



P4SMAFJ3.3A~P4SMAFJ250A

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR POWER 400 Watt

STAND-OFF VOLTAGE

3.3 to 250 Volt

SMAF

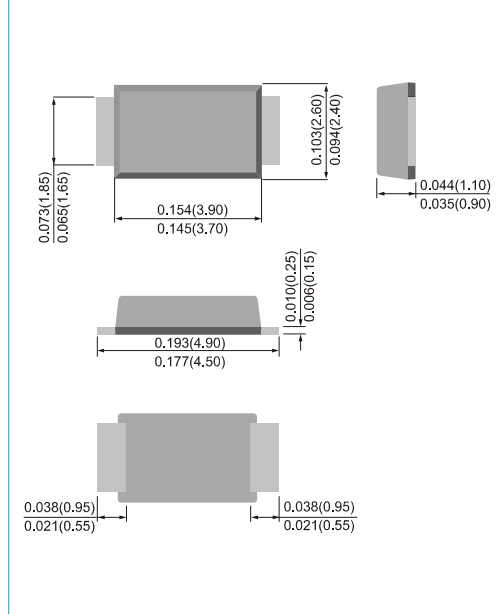
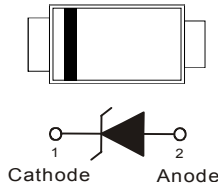
Unit : inch(mm)

FEATURES

- For surface mounted applications in order to optimize board space.
- Glass passivated junction
- Low inductance
- Ultra thin profile package for space constrained utilization
- Package suitable for automated handling
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature soldering : 260°C /10 seconds at terminals
- ESD IEC-61000-4-2 Air ± 30kV, Contact ± 30kV
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive)
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: Plastic molded
- Terminals: Solder plated, solderable per MIL-STD-750,Method2026
- Polarity: Color band denotes cathode end
- Weight: 0.0011 ounces, 0.0328 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on T _A =25°C (Note 1,2,4, Fig1)	P _{PPM}	400	W
Peak Forward Surge Current (Note 3, Fig 5)	I _{FSM}	40	A
Peak Pulse Current on 10/1000 us waveform (Note 1, Fig 2)	I _{PPM}	see Table 1	A
ESD IEC-61000-4-2 (Air) ESD IEC-61000-4-2 (Contact)	V _{ESD}	±30 ±30	kV
Typical Thermal Resistance Junction to Ambient (Note 2)	R _{θJA}	150	°C/W
Operating Junction Temperature and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

NOTES :

1. Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C per Fig. 2.
2. Mounted on FR-4 PCB single-sided copper, mini pad.
3. Peak Forward Surge Current : 8.3ms single half sine-wave Superimposed on rated load.
4. Peak pulse power waveform is tp=10/1000µs.
5. A transient suppressor is selected according to the working peak reverse voltage(V_{RWM}), which should be equal to or greater than the DC or continuous peak operating voltage level.



