

/ Descriptions

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

/ Features

Glass passivated junction,Low inductance.Halogen free product.

/ Applications

General purpose.

/ Equivalent Circuit

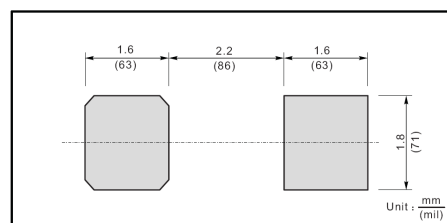


/ Pinning



PIN	DESCRIPTION
1	Cathode
2	Anode

The recommended mounting pad size



/ Marking

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}	±8	kV
	V _{ESD2}	±15	
Typical Thermal Resistance(Note2)	R _{θJA}	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 $T_A = 25^\circ\text{C}$ 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 (JEDEC method).
4. Peak pulse power waveform is 10/1000 μS .

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
=2i pa4.5j/TT4	1	0.5771	0ref8.0019		Tc(S.	)Tj2.3b>		

/ Electrical Characteristics(Ta=25)

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_{RMW}}	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

/ Electrical Characteristics(Ta=25)

Type	Marking	Reverse Stand-off Voltage	Breakdown Voltage		Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current
		V _{RWM}	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

/ Electrical Characteristic Curve

Fig.1 Peak Pulse Power Rating Curve

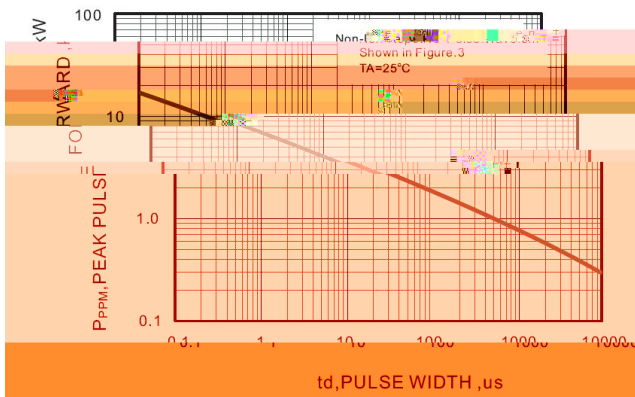


Fig.2 Forward Current Derating Curve

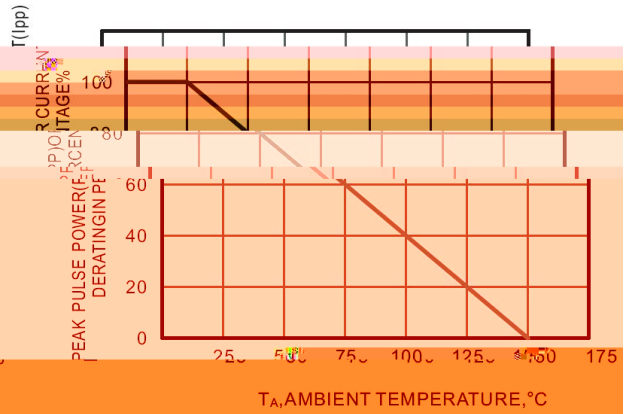


Fig.3 Pulse Waveform

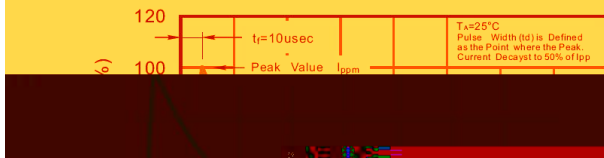


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



Technical drawing of a 12-pin D-subminiature connector. The drawing includes three views: a side view (top), a bottom view (bottom left), and a top view (bottom right). The side view shows the connector's profile with dimensions A (height), C (thickness), and E (length). The bottom view shows the underside with dimensions g (pin spacing), b (pin width), and H_E (pin height). The top view shows the top surface with dimensions D (overall width) and E (pin spacing). The drawing also includes a table of dimensions in millimeters (mm) and mils, and a table of dimensions in inches (in) and mils.

