400W 8.5V-170V SMAF

Surface mount transient voltage suppressor power 400W, Stand-Off Voltage:8.5V~170V,SMAF thin package.

Glass passivated junction,Low inductance.Halogen free product.

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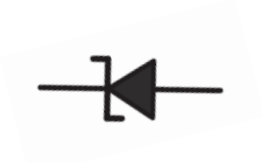
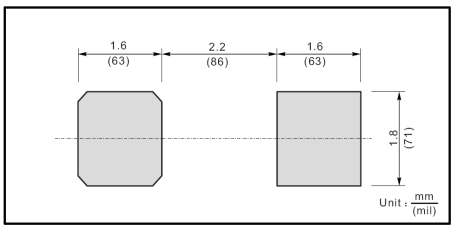
General purpose.



PIN	DESCRIPTION
1	Cathode
2	Anode

The recommended mounting pad size



See Marking Instructions.

Parameter	Symbol	Rating	Unit
Peak Pulse Power Dissipation on T_A=25 (Note1,2,4,Fig1)	P_{PPM}	400	W
Peak Forward Surge Current (Note 3,Fig5)	I_{FSM}	40	A
Peak Pulse Current on 10/1000 us waveform (Note1,Fig2)	I_{PPM}	see Table 1	A
Typical Junction capacitance at V_R=4V, f=1MHz	C_j	390	pF
ESD Voltage per IEC6100-4-2 Contact Air	V_{ESD1} V_{ESD2}	±8 ±15	kV
Typical Thermal Resistance(Note2)	R_{JA}	150	/W
Operating Junction Temperature and Storage Temperature Range	T_J T_{stg}	-55~150	

NOTES:
1. Non-repetitive current pulse, per Fig.3 and derated above T_A= 25 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 (JEDEC method).
4. Peak pulse power waveform is 10/1000 S.

Type	Marking	Reverse Stand-off Voltage	Breakdown Voltage		Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current
		V_{RMW}	$V_{BR}@I_T$		I_T	$I_R@V_{RWM}$	$V_C@I_{PP}$	I_{PP}
			Min	Max				
		V	V	V	mA	A	V	A

Type	Marking	Reverse Stand-off Voltage	Breakdown Voltage		Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current
		V_{RMW}	V_{BR}@I_T		I_T	I_R@V_{RWM}	V_C@I_{PP}	I_{PP}
			Min	Max				
		V	V	V	mA	A	V	A
P4SMAFJ16A	IP	16	17.8	20.5	1.0	1.0	26.0	15.3
P4SMAFJ17A	IR	17	18.9	21.7	1.0	1.0	27.6	14.5
P4SMAFJ18A	IT	18	20.0	23.3	1.0	1.0	29.2	13.7
P4SMAFJ20A	IV	20	22.2	25.5	1.0	1.0	32.4	12.3
P4SMAFJ22A	IX	22	24.4	28.0	1.0	1.0	35.5	11.2
P4SMAFJ24A	IZ	24	26.7	30.7	1.0	1.0	38.9	10.3
P4SMAFJ26A	JE	26	28.9	33.2	1.0	1.0	42.1	9.5
P4SMAFJ28A	JG	28	31.1	35.8	1.0	1.0	45.4	8.8
P4SMAFJ30A	JK	30	33.3	38.3	1.0	1.0	48.4	8.3
P4SMAFJ33A	JM	33	36.7	42.2	1.0	1.0	53.3	7.5
P4SMAFJ36A	JP	36	40.0	46.0	1.0	1.0	58.1	6.9
P4SMAFJ40A	JR	40	44.4	51.1	1.0	1.0	64.5	6.2
P4SMAFJ43A	JT	43	47.8	54.9	1.0	1.0	69.4	5.7
P4SMAFJ45A	JV	45	50.0	57.5	1.0	1.0	72.7	5.5
P4SMAFJ48A	JX	48	53.3	61.3	1.0	1.0	77.4	5.2
P4SMAFJ51A	JZ	51	56.7	65.2	1.0	1.0	82.4	4.9
P4SMAFJ54A	RE	54	60.0	69.0	1.0	1.0	87.1	4.6
P4SMAFJ58A	RG	58	64.4	74.1	1.0	1.0	93.6	4.3
P4SMAFJ60A	RK	60	66.7	76.7	1.0	1.0	96.8	4.1
P4SMAFJ64A	RM	64	71.1	81.8	1.0	1.0	103	3.9
P4SMAFJ70A	RP	70	77.8	89.5	1.0	1.0	113	3.5
P4SMAFJ75A	RR	75	83.3	95.8	1.0	1.0	121	3.3
P4SMAFJ78A	RT	78	86.7	99.7	1.0	1.0	126	2.2

