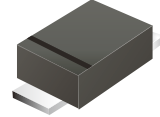


1SMAF4728A-HF Thru. 1SMAF4777A-HF

RoHS Device
Halogen Free

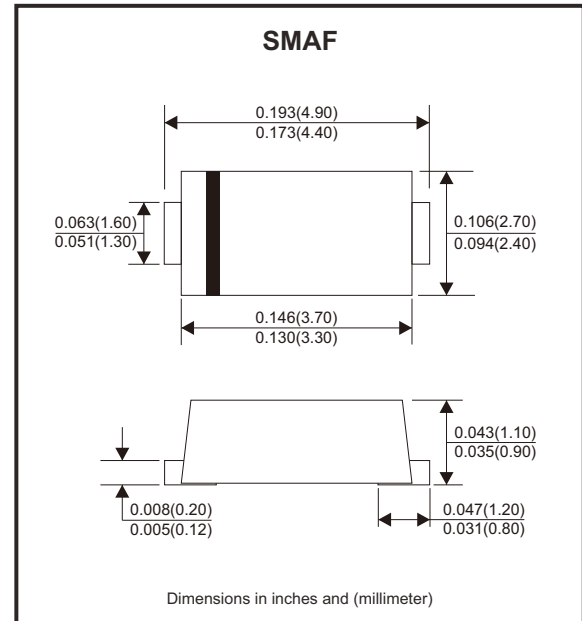


Features

- Total power dissipation: Max. 1W.
- Wide zener reverse voltage range
3.3V to 330V.
- Small plastic package suitable for surface
mounted design.
- Tight voltage tolerance: $\pm 5\%$.

Mechanical data

- Case: SMAF, molded plastic.
- Terminals: Solderable per MIL-STD-750,
method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any.



Circuit Diagram



Maximum Rating (at Ta=25 °C unless otherwise specified)

Parameter	Symbol	Value	Unit
Power dissipation @ Tc=75°C	P _D	1	W
Forward voltage @ I _F =200mA	V _F	1.2	V
Junction temperature range	T _J	-55 to +150	°C
Storage temperature range	T _{STG}	-55 to +150	°C

Electrical Characteristics (at Ta=25 °C unless otherwise specified)

Part Number	Zener voltage range (Note 1) V _Z (V)			@I _Z (mA)	Dynamic impedance Z _{zt} @I _{zt} Max (Ω)	Reverse current I _R @V _R		Admissible zener current I _{zm} (mA)	Marking Code
	Min	Nom	Max			Max I _R (μA)	V _R (V)		
1SMAF4728A-HF	3.10	3.3	3.50	75	10	100	1	285	728A
1SMAF4729A-HF	3.40	3.6	3.80	69	10	100	1	263	729A
1SMAF4730A-HF	3.70	3.9	4.10	64	9	50	1	243	730A
1SMAF4731A-HF	4.06	4.3	4.56	58	9	25	1	219	731A
1SMAF4732A-HF	4.50	4.7	4.93	53	8	10	1	203	732A
1SMAF4733A-HF	4.84	5.1	5.36	49	7	10	1	186	733A
1SMAF4734A-HF	5.32	5.6	5.92	45	5	10	2	170	734A
1SMAF4735A-HF	5.86	6.2	6.51	41	2	10	3	154	735A
1SMAF4736A-HF	6.46	6.8	7.18	37	3.5	10	4	140	736A
1SMAF4737A-HF	7.12	7.5	7.88	34	4	10	5	127	737A
1SMAF4738A-HF	7.79	8.2	8.67	31	4.5	10	6	116	738A
1SMAF4739A-HF	8.60	9.1	9.59	28	5	10	7	104	739A
1SMAF4740A-HF	9.50	10	10.5	25	7	10	7	95	740A
1SMAF4741A-HF	10.4	11	11.6	23	8	5	8	86	741A
1SMAF4742A-HF	11.4	12	12.6	21	9	5	9	79	742A
1SMAF4743A-HF	12.4	13	14.1	19	10	5	10	71	743A
1SMAF4744A-HF	13.8	15	15.8	17	14	5	11	63	744A
1SMAF4745A-HF	15.2	16	17.1	16	16	5	12	58	745A
1SMAF4746A-HF	16.8	18	19.2	14	20	5	13	52	746A
1SMAF4747A-HF	19.0	20	21.2	13	22	5	15	47	747A
1SMAF4748A-HF	20.8	22	23.3	12	23	5	17	43	748A
1SMAF4749A-HF	22.8	24	26.0	11	25	5	18	38	749A
1SMAF4750A-HF	25.3	27	28.9	9.5	35	5	21	35	750A
1SMAF4751A-HF	28.2	30	32.0	8.5	40	5	23	31	751A
1SMAF4752A-HF	31.3	33	34.9	7.5	45	5	25	28	752A
1SMAF4753A-HF	34.2	36	37.9	7.0	50	5	27	26	753A
1SMAF4754A-HF	37.2	39	41.5	6.5	60	5	30	24	754A
1SMAF4755A-HF	40.9	43	45.6	6.0	70	1	32	22	755A

