

P4SMFL5.0(C)A-T to P4SMFL220A-T

400Watts

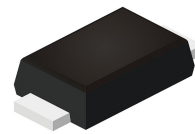
Automotive Transient Voltage Suppressors

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

- Glass passivated chip
- 400 W peak pulse power capability with a 10/1000 μ s waveform, repetitive rate (duty cycle):0.01 %
- Excellent clamping capability
- AEC-Q101 qualified available
- Low reverse leakage
- Very fast response time
- Lead and body according with RoHS standard

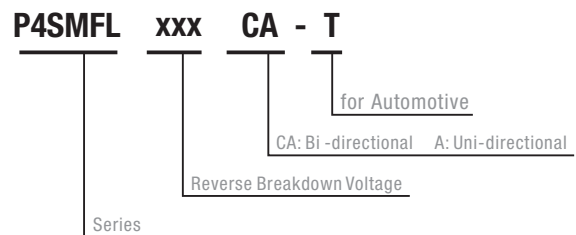


SOD123FL

Applications

- Case: SOD123FL 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

Part Numbering System



Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak power dissipation with a 10/1000 μ s waveform(1)	P _{PPM}	400	Watts
Peak pulse current with a 10/1000 μ s waveform(1)	I _{PPM}	See Electrical Characteristics	A
Peak forward surge current, 8.3 ms single half sinewave unidirectional only(2)	I _{FSM}	40	A
Power dissipation on infinite heatsink at T _L = 75°C	P _D	3.0	W
Operating junction and storage temperature range	T _J , T _{STG}	-55 ~ +150	°C
Maximum instantaneous forward voltage at 25 A for unidirectional only(3)	V _F	3.5 / 6.5	V

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 ;

