

## Silicon Planar Zener Diodes

### FEATURES

- ◆ Total power dissipation: Max. 1 W.
- ◆ Wide zener reverse voltage range 3.3V to 330V.
- ◆ Small plastic package suitable for surface mounted design.
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

### MECHANICAL DATA

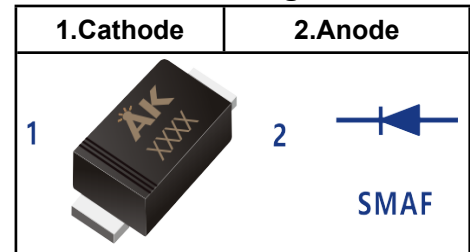
- ◆ Case: SMAF
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 27mg /0.00086oz

### Absolute Maximum Ratings And Characteristics (Ta = 25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation at TL=75°C	P <sub>D</sub>	1	W
Forward Voltage at IF = 200 mA	V <sub>F</sub>	1.2	V
Junction Temperature Range	T <sub>J</sub>	55 ~ +150	°C
Storage Temperature Range	T <sub>s</sub>	-55 ~ +150	°C

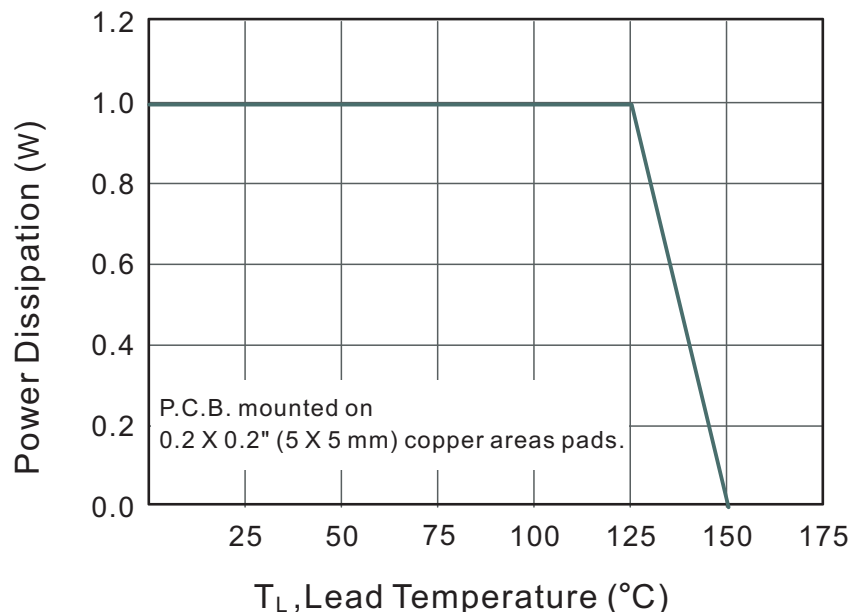
(1) Thermal resistance from junction to ambient at P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper areas pads.