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Part Number	Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current	Marking Code
	V _{RWM} (Note 5)	V _{BR @ I_T}		I _T	I _{R @ V_{RWM}}	V _{C @ I_{PP}}	I _{PP}	
		Min.	Max.					
	V	V	V	mA	μA	V	A	
400W Transient Voltage Suppressor								
P4SMAFJ3.3A	3.3	5.20	6.00	10	600	8.5	47	HC
P4SMAFJ5.0A	5	6.40	7.00	10	400	9.2	43.5	HE
P4SMAFJ6.0A	6	6.67	7.37	10	400	10.3	38.8	HG
P4SMAFJ6.5A	6.5	7.22	7.98	10	250	11.2	35.7	HK
P4SMAFJ7.0A	7	7.78	8.60	10	100	12	33.3	HM
P4SMAFJ7.5A	7.5	8.33	9.21	1	50	12.9	31	HP
P4SMAFJ8.0A	8	8.89	9.83	1	25	13.6	29.4	HR
P4SMAFJ8.5A	8.50	9.44	10.82	1	10	14.4	27.7	HT
P4SMAFJ9.0A	9	10	11.5	1	5	15.4	26	HV
P4SMAFJ10A	10	11.1	12.8	1	5	17	23.5	HX
P4SMAFJ11A	11	12.2	14	1	1	18.2	22	HZ
P4SMAFJ12A	12	13.3	15.3	1	1	19.9	20.1	IE
P4SMAFJ13A	13	14.4	16.5	1	1	21.5	18.6	IG
P4SMAFJ14A	14	15.6	17.9	1	1	23.2	17.2	IK
P4SMAFJ15A	15	16.7	19.2	1	1	24.4	16.4	IM
P4SMAFJ16A	16	17.8	20.5	1	1	26	15.3	IP
P4SMAFJ17A	17	18.9	21.7	1	1	27.6	14.5	IR
P4SMAFJ18A	18	20	23.3	1	1	29.2	13.7	IT
P4SMAFJ20A	20	22.2	25.5	1	1	32.4	12.3	IV
P4SMAFJ22A	22	24.4	28	1	1	35.5	11.2	IX
P4SMAFJ24A	24	26.7	30.7	1	1	38.9	10.3	IZ
P4SMAFJ26A	26	28.9	33.2	1	1	42.1	9.5	JE
P4SMAFJ28A	28	31.1	35.8	1	1	45.4	8.8	JG
P4SMAFJ30A	30	33.3	38.3	1	1	48.4	8.3	JK
P4SMAFJ33A	33	36.7	42.2	1	1	53.3	7.5	JM
P4SMAFJ36A	36	40	46	1	1	58.1	6.9	JP
P4SMAFJ40A	40	44.4	51.1	1	1	64.5	6.2	JR
P4SMAFJ43A	43	47.8	54.9	1	1	69.4	5.7	JT
P4SMAFJ45A	45	50	57.5	1	1	72.7	5.5	JV
P4SMAFJ48A	48	53.3	61.3	1	1	77.4	5.2	JX
P4SMAFJ51A	51	56.7	65.2	1	1	82.4	4.9	JZ
P4SMAFJ54A	54	60	69	1	1	87.1	4.6	RE
P4SMAFJ58A	58	64.4	74.1	1	1	93.6	4.3	RG
P4SMAFJ60A	60	66.7	76.7	1	1	96.8	4.1	RK
P4SMAFJ64A	64	71.1	81.8	1	1	103	3.9	RM
P4SMAFJ70A	70	77.8	89.5	1	1	113	3.5	RP
P4SMAFJ75A	75	83.3	95.8	1	1	121	3.3	RR
P4SMAFJ78A	78	86.7	99.7	1	1	126	3.2	RT
P4SMAFJ85A	85	94.4	108.2	1	1	137	2.9	RV
P4SMAFJ90A	90	100	115.5	1	1	146	2.7	RX
P4SMAFJ100A	100	111	128	1	1	162	2.5	RZ
P4SMAFJ110A	110	122	140.5	1	1	177	2.3	SE
P4SMAFJ120A	120	133	153	1	1	193	2	SG
P4SMAFJ130A	130	144	165.5	1	1	209	1.9	SK
P4SMAFJ150A	150	167	192.5	1	1	243	1.6	SM
P4SMAFJ160A	160	178	205	1	1	259	1.5	SP
P4SMAFJ170A	170	189	217.5	1	1	275	1.4	SR



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	V _{RWM} (Note 5)	V _{BR} @ I _T		I _T	I _R @ V _{RWM}	V _C @ I _{PP}	I _{PP}	
		Min.	Max.					
	V	V	V	mA	μA	V	A	
400W Transient Voltage Suppressor								
P4SMAFJ180A	180	198	221	1	1	291	1.4	ST
P4SMAFJ190A	190	209	233	1	1	307	1.3	SV
P4SMAFJ200A	200	220	246	1	1	324	1.2	SX
P4SMAFJ220A	220	246	272	1	1	356	1.1	GE
P4SMAFJ250A	250	279	309	1	1	405	1	GG