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

Automotive Transient Voltage Suppressors

P4SMFL5.0(C)A-T to P4SMFL220A-T

400Watts

Electrical Characteristics

Part Number		Device Marking Code		Reverse Stand-off Voltage V_{RWM} (V)	Breakdown Voltage		Test Current I_T (mA)	Max. Clamping Voltage V_C (V) @ I_{PP}	Max. Peak Pulse Current I_{PP} (A)	Max. Reverse Leakage I_R (μ A) @ V_{RWM}
UNI-POLAR	BI-POLAR	UNI	BI		V_{BR} @ I_T					
					Min. (V)	Max. (V)				
P4SMFL5.0A-T	P4SMFL5.0CA-T	AET	WET	5.0	6.40	7.00	10	9.2	43.5	800
P4SMFL6.0A-T	P4SMFL6.0CA-T	AGT	WGT	6.0	6.67	7.37	10	10.3	38.8	800
P4SMFL6.5A-T	P4SMFL6.5CA-T	AKT	WKT	6.5	7.22	7.98	10	11.2	35.7	500
P4SMFL7.0A-T	P4SMFL7.0CA-T	AMT	WMT	7.0	7.78	8.60	10	12.0	33.3	200
P4SMFL7.5A-T	P4SMFL7.5CA-T	APT	WPT	7.5	8.33	9.21	1	12.9	31.0	100
P4SMFL8.0A-T	P4SMFL8.0CA-T	ART	WRT	8.0	8.89	9.83	1	13.6	29.4	50
P4SMFL8.5A-T	P4SMFL8.5CA-T	ATT	WTT	8.5	9.44	10.40	1	14.4	27.8	20
P4SMFL9.0A-T	P4SMFL9.0CA-T	AVT	WVT	9.0	10.00	11.10	1	15.4	26.0	10
P4SMFL10A-T	P4SMFL10CA-T	AXT	WXT	10.0	11.10	12.30	1	17.0	23.5	5
P4SMFL11A-T	P4SMFL11CA-T	AZT	WZT	11.0	12.20	13.50	1	18.2	22.0	1
P4SMFL12A-T	P4SMFL12CA-T	BET	XET	12.0	13.30	14.70	1	19.9	20.1	1
P4SMFL13A-T	P4SMFL13CA-T	BGT	XGT	13.0	14.40	15.90	1	21.5	18.6	1
P4SMFL14A-T	P4SMFL14CA-T	BKT	XKT	14.0	15.60	17.20	1	23.2	17.2	1
P4SMFL15A-T	P4SMFL15CA-T	BMT	XMT	15.0	16.70	18.50	1	24.4	16.4	1
P4SMFL16A-T	P4SMFL16CA-T	BPT	XPT	16.0	17.80	19.70	1	26.0	15.4	1
P4SMFL17A-T	P4SMFL17CA-T	BRT	XRT	17.0	18.90	20.90	1	27.6	14.5	1
P4SMFL18A-T	P4SMFL18CA-T	BTT	XTT	18.0	20.00	22.10	1	29.2	13.7	1
P4SMFL20A-T	P4SMFL20CA-T	BVT	XVT	20.0	22.20	24.50	1	32.4	12.3	1
P4SMFL22A-T	P4SMFL22CA-T	BXT	XXT	22.0	24.40	26.90	1	35.5	11.3	1
P4SMFL24A-T	P4SMFL24CA-T	BZT	XZT	24.0	26.70	29.50	1	38.9	10.3	1
P4SMFL26A-T	P4SMFL26CA-T	CET	YET	26.0	28.90	31.90	1	42.1	9.5	1
P4SMFL28A-T	P4SMFL28CA-T	CGT	YGT	28.0	31.10	34.40	1	45.4	8.8	1
P4SMFL30A-T	P4SMFL30CA-T	CKT	YKT	30.0	33.50	36.80	1	48.4	8.3	1
P4SMFL33A-T	P4SMFL33CA-T	CMT	YMT	33.0	36.70	40.60	1	53.3	7.5	1
P4SMFL36A-T	P4SMFL36CA-T	CPT	YPT	36.0	40.00	44.20	1	58.1	6.9	1
P4SMFL40A-T	P4SMFL40CA-T	CRT	YRT	40.0	44.40	49.10	1	64.5	6.2	1
P4SMFL43A-T	P4SMFL43CA-T	CTT	YTT	43.0	47.80	52.80	1	69.4	5.8	1
P4SMFL45A-T	P4SMFL45CA-T	CVT	YVT	45.0	50.00	55.30	1	72.7	5.5	1
P4SMFL48A-T	P4SMFL48CA-T	CXT	YXT	48.0	53.30	58.90	1	77.4	5.2	1
P4SMFL51A-T	P4SMFL51CA-T	CZT	YZT	51.0	56.70	62.70	1	82.4	4.9	1
P4SMFL54A-T	P4SMFL54CA-T	RET	ZET	54.0	60.00	66.30	1	87.1	4.6	1
P4SMFL58A-T	P4SMFL58CA-T	RGT	ZGT	58.0	64.40	71.20	1	93.6	4.3	1
P4SMFL60A-T	P4SMFL60CA-T	RKT	ZKT	60.0	66.70	73.70	1	96.8	4.1	1
P4SMFL64A-T	P4SMFL64CA-T	RMT	ZMT	64.0	71.10	78.60	1	103.0	3.9	1
P4SMFL70A-T	P4SMFL70CA-T	RPT	ZPT	70.0	77.80	86.00	1	113.0	3.5	1
P4SMFL75A-T	P4SMFL75CA-T	RRT	ZRT	75.0	83.30	92.10	1	121.0	3.3	1
P4SMFL78A-T	P4SMFL78CA-T	RTT	ZTT	78.0	86.70	95.80	1	126.0	3.2	1
P4SMFL85A-T	P4SMFL85CA-T	RVT	ZVT	85.0	94.40	104.0	1	137.0	2.9	1
P4SMFL90A-T	P4SMFL90CA-T	RXT	ZXT	90.0	100.00	111.0	1	146.0	2.7	1
P4SMFL100A-T	P4SMFL100CA-T	RZT	ZZT	100.0	111.00	123.0	1	162.0	2.5	1
P4SMFL110A-T	P4SMFL110CA-T	SET	VET	110.0	122.00	135.0	1	177.0	2.3	1
P4SMFL120A-T	P4SMFL120CA-T	SGT	VGT	120.0	133.00	147.0	1	193.0	2.1	1
P4SMFL130A-T	P4SMFL130CA-T	SKT	VKT	130.0	144.00	159.0	1	209.0	1.9	1
P4SMFL150A-T	P4SMFL150CA-T	SMT	VMT	150.0	167.00	185.0	1	243.0	1.6	1
P4SMFL160A-T	P4SMFL160CA-T	SPT	VPT	160.0	178.00	197.0	1	259.0	1.5	1
P4SMFL170A-T	P4SMFL170CA-T	SRT	VRT	170.0	189.00	209.0	1	275.0	1.5	1
P4SMFL180A-T		STT		180.0	201.00	222.0	1	292.0	1.4	1
P4SMFL190A-T		SUT		190.0	209.00	243.0	1	308.0	1.3	1
P4SMFL200A-T		SVT		200.0	224.00	247.0	1	324.0	1.2	1
P4SMFL210A-T		SWT		210.0	231.00	268.0	1	340.0	1.2	1
P4SMFL220A-T		GXT		220.0	246.00	272.0	1	356.0	1.1	1

