

1K5HMC8.5CA-AU ~ 1K5HMC85CA-AU Series

Transient Voltage Suppressor

Voltage

8.5~85 V

Power

1500 W

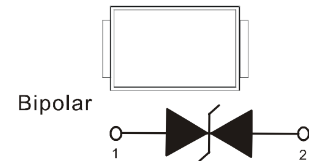
Features

- ISO10605(C=330pF, R=330Ω): ±30kV Air, ±30kV Contact
- ISO7637-2(Note 1):
 - Pulse 1: VS = -150V
 - Pulse 2a: VS = +112V
 - Pulse 3a: VS = -220V
 - Pulse 3b: VS = +150V
- High temperature soldering : 260°C/10 seconds at terminals
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case : SMC Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.266 grams

SMC



Maximum Ratings and Thermal Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNIT
Peak Pulse Power Dissipation(tp = 10 / 1000 us) ^(Note 2,4)	P _{PP}	1500	W
Peak Pulse Power Dissipation(tp = 8 / 20 us) ^(Note 3,4)	P _{PP}	10000	W
Peak Pulse Current on tp = 10 / 1000 us waveform ^{(Fig.2) (Note 2)}	I _{PPM}	See table 1	A
ESD IEC61000-4-2(Air)	V _{ESD}	±30	KV
ESD IEC61000-4-2(Contact)		±30	
Typical Thermal Resistance Junction to Ambient ^(Note 4)	R _{θJA}	125	°C/W
Operating Junction Temperature Range	T _J	-55~175	°C
Storage Temperature Range	T _{STG}	-55~175	°C

Note :

1. Not applicable to parts with V_{RWM} lower than battery voltage.
2. Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C per Fig.2.
3. Non-repetitive current pulse, per Fig.4 and derated above T_A=25°C per Fig.2.
4. Mounted on 100cm² copper pads to each terminal.
5. Mounted on a FR4 PCB, single-sided copper, standard footprint.

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Electrical Characteristics (T_A = 25 °C unless otherwise noted)

Part Number	V _{RWM}	V _{BR}			Reverse Leakage	V _{C@I_{PP}} (Note 1)		Typical Temp. Coefficient of V _{BR}	Marking Code
		Min.	Max.	IT	I _{R@V_{RWM}}	V	A		
	V	V	V	mA	uA	V	A	%/°C	
1K5HMC8.5CA-AU	8.5	9.44	10.4	1	50	14.4	104.2	0.057	1K5CAA
1K5HMC9.0CA-AU	9	10	11.1	1	20	15.4	97.4	0.058	1K5CAB
1K5HMC10CA-AU	10	11.1	12.3	1	5	17	88.2	0.06	1K5CAC
1K5HMC11CA-AU	11	12.2	13.5	1	1	18.2	82.4	0.061	1K5CAD
1K5HMC12CA-AU	12	13.3	14.7	1	1	19.9	75.3	0.062	1K5CAE
1K5HMC13CA-AU	13	14.4	15.9	1	1	21.5	69.7	0.063	1K5CAF
1K5HMC14CA-AU	14	15.6	17.2	1	1	23.2	64.7	0.065	1K5CAG
1K5HMC15CA-AU	15	16.7	18.5	1	1	24.4	61.5	0.066	1K5CAH
1K5HMC16CA-AU	16	17.8	19.7	1	1	26	57.7	0.067	1K5CAJ
1K5HMC17CA-AU	17	18.9	20.9	1	1	27.6	53.3	0.068	1K5CAK
1K5HMC18CA-AU	18	20	22.1	1	1	29.2	51.4	0.069	1K5CAL
1K5HMC20CA-AU	20	22.2	24.5	1	1	32.4	46.3	0.069	1K5CAM
1K5HMC22CA-AU	22	24.4	26.9	1	1	35.5	42.2	0.07	1K5CAN
1K5HMC24CA-AU	24	26.7	29.5	1	1	38.9	38.6	0.071	1K5CAP
1K5HMC26CA-AU	26	28.9	31.9	1	1	42.1	35.6	0.071	1K5CAR
1K5HMC28CA-AU	28	31.1	34.4	1	1	45.4	33	0.071	1K5CAS
1K5HMC30CA-AU	30	33.3	36.8	1	1	48.4	31	0.072	1K5CAT
1K5HMC33CA-AU	33	36.7	40.6	1	1	53.3	28.1	0.073	1K5CAU
1K5HMC36CA-AU	36	40	44.2	1	1	58.1	25.8	0.073	1K5CAV
1K5HMC40CA-AU	40	44.4	49.1	1	1	64.5	23.2	0.074	1K5CAW
1K5HMC43CA-AU	43	47.8	52.8	1	1	69.4	21.6	0.075	1K5CAX
1K5HMC45CA-AU	45	50	55.3	1	1	72.7	20.6	0.075	1K5CAY
1K5HMC48CA-AU	48	53.3	58.9	1	1	77.4	19.4	0.076	1K5CAZ
1K5HMC51CA-AU	51	56.7	62.7	1	1	82.4	18.2	0.076	1K5CBA
1K5HMC54CA-AU	54	60	66.3	1	1	87.1	17.2	0.077	1K5CBB
1K5HMC58CA-AU	58	64.4	71.2	1	1	93.6	16	0.078	1K5CBC
1K5HMC60CA-AU	60	66.7	73.7	1	1	96.8	15.5	0.078	1K5CBD
1K5HMC64CA-AU	64	71.1	78.6	1	1	103	14.6	0.079	1K5CBE
1K5HMC70CA-AU	70	77.8	86	1	1	113	13.3	0.08	1K5CBF
1K5HMC75CA-AU	75	83.3	92.1	1	1	121	12.4	0.081	1K5CBG
1K5HMC78CA-AU	78	86.7	95.8	1	1	126	11.4	0.082	1K5CBH
1K5HMC85CA-AU	85	94.4	104	1	1	137	10.4	0.084	1K5CBJ