### Pinning



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

**Fig.1 Maximum Continuous Power Derating**





Characteristics at Ta = 25°C

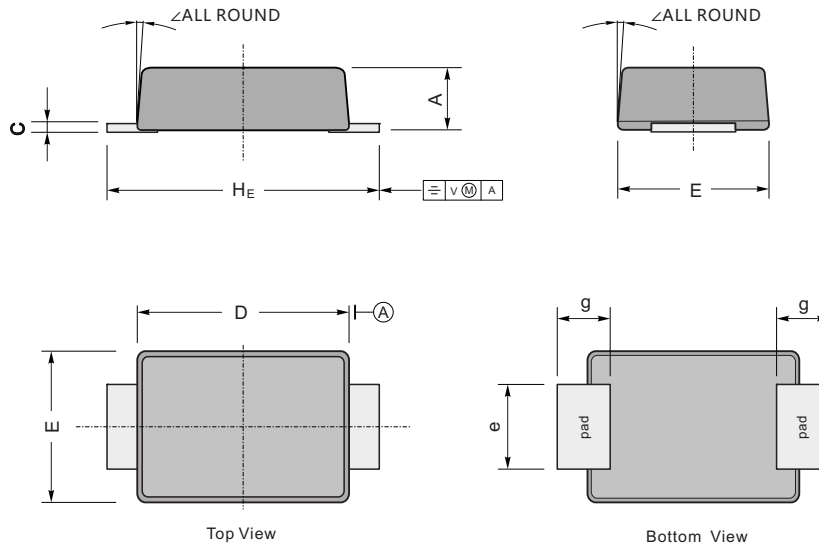
Type	Marking	Zener Voltage Range <sup>(1)</sup>			I <sub>ZT</sub>	Dynamic Impedance	Reverse Current		Admissible Zener Current
		V <sub>ZT</sub> ( at I <sub>ZT</sub> )					I <sub>r</sub>	at V <sub>R</sub>	
		Min ( V )	Nom ( V )	Max ( V )	(mA)	Max (Ω)	Max ( μA )	( V )	I <sub>ZM</sub> (mA)
1SMAF4728A	728A	3.10	3.3	3.50	75	10	100	1	285
1SMAF4729A	729A	3.40	3.6	3.80	69	10	100	1	263
1SMAF4730A	730A	3.70	3.9	4.10	64	9.0	50	1	243
1SMAF4731A	731A	4.06	4.3	4.56	58	9.0	25	1	219
1SMAF4732A	732A	4.50	4.7	4.93	53	8.0	10	1	203
1SMAF4733A	733A	4.84	5.1	5.36	49	7.0	10	1	186
1SMAF4734A	734A	5.32	5.6	5.92	45	5.0	10	2	170
1SMAF4735A	735A	5.86	6.2	6.51	41	2.0	10	3	154
1SMAF4736A	736A	6.46	6.8	7.18	37	3.5	10	4	140
1SMAF4737A	737A	7.12	7.5	7.88	34	4.0	10	5	127
1SMAF4738A	738A	7.79	8.2	8.67	31	4.5	10	6	116
1SMAF4739A	739A	8.60	9.1	9.59	28	5.0	10	7	104
1SMAF4740A	740A	9.50	10	10.5	25	7.0	10	7	95
1SMAF4741A	741A	10.4	11	11.6	23	8.0	5	8	86
1SMAF4742A	742A	11.4	12	12.6	21	9.0	5	9	79
1SMAF4743A	743A	12.4	13	14.1	19	10	5	10	71
1SMAF4744A	744A	13.8	15	15.8	17	14	5	11	63
1SMAF4745A	745A	15.2	16	17.1	16	16	5	12	58
1SMAF4746A	746A	16.8	18	19.2	14	20	5	13	52
1SMAF4747A	747A	19.0	20	21.2	13	22	5	15	47
1SMAF4748A	748A	20.8	22	23.3	12	23	5	17	43
1SMAF4749A	749A	22.8	24	26.0	11	25	5	18	38
1SMAF4750A	750A	25.3	27	28.9	9.5	35	5	21	35
1SMAF4751A	751A	28.2	30	32.0	8.5	40	5	23	31
1SMAF4752A	752A	31.3	33	34.9	7.5	45	5	25	28
1SMAF4753A	753A	34.2	36	37.9	7.0	50	5	27	26
1SMAF4754A	754A	37.2	39	41.5	6.5	60	5	30	24
1SMAF4755A	755A	40.9	43	45.6	6.0	70	1	32	22
1SMAF4756A	756A	44.9	47	49.8	5.5	80	1	35	20
1SMAF4757A	757A	48.6	51	54.0	5.0	95	1	38	18
1SMAF4758A	758A	53.6	56	58.8	4.5	110	1	42	17
1SMAF4759A	759A	58.9	62	65.6	4.0	125	1	47	15
1SMAF4760A	760A	64.6	68	71.7	3.7	150	1	52	14
1SMAF4761A	761A	71.2	75	78.8	3.3	175	1	56	12
1SMAF4762A	762A	77.9	82	87.0	3.0	200	1	62	11
1SMAF4763A	763A	86.0	91	96.0	2.8	250	1	69	10
1SMAF4764A	764A	95.0	100	105	2.5	350	1	76	9.5
1SMAF4765A	765A	104	110	116	2.3	450	1	84	8.6
1SMAF4766A	766A	114	120	127	2.0	550	1	91	7.8
1SMAF4767A	767A	125	135	142	1.9	700	1	100	7.0
1SMAF4768A	768A	140	150	157	1.7	900	1	110	6.3
1SMAF4769A	769A	155	165	172	1.6	1100	1	120	5.8
1SMAF4770A	770A	170	180	191	1.4	1200	1	135	5.2
1SMAF4771A	771A	189	200	211	1.2	1400	1	150	4.7
1SMAF4772A	772A	209	220	231	1.0	1600	1	165	4.3
1SMAF4773A	773A	229	240	251	1.0	1800	1	180	3.9
1SMAF4774A	774A	249	260	271	1.0	2000	1	190	3.7
1SMAF4775A	775A	269	280	291	1.0	2100	1	205	3.4
1SMAF4776A	776A	289	300	315	1.0	2300	1	230	3.1
1SMAF4777A	777A	313	330	346	1.0	2500	1	250	2.8

1 V<sub>ZT</sub>

## Package Outline

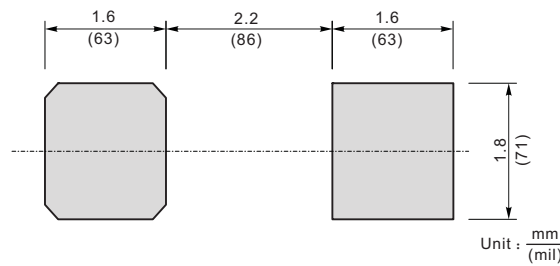
## SMAF

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	e	g	H <sub>E</sub>	∠
mm	max	1.1	0.20	3.7	2.7	1.6	1.2	4.9	7°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	max	43	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	

### The recommended mounting pad size



### Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SMAF	Tape/Reel, 13" reel	10000	EIA-481-1
	Tape/Reel, 7" reel	3000	EIA-481-1