

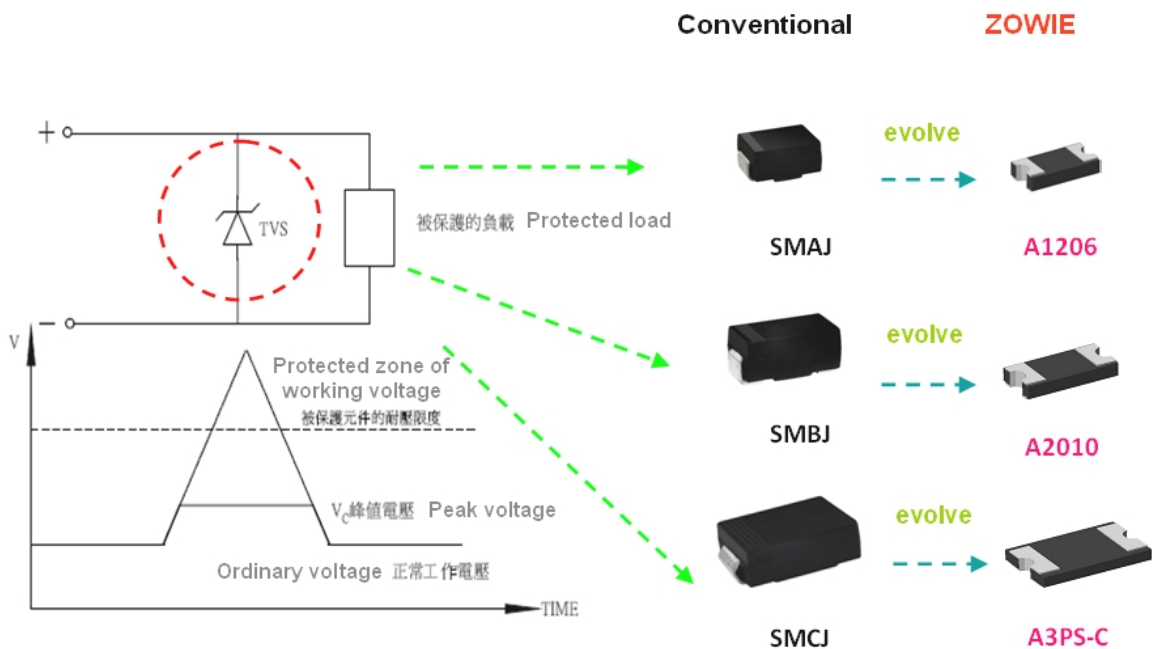
Zowie transient voltage suppressor (TVS) diodes

400W~2000W TVS diodes in CoolTc™ packages

The 400W~2000W transient voltage suppressor (TVS) diodes are designed for transient over-voltage protection. They are available in the new Ultimate High Thermal Dissipation package design.

✓ Product advantages

- World's First 2KW TVS in TO-277A equivalent package
- Pad layout compatible with SMC for easy drop-in replacement
- Lowest profile 1mm
- To lower user's cost and upgrade the performance by replacing SMCJ package



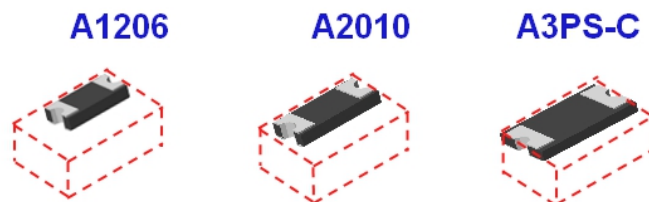
✓ Key Features

- Thickness < 1.0mm
- Superior thermal performance
- Leadless, no wire bond construction
- Good solderability
- Halogen Free and RoHS compliant

