

5.0SMC6.8~5.0SMC440CA

SMC TRANSIENT VOLTAGE SUPPRESSOR

BREAKDOWN VOLTAGE: 6.8 --- 440 V PEAK PULSE POWER: 5000 W

FEATURES

• Low profile
• High surge current rating
• High peak power dissipation
• Bidirectional protection
• RoHS compliant

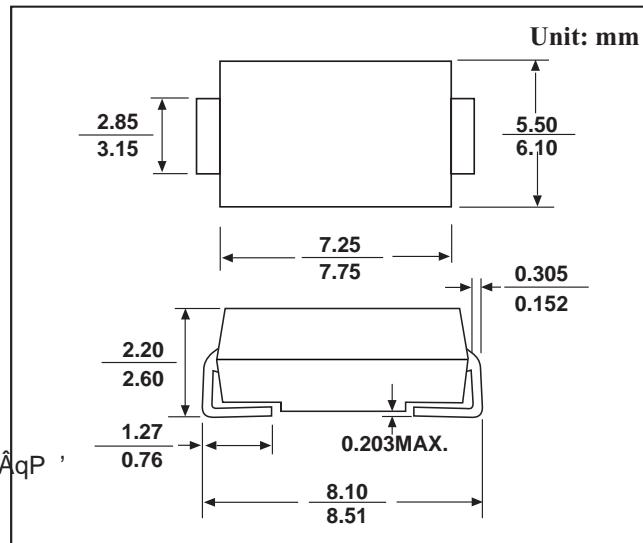
MECHANICAL DATA

Case material: FR4

Polarity: color band denotes positive end (cathode)

except for bidirectional

Mounting position: any



Order No.: 7L7Ct5E8rA "CD A %30A H F qP "

Parameter	Symbol	Value	Units
Peak Power Dissipation (Note 1.) @ $T_L = 25^\circ\text{C}$, Pulse Width = 1 ms	P_{PK}	5000	W
Forward Surge Current (Note 2.) @ $T_A = 25^\circ\text{C}$	I_{FSM}	200	A
Power Dissipation On Infinite Heatsink, @ $T_A = 50^\circ\text{C}$	$P_{M(AV)}$	5.0	W
Thermal Resistance Junction To Ambient Air (Note 3.)	R_{JA}	75	$^\circ\text{C}/\text{W}$
Thermal Resistance Junction To Leads	R_{JL}	15	$^\circ\text{C}/\text{W}$
Storage Temperature Range	T_{STG}	-55 to 150	$^\circ\text{C}$
Operating Junction Temperature Range	T_J	-55 to 150	$^\circ\text{C}$

1 10 X 1000 us, non-repetitive

2 1/2 sine wave (or equivalent square wave), PW = 8.3 ms, duty cycle = 4 pulses per minute maximum

3 Mounted on minimum recommended pad layout

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Part Number (Uni)	Part Number (Bi)	Marking	Breakdown Voltage			Maximu m Peak Vo	Pioff dpTIIcRrmTsm
			Reverse Stand off Voltage VR (Volts)	VBR (Volts) @ IT	Maximum Clamping Reverse Leakage IR @ VR (A)		

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5.0SMC170A	5.0SMC170CA	170A	170CA	152.25	162	179	1	3	234	21	0.108
5.0SMC180A	5.0SMC180CA	180A	180CA	161.7	171	189	1	3	246	20	0.108
5.0SMC200A*	5.0SMC200CA*	200A	200CA	179.55	190	210	1	3	274	18	0.108
5.0SMC220A	5.0SMC220CA	220A	220CA	194.25	209	231	1	3	328	15	0.108
5.0SMC250A	5.0SMC250CA	250A	250CA	224.7	237	263	1	3	344	15	0.11
5.0SMC300A	5.0SMC300CA*	300A	300CA	268.8	285	315	1	3	414	12	0.11