Type	Marking	Reverse Stand-off Voltage	Breakdown Voltage		Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current
		V_{RMW}	V_{BR}@I_T		I_T	I_R@V_{RWM}	V_C@I_{PP}	I_{PP}
			Min	Max				
		V	V	V	mA	A	V	A
P4SMAFJ85A	RV	85	94.4	108	1.0	1.0	137	2.9
P4SMAFJ90A	RX	90	100	116	1.0	1.0	146	2.7
P4SMAFJ100A	RZ	100	111	128	1.0	1.0	162	2.5
P4SMAFJ110A	SE	110	122	141	1.0	1.0	177	2.3
P4SMAFJ120A	SG	120	133	153	1.0	1.0	193	2.0
P4SMAFJ130A	SK	130	144	166	1.0	1.0	209	1.9
P4SMAFJ150A	SM	150	167	193	1.0	1.0	243	1.6
P4SMAFJ160A	SP	160	178	205	1.0	1.0	259	1.5
P4SMAFJ170A	SR	170	189	218	1.0	1.0	275	1.4

Fig.1 Peak Pulse Power Rating Curve

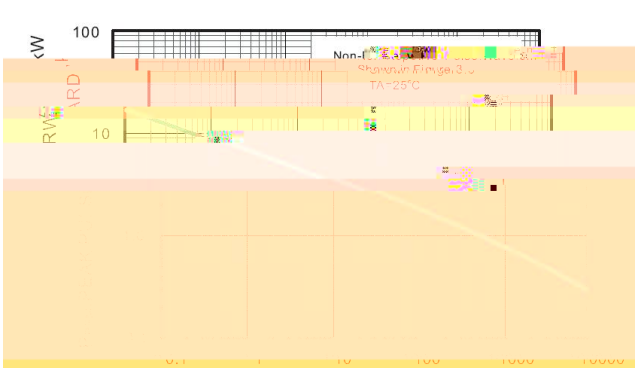


Fig.2 Forward Current Derating Curve

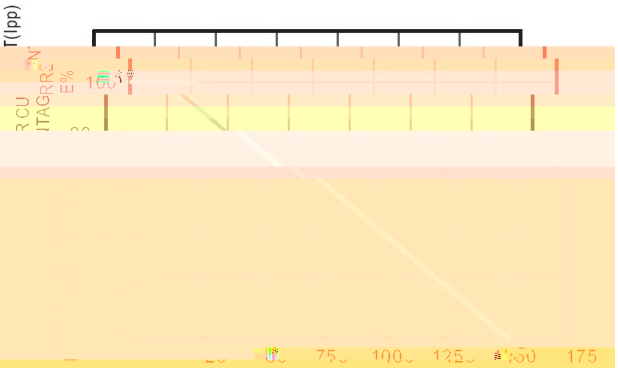


Fig.3 Pulse Waveform

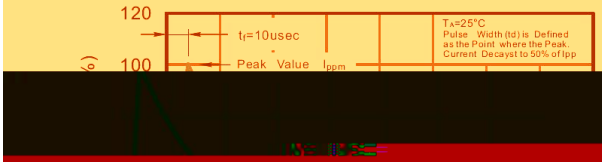
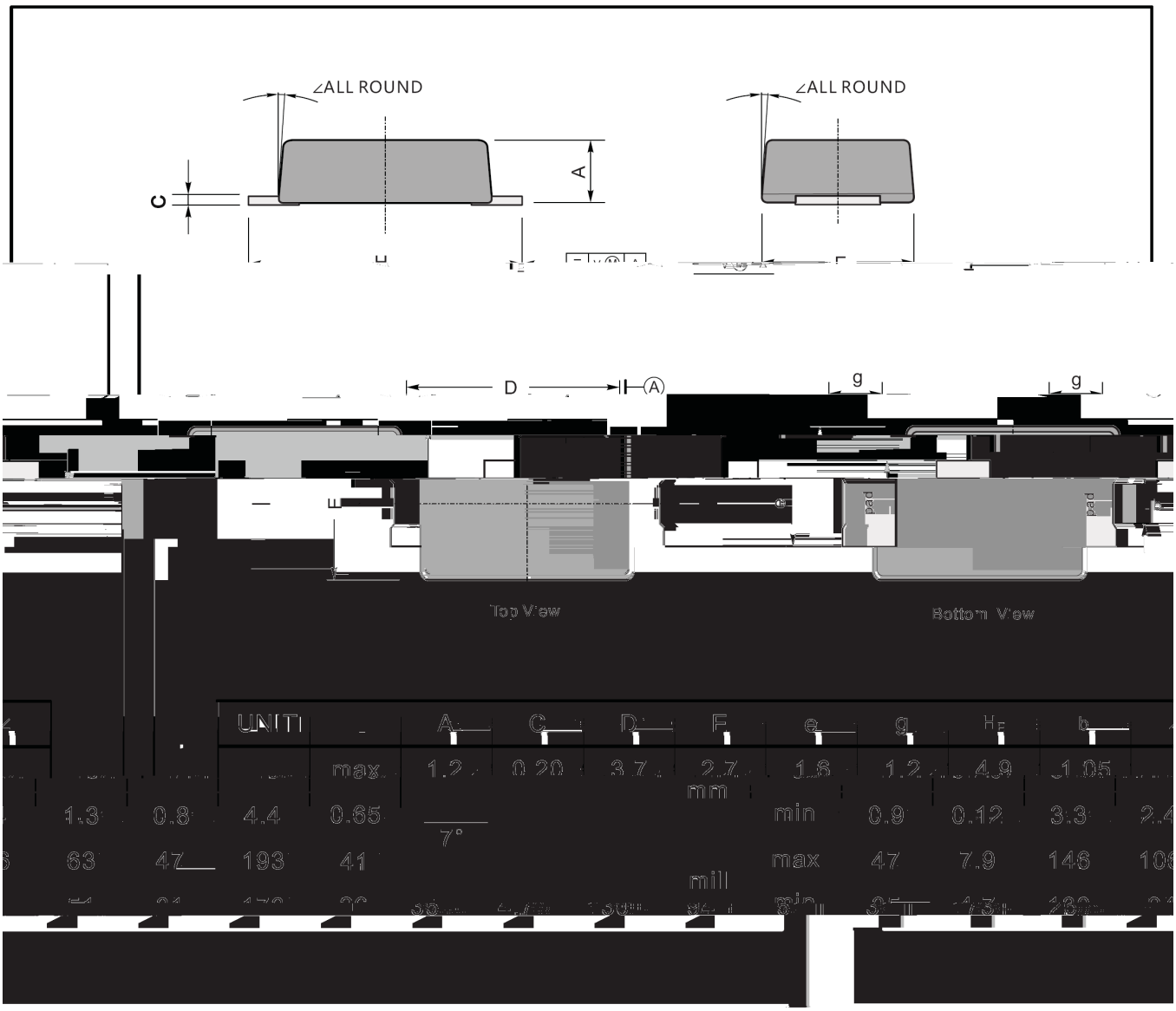
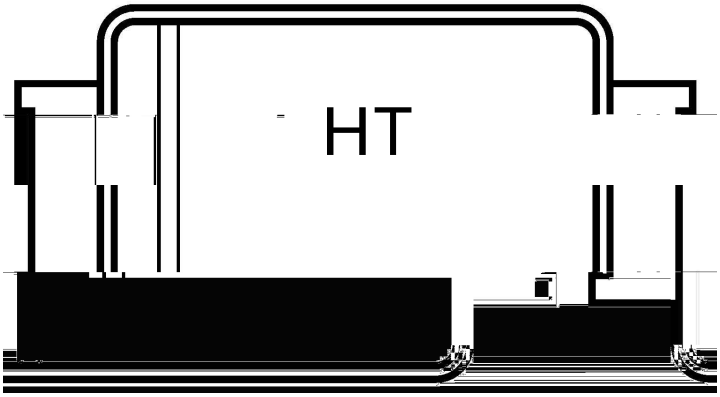


