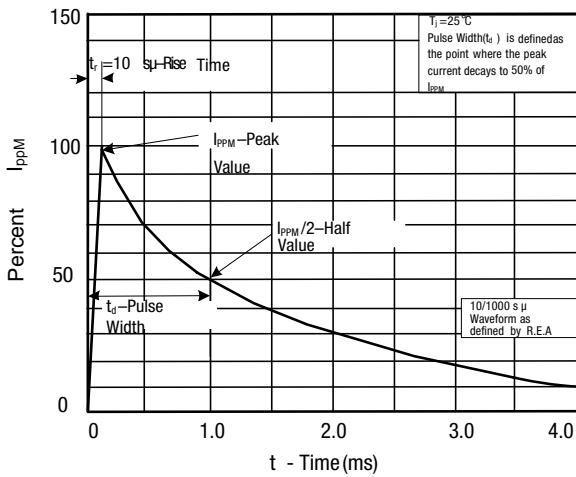


Figure 4: Typical Junction Capacitance

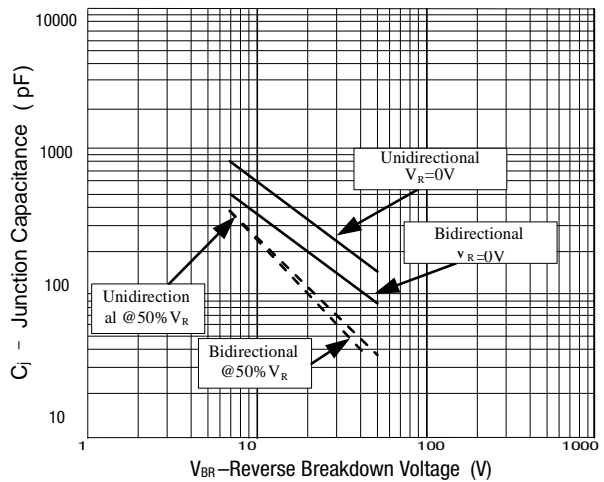


Figure 5: Steady State Power Dissipation Derating Curve

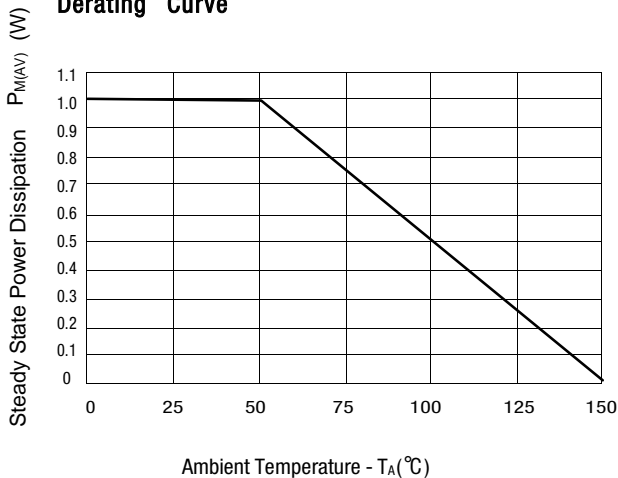
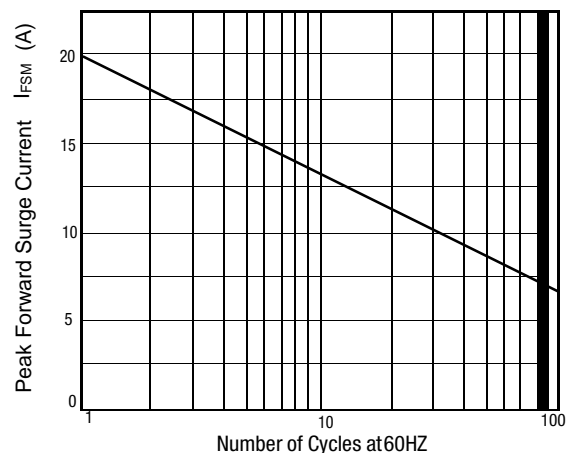


Figure 6: Maximum Non-Repetitive Forward Surge Current Only Unidirectional

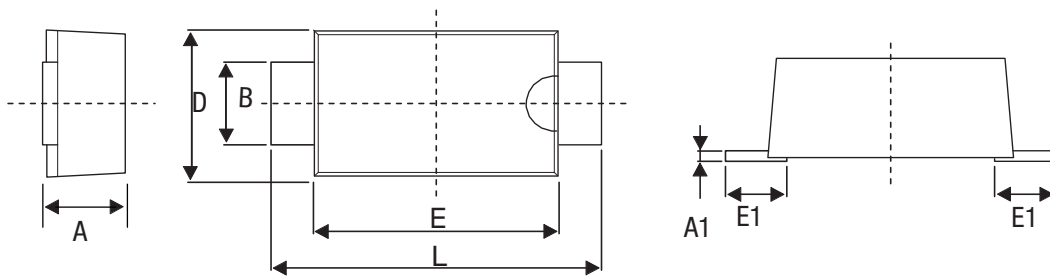


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Dimension (Unit: mm)



A		A1		B		E		E1		D		L	
Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1.200	1.400	0.150	0.250	0.800	1.100	2.700	0.900	0.350	0.850	1.750	1.950	3.500	3.900

Packaging

- Quantity: 3,000pcs
- 12mm wide tape on 330mm(13 inch) diameter reel –specification EIA Standard 481.