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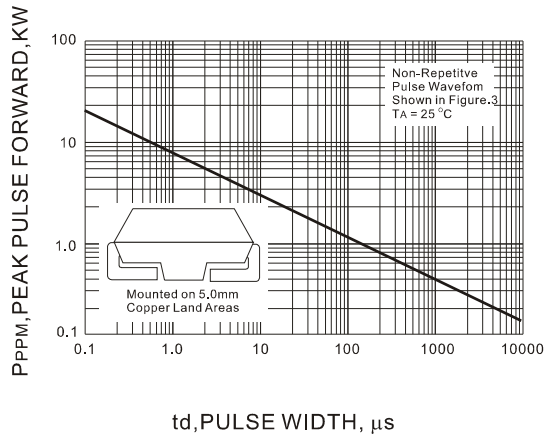


Fig.1 PEAK PULSE POWER RATING CURVE

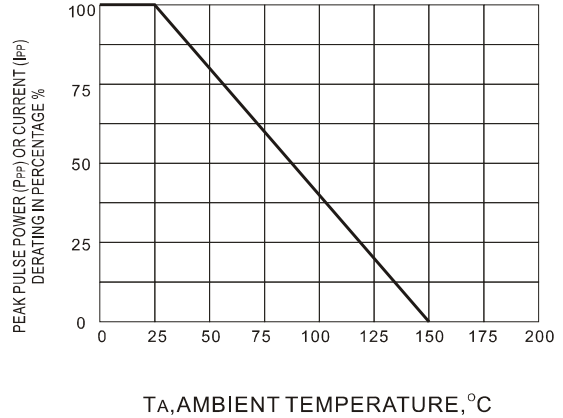


Fig.2 DERATING CURVE

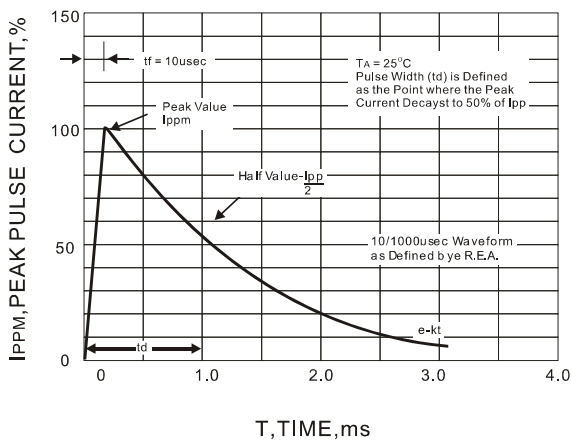


Fig.3 PULSE WAVEFORM

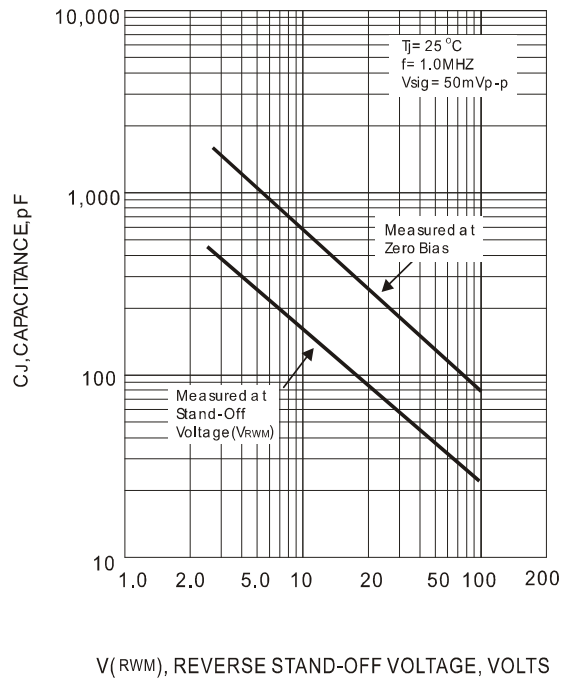


Fig.4 TYPICAL JUNCTION CAPACITANCE

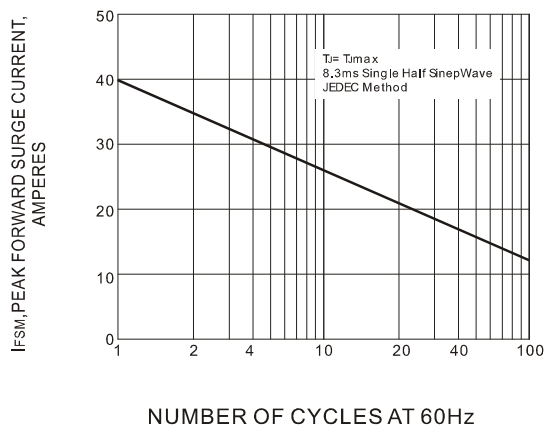
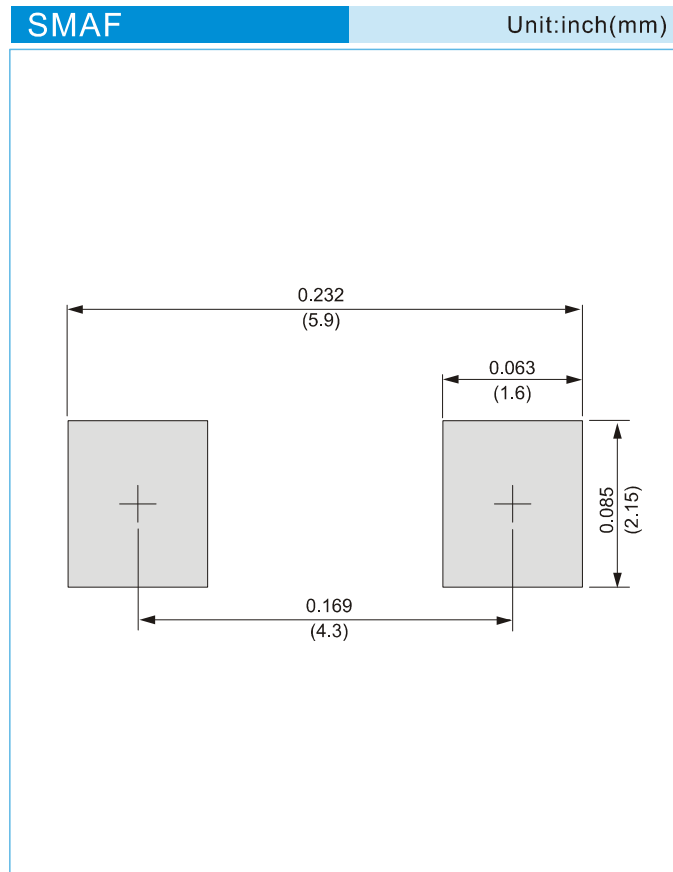


Fig.5 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
T/R - 10K per 13" plastic Reel
T/R - 3K per 7" plastic Reel



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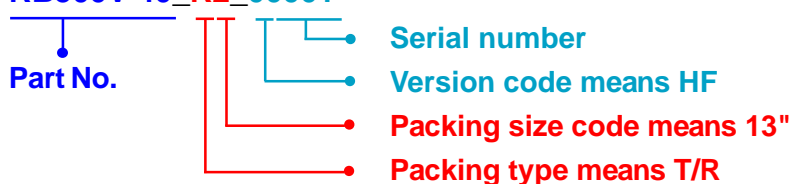
Part No_packing code_Version

P4SMAFJ3.3A_R1_00001

P4SMAFJ3.3A_R2_00001

For example :

RB500V-40_R2_00001



Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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