✓ Applications

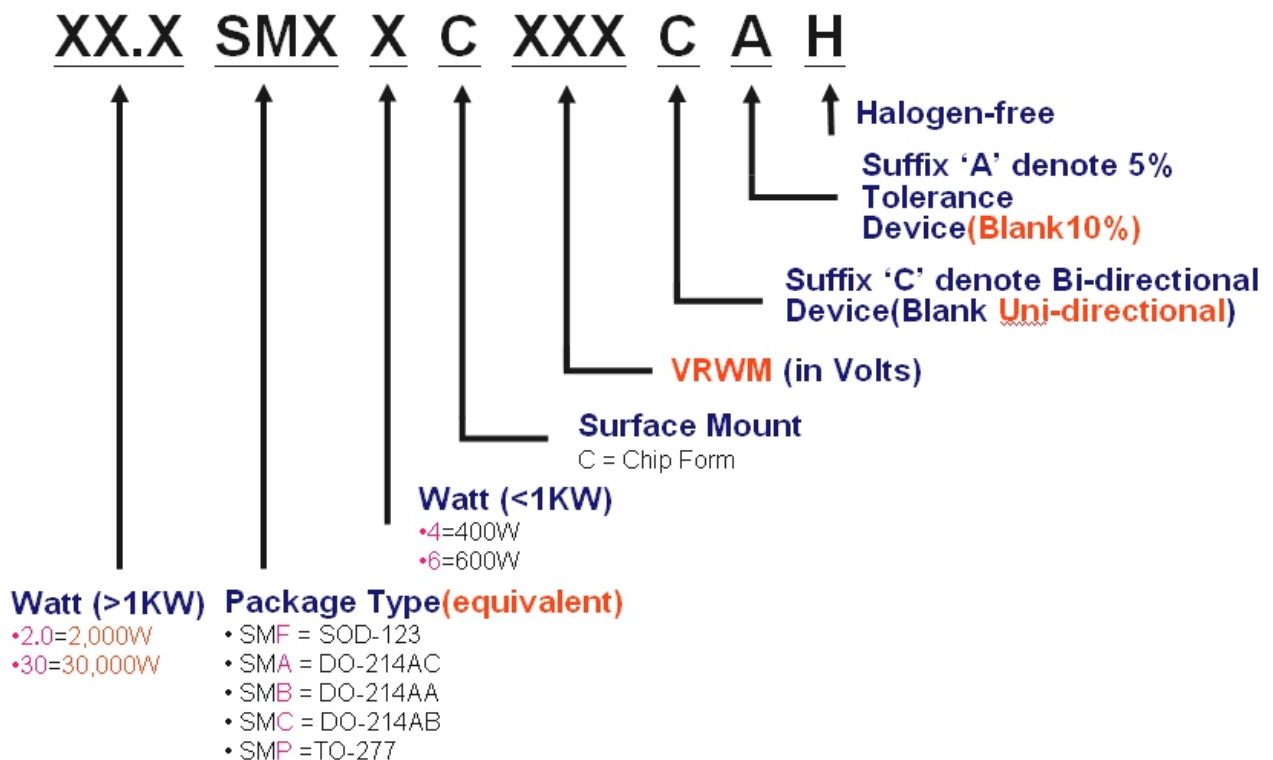
- Power Supply
- Data or signal lines
- Telecommunication circuits
- Automotive

✓ Save space while retaining performance



Conventional Package	SMA	SMB	SMC
Max volume (mm ³)	32.64	43.77	116.22
ZOWIE Reduction ratio	-73%	-72%	-76%
ZOWIE Package	A1206	A2010	A3PS-C
Max volume (mm ³)	8.77	12.27	27.6

