Features

P_{PP} 1500W

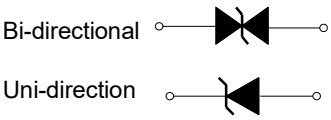
V_{RWM} 5.8V- 509V

Glass passivated chip

SMC

Applications

Clamping Voltage



Limiting values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Max
Peak pulse power dissipation	P_{PPM}	W	with a 10/1000us waveform	1500
Peak pulse current (1)	I_{PPM}	A	with a 10/1000us waveform	See Next Table
Power dissipation	P_D	W	On infinite heat sink at T_L=75℃	5.0
Peak forward surge current(2)	I_{FSM}	A	8.3 ms single half sine-wave unidirectional only	200
Operating junction and storage temperature range	T_J,T_{STG}	℃		-55 to +150

Electrical Characteristics（Ta=25℃ Unless otherwise specified）

Item	Symbol	Unit	Conditions	Max
Maximum instantaneous forward Voltage (3)	V_F	V	at 100A for unidirectional only	3.5/6.5
Thermal resistance	$R_{\theta JL}$	℃/W	junction to lead	15
	$R_{\theta JA}$	℃/W	junction to ambient, L_{Lead} = 10 mm	75

Notes:

(1) Non-repetitive current pulse, per Fig. 3 and derated above T_A= 25℃per Fig.2.

(2) Mounted on 0.2 x 0.2" (5.0 x 5.0 mm) copper pads to each terminal

(3) VF<3.5V for devices of VBR<200V and VF<5.0V for devices of VBR>201V

Electrical Characteristics (T_A=25℃ unless otherwise noted)