Electrical Characteristics (at Ta=25 °C unless otherwise specified)

Part Number	Zener voltage range (Note 1) V _Z (V)			@I _Z (mA)	Dynamic impedance Z _{zt} @I _{zt} Max (Ω)	Reverse current I _R @V _R		Admissible zener current I _{zm} (mA)	Marking Code
	Min	Nom	Max			Max I _R (μA)	V _R (V)		
1SMAF4756A-HF	44.9	47	49.8	5.5	80	1	35	20	756A
1SMAF4757A-HF	48.6	51	54.0	5.0	95	1	38	18	757A
1SMAF4758A-HF	53.6	56	58.8	4.5	110	1	42	17	758A
1SMAF4759A-HF	58.9	62	65.6	4.0	125	1	47	15	759A
1SMAF4760A-HF	64.6	68	71.7	3.7	150	1	52	14	760A
1SMAF4761A-HF	71.2	75	78.8	3.3	175	1	56	12	761A
1SMAF4762A-HF	77.9	82	87.0	3.0	200	1	62	11	762A
1SMAF4763A-HF	86.0	91	96.0	2.8	250	1	69	10	763A
1SMAF4764A-HF	95.0	100	105	2.5	350	1	76	9.5	764A
1SMAF4765A-HF	104	110	116	2.3	450	1	84	8.6	765A
1SMAF4766A-HF	114	120	127	2.0	550	1	91	7.8	766A
1SMAF4767A-HF	125	135	142	1.9	700	1	100	7.0	767A
1SMAF4768A-HF	140	150	157	1.7	900	1	110	6.3	768A
1SMAF4769A-HF	155	165	172	1.6	1100	1	120	5.8	769A
1SMAF4770A-HF	170	180	191	1.4	1200	1	135	5.2	770A
1SMAF4771A-HF	189	200	211	1.2	1400	1	150	4.7	771A
1SMAF4772A-HF	209	220	231	1.0	1600	1	165	4.3	772A
1SMAF4773A-HF	229	240	251	1.0	1800	1	180	3.9	773A
1SMAF4774A-HF	249	260	271	1.0	2000	1	190	3.7	774A
1SMAF4775A-HF	269	280	291	1.0	2100	1	205	3.4	775A
1SMAF4776A-HF	289	300	315	1.0	2300	1	230	3.1	776A
1SMAF4777A-HF	313	330	346	1.0	2500	1	250	2.8	777A

Note: 1. V_{ZT} is tested with pulses (20ms).

Typical Rating and Characteristic Curves (1SMAF47XXA-HF Series)