✓ Part Nomenclature



PART NUMBER	Working Peak Reverse Voltage V_{RWM} (V)	Breakdown Voltage V_{BR} @ I_T			Maximum Clamping Voltage V_C (V) @ I_{PP}	Maximum Reverse Surge Current I_{PP} (A) @ $10 \times 1000 \mu s$ sinewave	Maximum Reverse Leakage I_R (μA) @ V_{RWM}
		Min. (V)	Max. (V)	I_T (mA)			
BI-POLAR							
SMF4C11CAH	11	12.2	13.5	1	18.2	21.98	1
SMF4C12CAH	12	13.3	14.7	1	19.9	20.10	1
SMF4C13CAH	13	14.4	15.9	1	21.5	18.60	1
SMF4C14CAH	14	15.6	17.2	1	23.2	17.24	1
SMF4C15CAH	15	16.7	18.5	1	24.4	16.39	1
SMF4C16CAH	16	17.8	19.7	1	26.0	15.38	1
SMF4C17CAH	17	18.9	20.9	1	27.6	14.49	1
SMF4C18CAH	18	20.0	22.1	1	29.2	13.70	1
SMF4C20CAH	20	22.2	24.5	1	32.4	12.35	1
SMF4C22CAH	22	24.4	26.9	1	35.5	11.27	1
SMF4C24CAH	24	26.7	29.5	1	38.9	10.28	1
SMF4C26CAH	26	28.9	31.9	1	42.1	9.50	1
SMF4C28CAH	28	31.1	34.4	1	45.4	8.81	1
SMF4C30CAH	30	33.3	36.8	1	48.4	8.26	1
SMF4C33CAH	33	36.7	40.6	1	53.3	7.50	1
SMF4C36CAH	36	40.0	44.2	1	58.1	6.88	1
SMF4C40CAH	40	44.4	49.1	1	64.5	6.20	1
SMF4C43CAH	43	47.8	52.8	1	69.4	5.76	1
SMF4C45CAH	45	50.0	55.3	1	72.7	5.50	1
SMF4C48CAH	48	53.3	58.9	1	77.4	5.17	1
SMF4C51CAH	51	56.7	62.7	1	82.4	4.85	1
SMF4C54CAH	54	60.0	66.3	1	87.1	4.59	1
SMF4C58CAH	58	64.4	71.2	1	93.6	4.27	1
SMF4C60CAH	60	66.7	73.7	1	96.8	4.13	1
SMF4C64CAH	64	71.1	78.6	1	103	3.88	1
SMF4C70CAH	70	77.8	86.0	1	113	3.54	1
SMF4C75CAH	75	83.3	92.1	1	121	3.31	1
SMF4C78CAH	78	86.7	95.8	1	126	3.17	1
SMF4C85CAH	85	94.4	104	1	137	2.92	1
SMF4C90CAH	90	100	111	1	146	2.74	1
SMF4C100CAH	100	111	123	1	162	2.47	1
SMF4C110CAH	110	122	135	1	177	2.26	1
SMF4C120CAH	120	133	147	1	193	2.07	1
SMF4C130CAH	130	144	159	1	209	1.91	1
SMF4C140CAH	140	155	171	1	227	1.76	1
SMF4C150CAH	150	167	185	1	243	1.65	1
SMF4C160CAH	160	178	197	1	259	1.54	1
SMF4C170CAH	170	189	209	1	275	1.45	1
SMF4C180CAH	180	200	220	1	292	1.37	1
SMF4C200CAH	200	224	247	1	324	1.23	1

NOTE : Add suffix " CA " after part number to specify Bi-directional devices.