Automotive Transient Voltage Suppressors

P4SMFL5.0(C)A-T to P4SMFL220A-T

400Watts

Typical Characteristics

Fig. 1 - Pulse Derating Curve

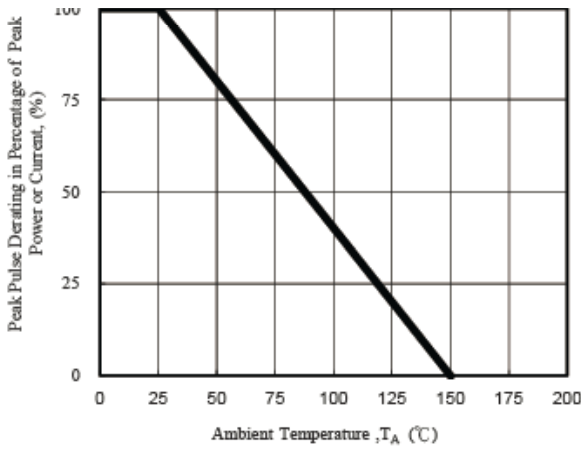


Fig. 2 - Maximum Non-Repetitive Surge Current

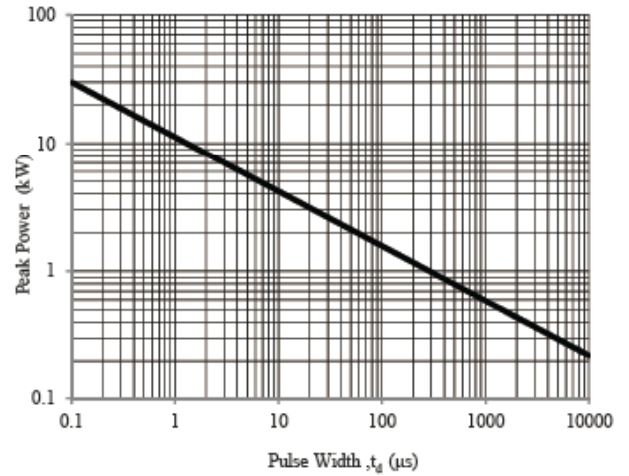
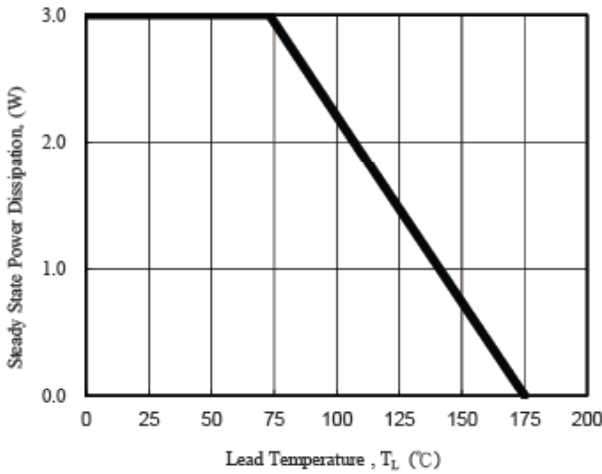
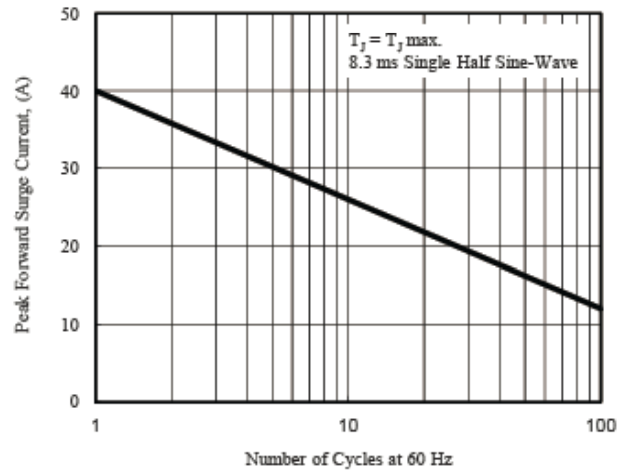