Part Number				Reverse Stand-off Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Max. Clamping Voltage @ I_{PP}	Max. Peak Pulse Current	Max. Reverse Leakage @ V_{RWM}
UNI		BI		V_{RWM}(V)	Min.(V)	Max.(V)	I_T(mA)	$V_{C\ MAX.}$(V)	I_{PP}(A)	I_R(uA)
1.5SMC6.8A	6V8A	1.5SMC6.8CA	6V8C	5.8	6.45	7.14	10	10.5	144.80	1000
1.5SMC7.5A	7V5A	1.5SMC7.5CA	7V5C	6.4	7.13	7.88	10	11.3	134.50	500
1.5SMC8.2A	8V2A	1.5SMC8.2CA	8V2C	7.0	7.79	8.61	10	12.1	125.60	200
1.5SMC9.1A	9V1A	1.5SMC9.1CA	9V1C	7.8	8.65	9.55	1	13.4	113.40	50
1.5SMC10A	10A	1.5SMC10CA	10C	8.6	9.50	10.50	1	14.5	104.80	10
1.5SMC11A	11A	1.5SMC11CA	11C	9.4	10.50	11.60	1	15.6	97.40	5
1.5SMC12A	12A	1.5SMC12CA	12C	10.2	11.40	12.60	1	16.7	91.00	5
1.5SMC13A	13A	1.5SMC13CA	13C	11.1	12.40	13.70	1	18.2	83.50	1
1.5SMC15A	15A	1.5SMC15CA	15C	12.8	14.30	15.80	1	21.2	71.70	1
1.5SMC16A	16A	1.5SMC16CA	16C	13.6	15.20	16.80	1	22.5	67.60	1
1.5SMC18A	18A	1.5SMC18CA	18C	15.3	17.10	18.90	1	25.5	60.30	1
1.5SMC20A	20A	1.5SMC20CA	20C	17.1	19.00	21.00	1	27.7	54.90	1
1.5SMC22A	22A	1.5SMC22CA	22C	18.8	20.90	23.10	1	30.6	49.70	1
1.5SMC24A	24A	1.5SMC24CA	24C	20.5	22.80	25.20	1	33.2	45.80	1
1.5SMC27A	27A	1.5SMC27CA	27C	23.1	25.70	28.40	1	37.5	40.50	1
1.5SMC30A	30A	1.5SMC30CA	30C	25.6	28.50	31.50	1	41.4	36.70	1
1.5SMC33A	33A	1.5SMC33CA	33C	28.2	31.40	34.70	1	45.7	33.30	1
1.5SMC36A	36A	1.5SMC36CA	36C	30.8	34.20	37.80	1	49.9	30.50	1
1.5SMC39A	39A	1.5SMC39CA	39C	33.3	37.10	41.00	1	53.9	28.20	1
1.5SMC43A	43A	1.5SMC43CA	43C	36.8	40.90	45.20	1	59.3	25.60	1
1.5SMC47A	47A	1.5SMC47CA	47C	40.2	44.70	49.40	1	64.8	23.50	1
1.5SMC51A	51A	1.5SMC51CA	51C	43.6	48.50	53.60	1	70.1	21.70	1
1.5SMC56A	56A	1.5SMC56CA	56C	47.8	53.20	58.80	1	77.0	19.70	1
1.5SMC62A	62A	1.5SMC62CA	62C	53.0	58.90	65.10	1	85.0	17.90	1
1.5SMC68A	68A	1.5SMC68CA	68C	58.1	64.60	71.40	1	92.0	16.50	1
1.5SMC75A	75A	1.5SMC75CA	75C	64.1	71.30	78.80	1	103.0	14.80	1
1.5SMC82A	82A	1.5SMC82CA	82C	70.1	77.90	86.10	1	113.0	13.50	1
1.5SMC91A	91A	1.5SMC91CA	91C	77.8	86.50	95.50	1	125.0	12.20	1
1.5SMC100A	100A	1.5SMC100CA	100C	85.5	95.00	105.00	1	137.0	11.10	1
1.5SMC110A	110A	1.5SMC110CA	110C	94.0	105.0	116.0	1	152.0	10.00	1
1.5SMC120A	120A	1.5SMC120CA	120C	102.0	114.0	126.0	1	165.0	9.20	1
1.5SMC130A	130A	1.5SMC130CA	130C	111.0	124.0	137.0	1	179.0	8.50	1
1.5SMC150A	150A	1.5SMC150CA	150C	128.0	143.0	158.0	1	207.0	7.30	1
1.5SMC160A	160A	1.5SMC160CA	160C	136.0	152.0	168.0	1	219.0	6.90	1
1.5SMC170A	170A	1.5SMC170CA	170C	145.0	162.0	179.0	1	234.0	6.50	1
1.5SMC180A	180A	1.5SMC180CA	180C	154.0	171.0	189.0	1	246.0	6.20	1
1.5SMC200A	200A	1.5SMC200CA	200C	171.0	190.0	210.0	1	274.0	5.50	1
1.5SMC220A	220A	1.5SMC220CA	220C	185.0	209.0	231.0	1	328.0	4.60	1
1.5SMC250A	250A	-	-	214.0	237.0	263.0	1	344.0	4.40	1
1.5SMC300A	300A	-	-	256.0	285.0	315.0	1	414.0	3.70	1
1.5SMC350A	350A	-	-	300.0	332.0	368.0	1	482.0	3.20	1
1.5SMC400A	400A	-	-	342.0	380.0	420.0	1	548.0	2.80	1
1.5SMC440A	440A	-	-	376.0	418.0	462.0	1	602.0	2.50	1
1.5SMC480A	480A	-	-	408.0	456.0	504.0	1	658.0	2.30	1
1.5SMC510A	510A	-	-	434.0	485.0	535.0	1	698.0	2.10	1
1.5SMC540A	540A	-	-	459.0	513.0	567.0	1	740.0	2.00	1