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TYPICAL CHARACTERISTIC CURVES

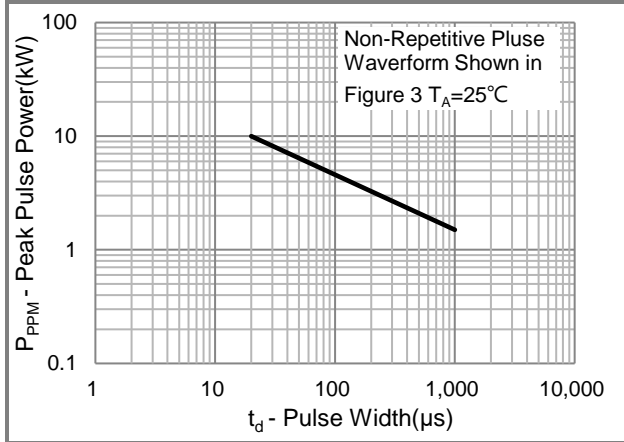


Fig.1 Pulse Power Rating Curve

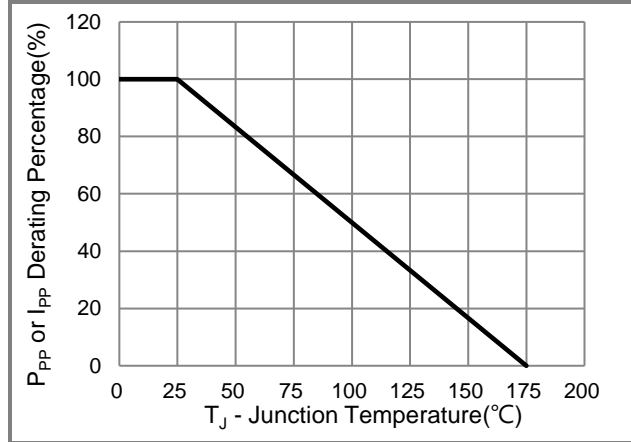


Fig.2 Derating Curve

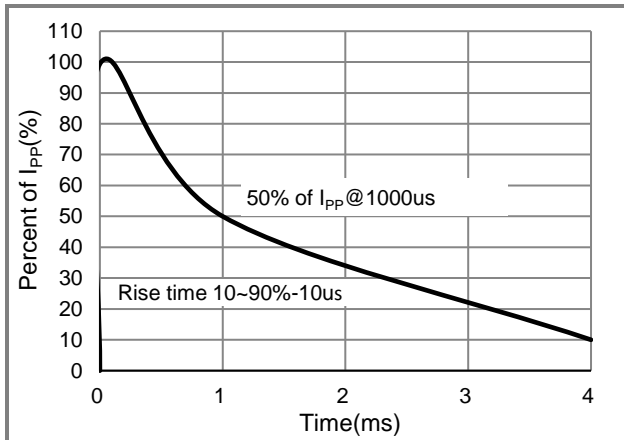


Fig.3 10/1000 μs Pulse Waveform