PART NUMBER	Working Peak Reverse Voltage V_{RWM} (V)	Breakdown Voltage V_{BR} @ I_T			Maximum Clamping Voltage V_C (V) @ I_{PP}	Maximum Reverse Surge Current I_{PP} (A) @ $10 \times 1000 \mu s$ sinewave	Maximum Reverse Leakage I_R (μA) @ V_{RWM}
		Min. (V)	Max. (V)	I_T (mA)			
BI-POLAR							
SMA6C11CAH	11	12.2	13.5	1	18.2	32.97	5
SMA6C12CAH	12	13.3	14.7	1	19.9	30.15	5
SMA6C13CAH	13	14.4	15.9	1	21.5	27.91	1
SMA6C14CAH	14	15.6	17.2	1	23.2	25.86	1
SMA6C15CAH	15	16.7	18.5	1	24.4	24.59	1
SMA6C16CAH	16	17.8	19.7	1	26.0	23.08	1
SMA6C17CAH	17	18.9	20.9	1	27.6	21.74	1
SMA6C18CAH	18	20.0	22.1	1	29.2	20.55	1
SMA6C20CAH	20	22.2	24.5	1	32.4	18.52	1
SMA6C22CAH	22	24.4	26.9	1	35.5	16.90	1
SMA6C24CAH	24	26.7	29.5	1	38.9	15.42	1
SMA6C26CAH	26	28.9	31.9	1	42.1	14.25	1
SMA6C28CAH	28	31.1	34.4	1	45.4	13.22	1
SMA6C30CAH	30	33.3	36.8	1	48.4	12.40	1
SMA6C33CAH	33	36.7	40.6	1	53.3	11.26	1
SMA6C36CAH	36	40.0	44.2	1	58.1	10.33	1
SMA6C40CAH	40	44.4	49.1	1	64.5	9.30	1
SMA6C43CAH	43	47.8	52.8	1	69.4	8.65	1
SMA6C45CAH	45	50.0	55.3	1	72.7	8.25	1
SMA6C48CAH	48	53.3	58.9	1	77.4	7.75	1
SMA6C51CAH	51	56.7	62.7	1	82.4	7.28	1
SMA6C54CAH	54	60.0	66.3	1	87.1	6.89	1
SMA6C58CAH	58	64.4	71.2	1	93.6	6.41	1
SMA6C60CAH	60	66.7	73.7	1	96.8	6.20	1
SMA6C64CAH	64	71.1	78.6	1	103	5.83	1
SMA6C70CAH	70	77.8	86.0	1	113	5.31	1
SMA6C75CAH	75	83.3	92.1	1	121	4.96	1
SMA6C78CAH	78	86.7	95.8	1	126	4.76	1
SMA6C85CAH	85	94.4	104	1	137	4.38	1
SMA6C90CAH	90	100	111	1	146	4.11	1
SMA6C100CAH	100	111	123	1	162	3.70	1
SMA6C110CAH	110	122	135	1	177	3.39	1
SMA6C120CAH	120	133	147	1	193	3.11	1
SMA6C130CAH	130	144	159	1	209	2.87	1
SMA6C140CAH	140	155	171	1	227	2.65	1
SMA6C150CAH	150	167	185	1	243	2.47	1
SMA6C160CAH	160	178	197	1	259	2.32	1
SMA6C170CAH	170	189	209	1	275	2.18	1
SMA6C180CAH	180	200	220	1	292	2.06	1
SMA6C200CAH	200	224	247	1	324	1.85	1

NOTE: Add suffix " CA " after part number to specify Bi-directional devices.

PART NUMBER	Working Peak Reverse Voltage V_{RWM} (V)	Breakdown Voltage V_{BR} @ I_T			Maximum Clamping Voltage V_C (V) @ I_{PP}	Maximum Reverse Surge Current I_{PP} (A) @ $10 \times 1000 \mu s$ sinewave	Maximum Reverse Leakage I_R (μA) @ V_{RWM}
		Min. (V)	Max. (V)	I_T (mA)			
BI-POLAR							
1.5SMPC11CAH	11	12.2	13.5	1	18.2	82.4	5
1.5SMPC12CAH	12	13.3	14.7	1	19.9	75.4	5
1.5SMPC13CAH	13	14.4	15.9	1	21.5	69.8	1
1.5SMPC14CAH	14	15.6	17.2	1	23.2	64.7	1
1.5SMPC15CAH	15	16.7	18.5	1	24.4	61.5	1
1.5SMPC16CAH	16	17.8	19.7	1	26.0	57.7	1
1.5SMPC17CAH	17	18.9	20.9	1	27.6	54.3	1
1.5SMPC18CAH	18	20.0	22.1	1	29.2	51.4	1
1.5SMPC20CAH	20	22.2	24.5	1	32.4	46.3	1
1.5SMPC22CAH	22	24.4	26.9	1	35.5	42.3	1
1.5SMPC24CAH	24	26.7	29.5	1	38.9	38.6	1
1.5SMPC26CAH	26	28.9	31.9	1	42.1	35.6	1
1.5SMPC28CAH	28	31.1	34.4	1	45.4	33.0	1
1.5SMPC30CAH	30	33.3	36.8	1	48.4	31.0	1
1.5SMPC33CAH	33	36.7	40.6	1	53.3	28.1	1
1.5SMPC36CAH	36	40.0	44.2	1	58.1	25.8	1
1.5SMPC40CAH	40	44.4	49.1	1	64.5	23.3	1
1.5SMPC43CAH	43	47.8	52.8	1	69.4	21.6	1
1.5SMPC45CAH	45	50.0	55.3	1	72.7	20.6	1
1.5SMPC48CAH	48	53.3	58.9	1	77.4	19.4	1
1.5SMPC51CAH	51	56.7	62.7	1	82.4	18.2	1
1.5SMPC54CAH	54	60.0	66.3	1	87.1	17.2	1
1.5SMPC58CAH	58	64.4	71.2	1	93.6	16.0	1
1.5SMPC60CAH	60	66.7	73.7	1	96.8	15.5	1
1.5SMPC64CAH	64	71.1	78.6	1	103	14.6	1
1.5SMPC70CAH	70	77.8	86.0	1	113	13.3	1
1.5SMPC75CAH	75	83.3	92.1	1	121	12.4	1
1.5SMPC78CAH	78	86.7	95.8	1	126	11.9	1
1.5SMPC85CAH	85	94.4	104	1	137	10.9	1
1.5SMPC90CAH	90	100	111	1	146	10.3	1
1.5SMPC100CAH	100	111	123	1	162	9.3	1
1.5SMPC110CAH	110	122	135	1	177	8.5	1
1.5SMPC120CAH	120	133	147	1	193	7.8	1
1.5SMPC130CAH	130	144	159	1	209	7.2	1
1.5SMPC140CAH	140	155	171	1	227	6.6	1
1.5SMPC150CAH	150	167	185	1	243	6.2	1