RATINGS AND CHARACTERISTIC CURVES

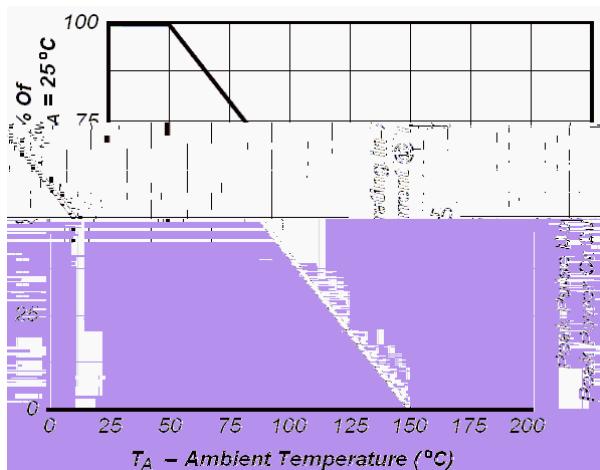


Fig1. Pulse Deating Curve

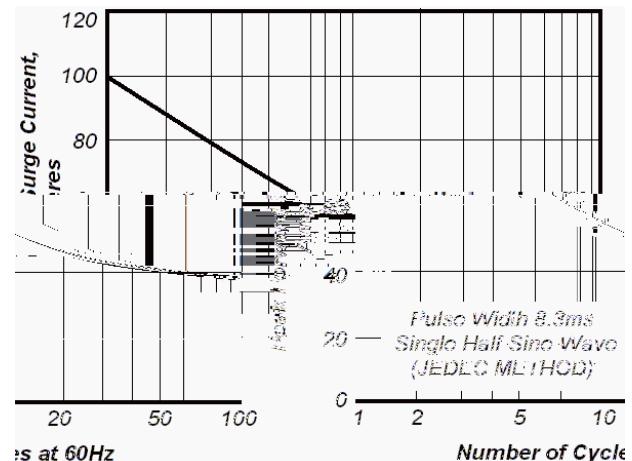


Fig2. Maximum Non-Repetitive Peak Forward Surge Current

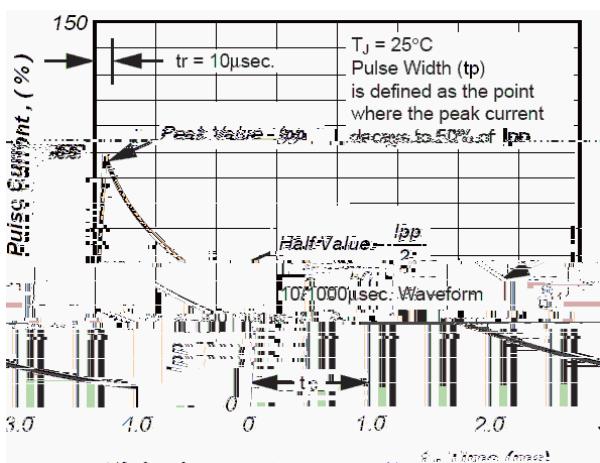


Fig3. Pulse Waveform

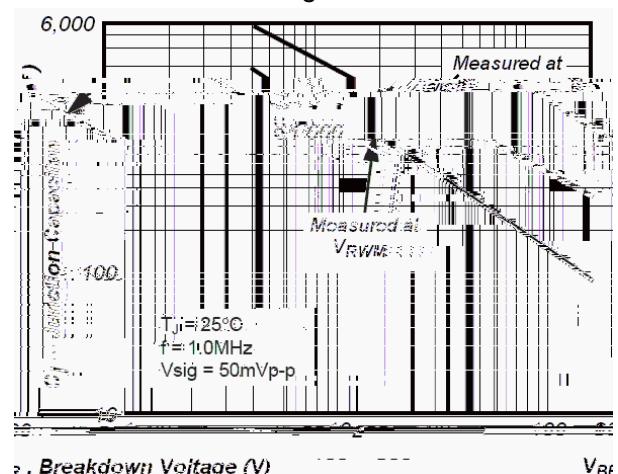


Fig4. Typical Junction Capacitance

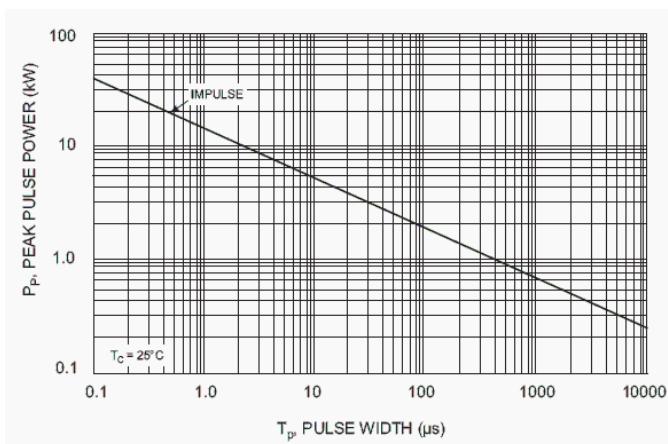


Fig5. Peak Pulse Power Rating curve

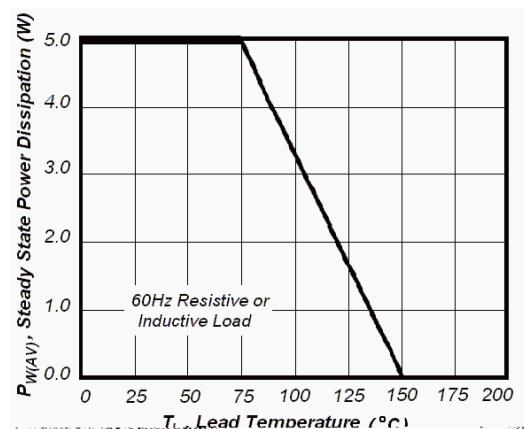


Fig6. Steady State Power Derating Curv