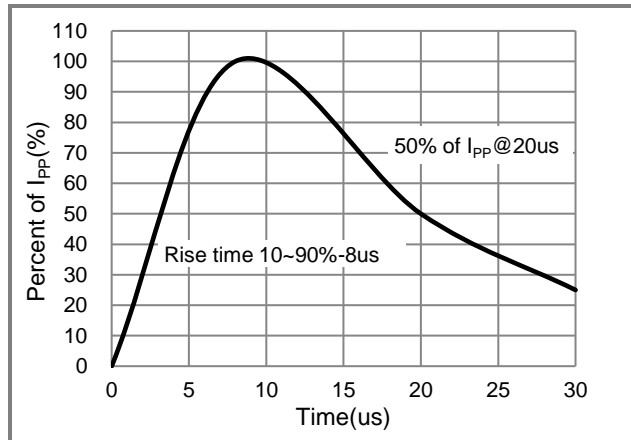


Fig.4 8/20us Pulse Waveform

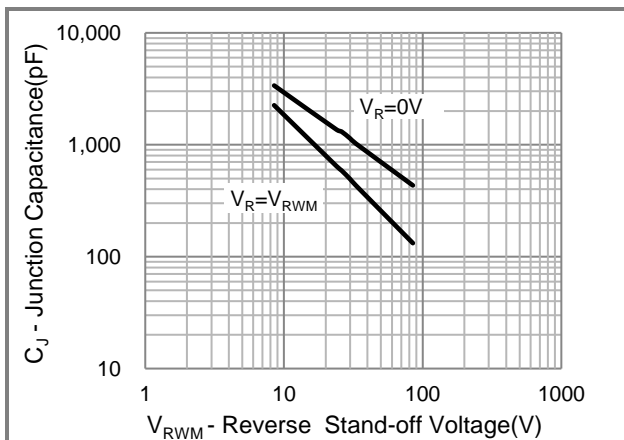


Fig.5 Typical Capacitance

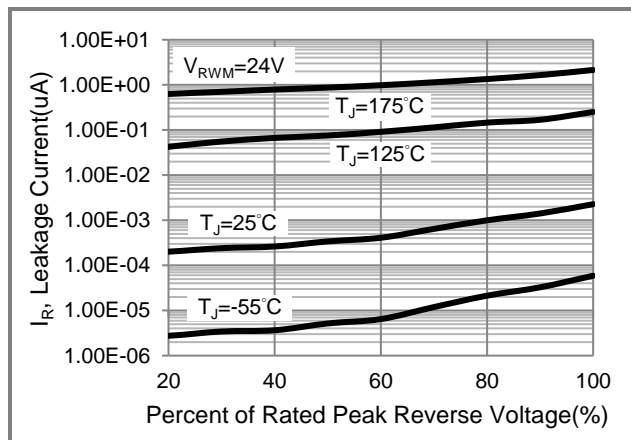


Fig.6 Typical Reverse Characteristics

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TYPICAL CHARACTERISTIC CURVES