NOTE : Add suffix " CA " after part number to specify Bi-directional devices.

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		Min. (V)	Max. (V)	I_T (mA)			
BI-POLAR							
2.0SMPC11CAH	11	12.2	13.5	1	18.2	109.89	5
2.0SMPC12CAH	12	13.3	14.7	1	19.9	100.50	5
2.0SMPC13CAH	13	14.4	15.9	1	21.5	93.02	1
2.0SMPC14CAH	14	15.6	17.2	1	23.2	86.21	1
2.0SMPC15CAH	15	16.7	18.5	1	24.4	81.97	1
2.0SMPC16CAH	16	17.8	19.7	1	26.0	76.92	1
2.0SMPC17CAH	17	18.9	20.9	1	27.6	72.46	1
2.0SMPC18CAH	18	20.0	22.1	1	29.2	68.49	1
2.0SMPC20CAH	20	22.2	24.5	1	32.4	61.73	1
2.0SMPC22CAH	22	24.4	26.9	1	35.5	56.34	1
2.0SMPC24CAH	24	26.7	29.5	1	38.9	51.41	1
2.0SMPC26CAH	26	28.9	31.9	1	42.1	47.51	1
2.0SMPC28CAH	28	31.1	34.4	1	45.4	44.05	1
2.0SMPC30CAH	30	33.3	36.8	1	48.4	41.32	1
2.0SMPC33CAH	33	36.7	40.6	1	53.3	37.52	1
2.0SMPC36CAH	36	40.0	44.2	1	58.1	34.42	1
2.0SMPC40CAH	40	44.4	49.1	1	64.5	31.01	1
2.0SMPC43CAH	43	47.8	52.8	1	69.4	28.82	1
2.0SMPC45CAH	45	50.0	55.3	1	72.7	27.51	1
2.0SMPC48CAH	48	53.3	58.9	1	77.4	25.84	1
2.0SMPC51CAH	51	56.7	62.7	1	82.4	24.27	1
2.0SMPC54CAH	54	60.0	66.3	1	87.1	22.96	1
2.0SMPC58CAH	58	64.4	71.2	1	93.6	21.37	1
2.0SMPC60CAH	60	66.7	73.7	1	96.8	20.66	1
2.0SMPC64CAH	64	71.1	78.6	1	103	19.42	1
2.0SMPC70CAH	70	77.8	86.0	1	113	17.70	1
2.0SMPC75CAH	75	83.3	92.1	1	121	16.53	1
2.0SMPC78CAH	78	86.7	95.8	1	126	15.87	1
2.0SMPC85CAH	85	94.4	104	1	137	14.60	1
2.0SMPC90CAH	90	100	111	1	146	13.70	1
2.0SMPC100CAH	100	111	123	1	162	12.35	1
2.0SMPC110CAH	110	122	135	1	177	11.30	1
2.0SMPC120CAH	120	133	147	1	193	10.36	1
2.0SMPC130CAH	130	144	159	1	209	9.57	1
2.0SMPC140CAH	140	155	171	1	227	8.81	1
2.0SMPC150CAH	150	167	185	1	243	8.23	1

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