Typical Characteristics

FIG1:Peak Pulse Power Rating Curve

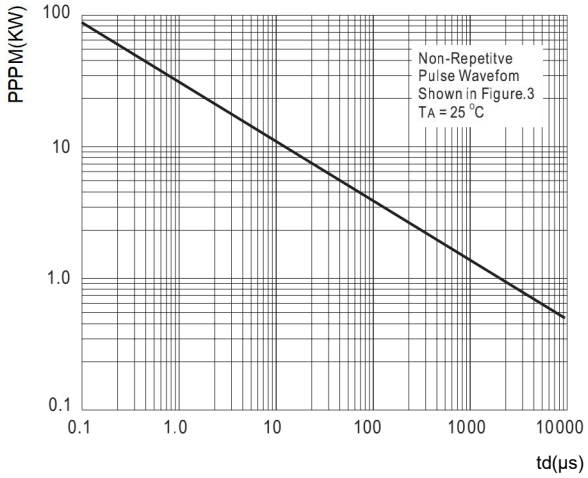


FIG2: Pulse Power or Current vs. Initial Junction Temperature

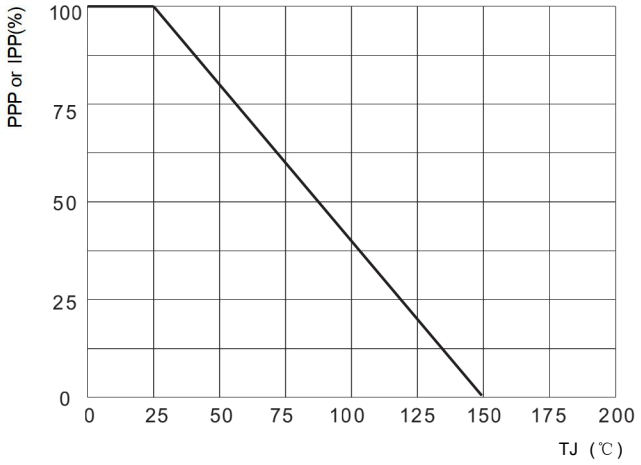


FIG3: Pulse Waveform

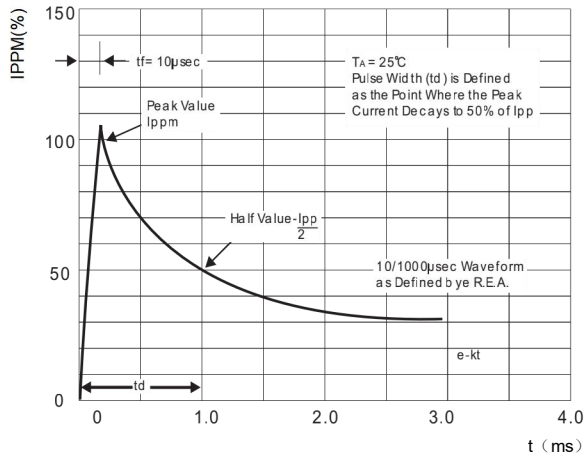


FIG4:Typical Transient Thermal Impedance

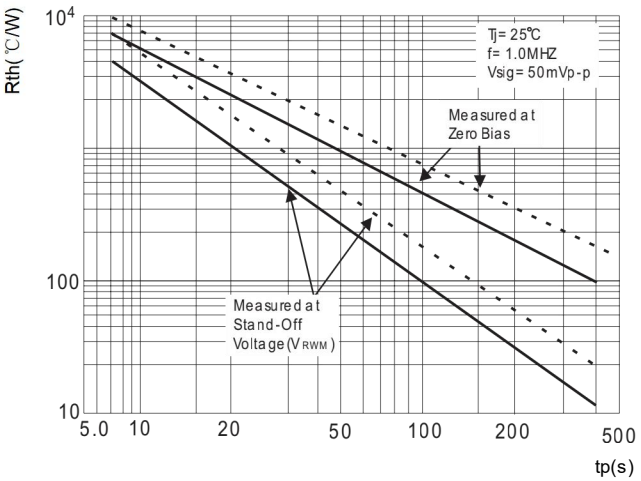