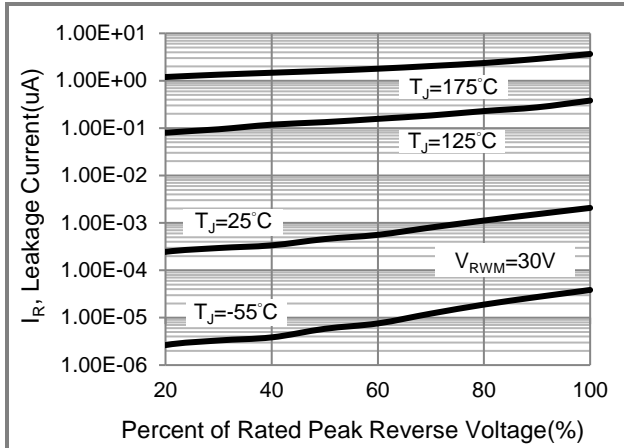


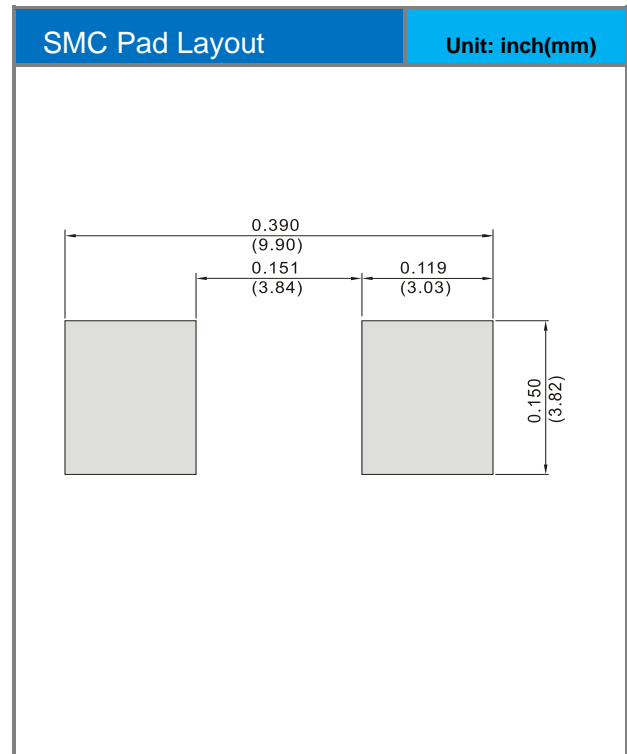
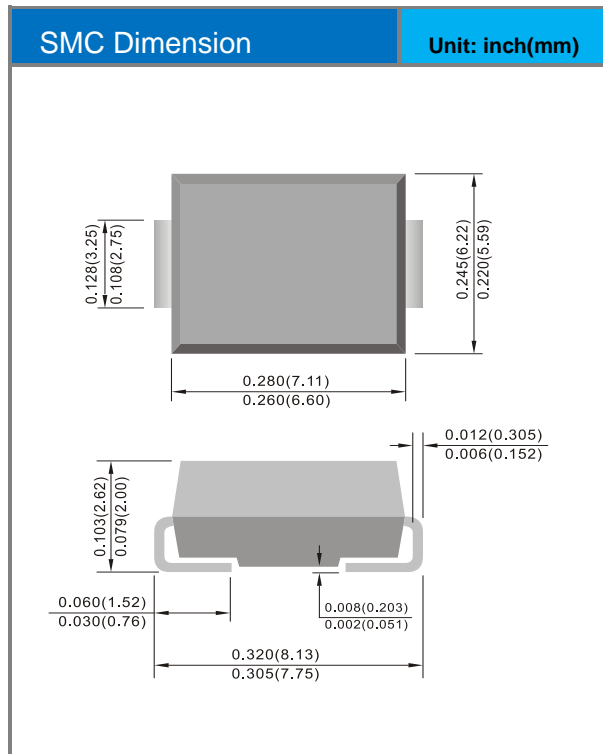
Fig.7 Typical Reverse Characteristics

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
1K5HMCxxxCA-AU	SMC	3K pcs / 13" reel	See Table

Packaging Information & Mounting Pad Layout



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