Fig. 5 - Pulse Waveform

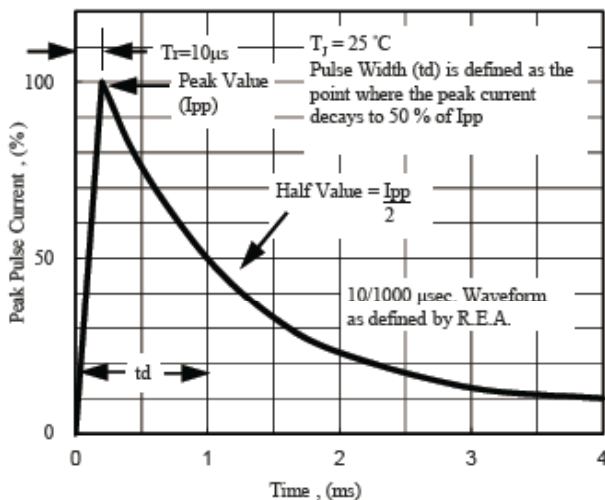
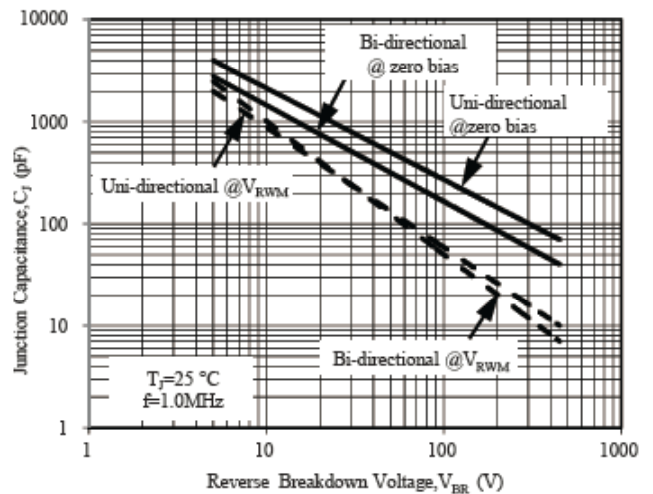


Fig. 6 - Typical Junction Capacitance

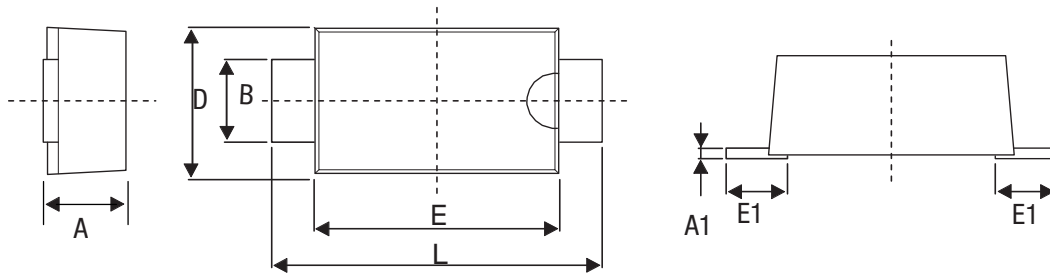


Automotive Transient Voltage Suppressors

P4SMFL5.0(C)A-T to P4SMFL220A-T

400Watts

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.