FIG5: Maximum Non-Repetitive Surge Current

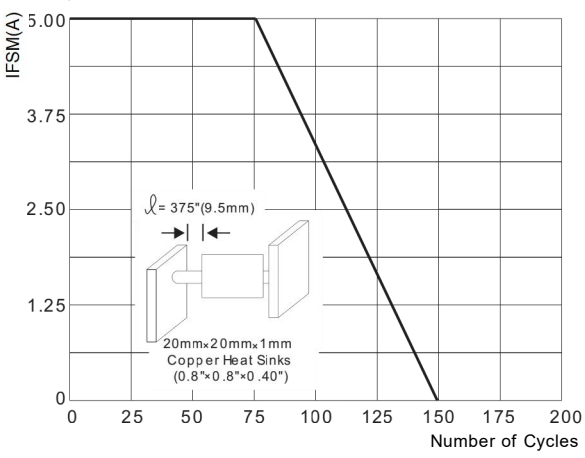
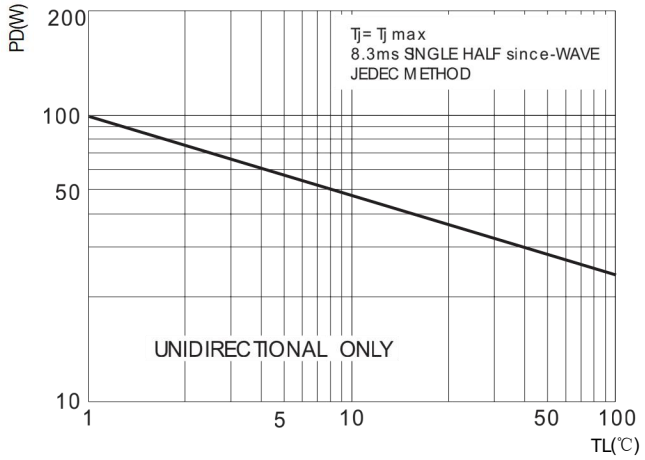
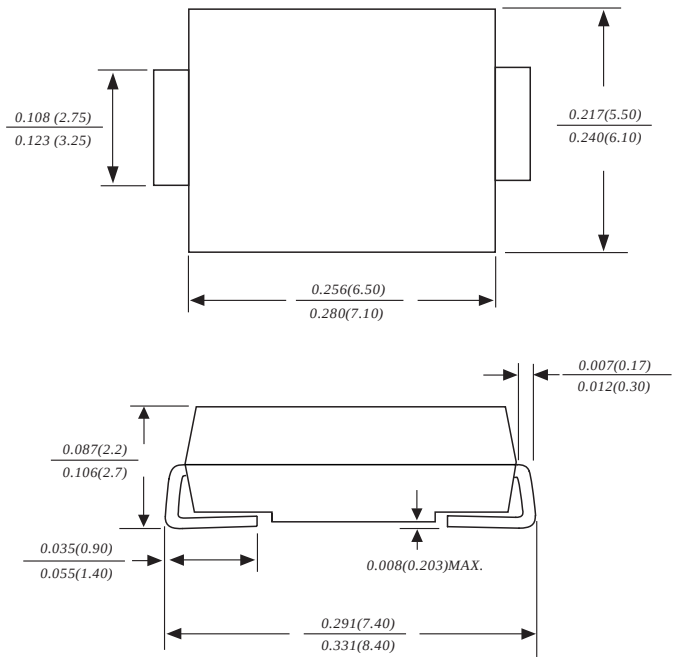


FIG6:Steady State Power Dissipation

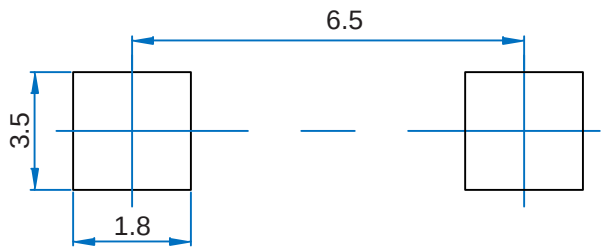


SMC package outline Dimensions



Dimensions in inches and (millimeters)

SMC Suggested pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.