Fig.1 - Power Temperature Derating Curves

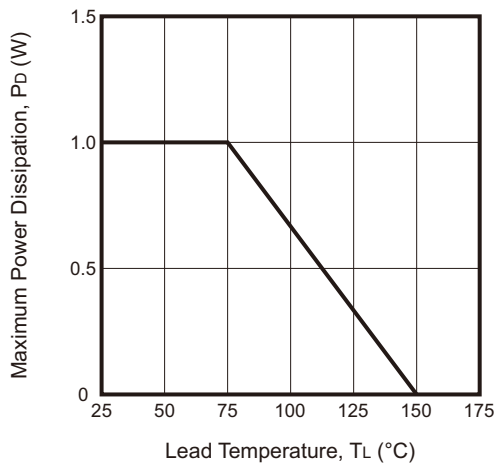


Fig.2 - Typical Zener Impedance

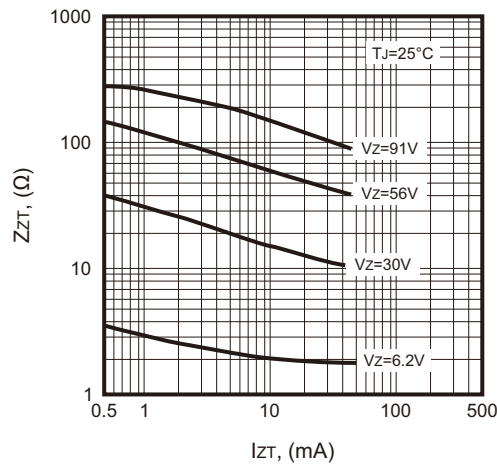


Fig.3 - Temperature Coefficients
v.s. Zener Voltage

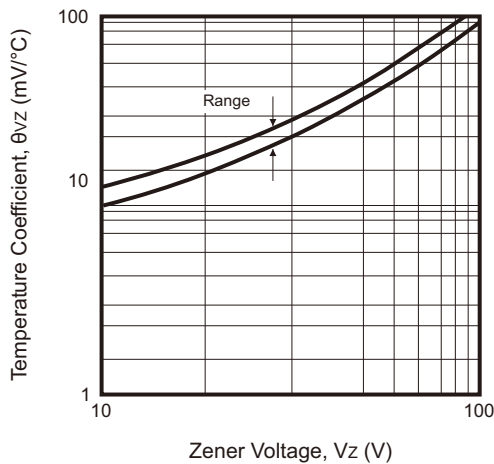
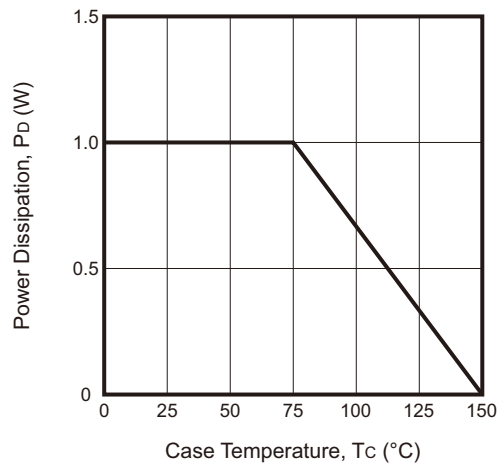
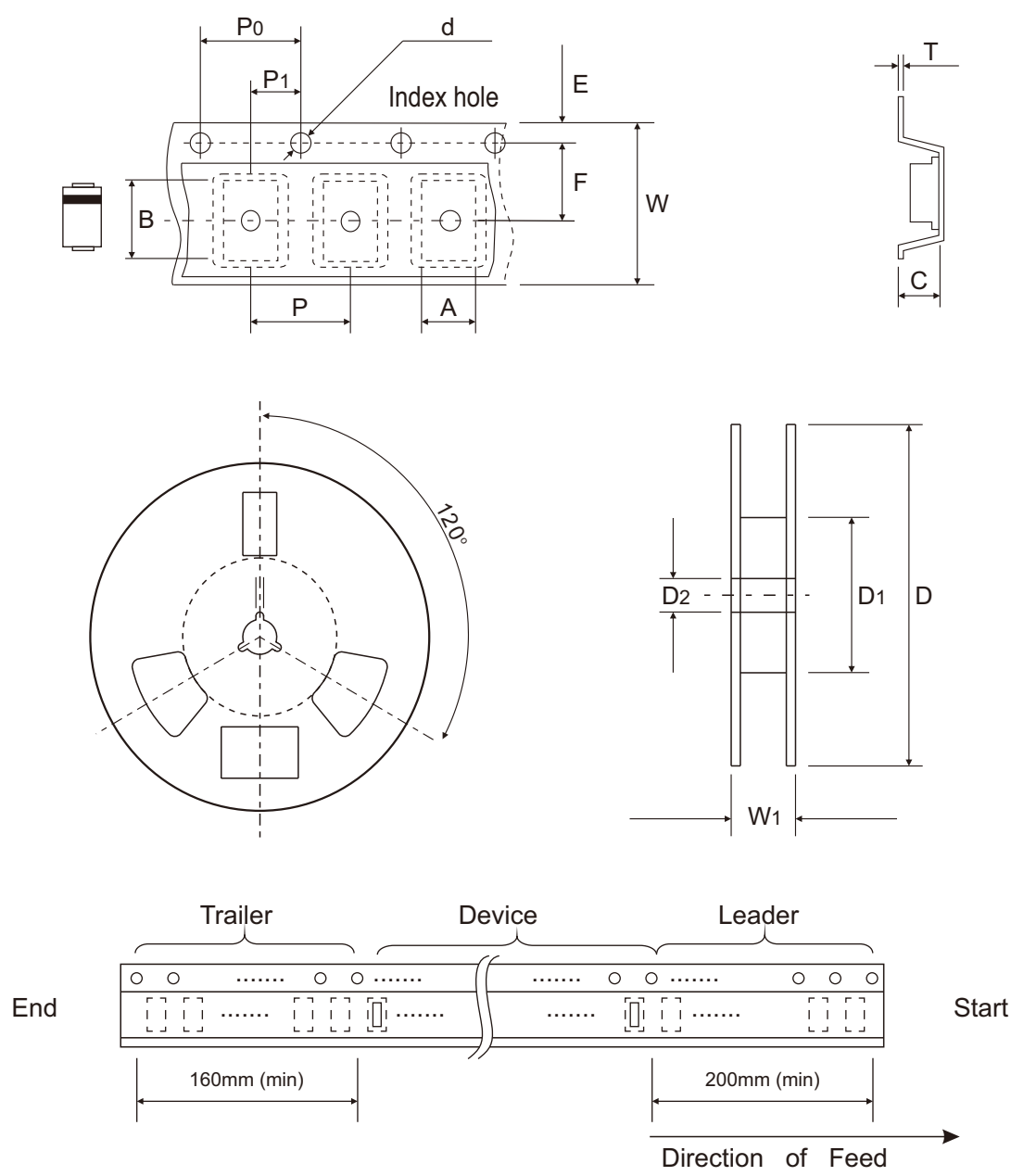