E	e	g	H _E	b	∠
2.7	1.6	1.2	4.9	1.05	
mm	min	0.9	0.12	3.3	2.4
	max	47	7.9	146	106
mil	min	25	1.7	100	64

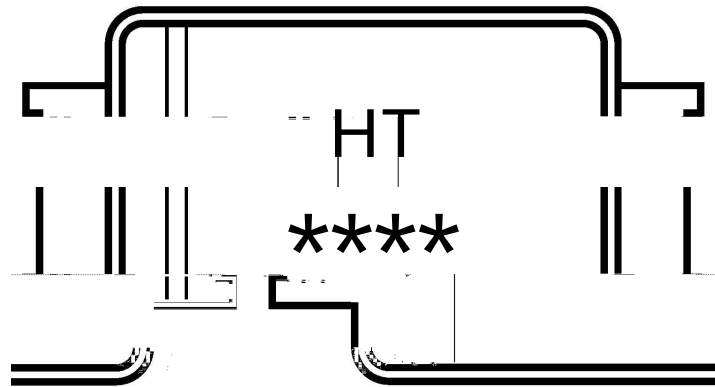
UNIT	A	C	D
max	1.2	0.20	3.7
	7°		



/ Marking Instructions

Type number	Marking
P4SMAFJ8.5A	HT
P4SMAFJ9.0A	HV
P4SMAFJ10A	HX
□ P4SMAFJ11A	Hz
■ P4SMAFJ12A	Hz
IAFJ13A	IG
IAFJ14A	IK
IAFJ15A	IM
IAFJ16A	IP
IAFJ17A	IR
IAFJ18A	IT
IAFJ20A	IV
IAFJ22A	IX
MAFJ24A	JH
MAFJ26A	JE
MAFJ28A	JG
MAFJ30A	JK
MAFJ33A	JM
MAFJ36A	JP
MAFJ40A	JR
MAFJ43A	JT
MAFJ45A	JV
MAFJ48A	JX
MAFJ51A	JZ
MAFJ54A	RE
MAFJ58A	RG
MAFJ60A	RK
MAFJ64A	RM
MAFJ70A	RP
MAFJ75A	RR
MAFJ78A	RT
MAFJ85A	RV
MAFJ90A	RX
P4SMAFJ100A	RZ
P4SMAFJ110A	SE
P4SMAFJ120A	SG
P4SMAFJ130A	SK
P4SMAFJ150A	SM
P4SMAFJ160A	SP
P4SMAFJ170A	SR

/ Marking Instructions



HT

1 *

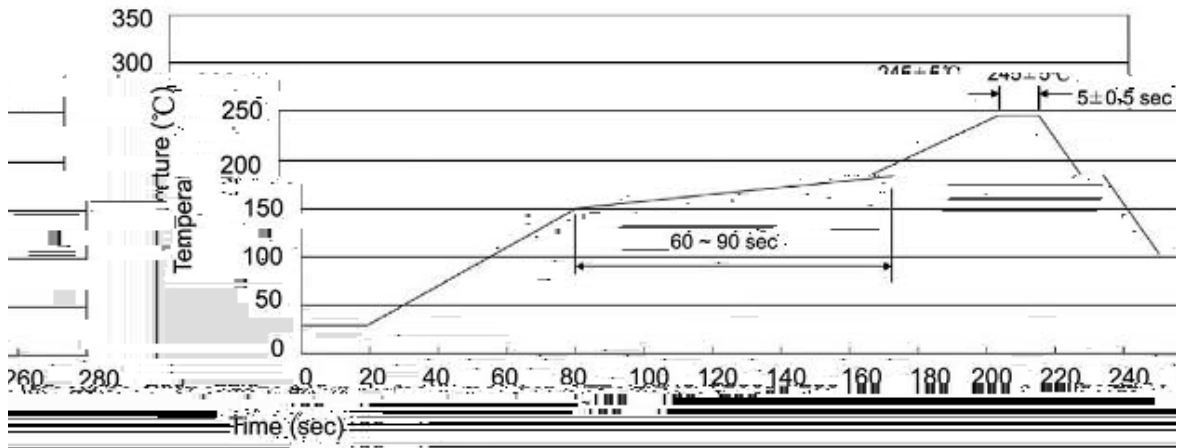
3 *

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. |

/ Resistance to Soldering Heat Test Conditions

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

/ Packaging SPEC.

/ 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

/ Notices