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current


∠ALL ROUND
∠ALL ROUND
A
C
D
A
g
g
Top View
Bottom View
UNIT
A
C
D
F
e
g
H
b
max
1.2
0.20
3.7
2.7
1.6
1.2
4.9
1.05
mm
1.3
0.8
4.4
0.65
7°
min
0.9
0.12
3.3
63
47
193
41
max
47
7.9
146
mill

Type number	Marking
P4SMAFJ8.5A	HT
P4SMAFJ9.0A	HV
P4SMAFJ10A	HX
P4SMAFJ11A	HZ
P4SMAFJ12A	IE
P4SMAFJ13A	IG
P4SMAFJ14A	IK
P4SMAFJ15A	IM
P4SMAFJ16A	IP
P4SMAFJ17A	IR
P4SMAFJ18A	IT
P4SMAFJ20A	IV
P4SMAFJ22A	IX
P4SMAFJ24A	IZ
P4SMAFJ26A	JE
P4SMAFJ28A	JG
P4SMAFJ30A	JK
P4SMAFJ33A	JM
P4SMAFJ36A	JP
P4SMAFJ40A	JR
P4SMAFJ43A	JT
P4SMAFJ45A	JV
P4SMAFJ48A	JX
P4SMAFJ51A	JZ
P4SMAFJ54A	RE
P4SMAFJ58A	RG
P4SMAFJ60A	RK
P4SMAFJ64A	RM
P4SMAFJ70A	RP
P4SMAFJ75A	RR
P4SMAFJ78A	RT
P4SMAFJ85A	RV
P4SMAFJ90A	RX
P4SMAFJ100A	RZ
P4SMAFJ110A	SE
P4SMAFJ120A	SG
P4SMAFJ130A	SK
P4SMAFJ150A	SM
P4SMAFJ160A	SP
P4SMAFJ170A	SR



HT

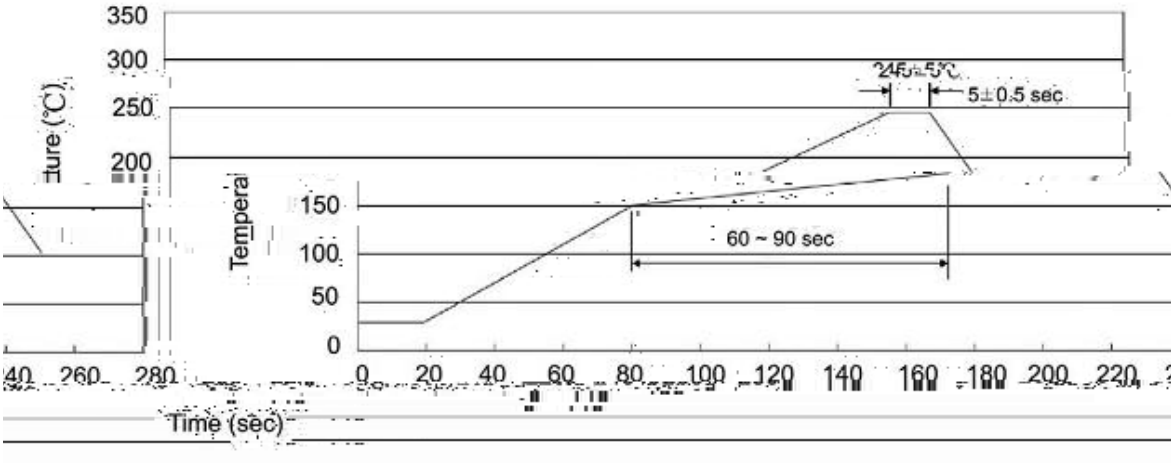
1 * 3 *

Note:

HT Product Type Code

Lot No. Code The 1st * means:YM Code The last 3 * means:little Lot No Code

Temperature Profile for IR Reflow Soldering(Pb-Free)



		Note:	
1	150 180 60 90sec;	1.Preheating:150~180 , Time:60~90sec.	
2	245±5 5±0.5sec;	2.Peak Temp.:245±5 , Duration:5±0.5sec.	
3	2 10 /sec.	3. Cooling Speed: 2~10 /sec.	

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm^3)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
SMAF	3000	5	15000	5	75000	7 ×11	185X180X105	390X385X205