Fig.4 - Maximum Continuous Power Derating



Reel Taping Specification



SMAF	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.93 ± 0.10	5.33 ± 0.10	1.33 ± 0.10	1.55 ± 0.05	178.00 ± 3.00	60.00 ± 2.00	13.30 ± 0.30
	(inch)	0.115 ± 0.004	0.210 ± 0.004	0.052 ± 0.004	0.061 ± 0.002	7.008 ± 0.118	2.362 ± 0.079	0.524 ± 0.012

SMAF	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.73 ± 0.10	5.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.20 ± 0.03	12.00 ± 0.30	15.60 ± 0.50
	(inch)	0.068 ± 0.004	0.217 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.008 ± 0.001	0.472 ± 0.012	0.614 ± 0.020

Marking Code

Part Number	Marking Code
1SMAF4728A-HF Thru. 1SMAF4777A-HF	See Page 2~3

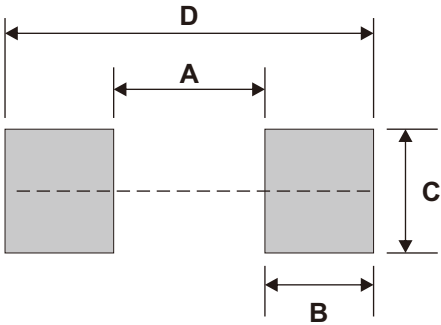


↑ Cathode band

xxxx = Product type marking code

Suggested P.C.B. PAD Layout

SIZE	SMAF	
	(mm)	(inch)
A	2.20	0.087
B	1.60	0.063
C	1.80	0.071
D	5.40	0.213



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SMAF	3,000	7