

Transient Voltage Suppressors DO-214AB/SMC Package

1.5SMC Series

MERITEK

SPECIFICATIONS(CONTINUED)

Part Number		Device Marking Code		Reverse Stand-Off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
Uni-Polar	Bi-Polar	Uni	Bi	V _{RWM} (V)	V _{BR MIN.} (V)	V _{BR MAX.} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (μA)
1.5SMC16A	1.5SMC16CA	16A	16C	13.60	15.20	16.80	1	22.5	67.6	1
1.5SMC18A	1.5SMC18CA	18A	18C	15.30	17.10	18.90	1	25.2	60.3	1
1.5SMC20A	1.5SMC20CA	20A	20C	17.10	19.00	21.00	1	27.7	54.9	1
1.5SMC22A	1.5SMC22CA	22A	22C	18.80	20.90	23.10	1	30.6	49.7	1
1.5SMC24A	1.5SMC24CA	24A	24C	20.50	22.80	25.20	1	33.2	45.8	1
1.5SMC27A	1.5SMC27CA	27A	27C	23.10	25.70	28.40	1	37.5	40.5	1
1.5SMC30A	1.5SMC30CA	30A	30C	25.60	28.50	31.50	1	41.4	36.7	1
1.5SMC33A	1.5SMC33CA	33A	33C	28.20	31.40	34.70	1	45.7	33.3	1
1.5SMC36A	1.5SMC36CA	36A	36C	30.80	34.20	37.80	1	49.9	30.5	1
1.5SMC39A	1.5SMC39CA	39A	39C	33.30	37.10	41.00	1	53.9	28.2	1
1.5SMC43A	1.5SMC43CA	43A	43C	36.80	40.90	45.20	1	59.3	25.6	1
1.5SMC47A	1.5SMC47CA	47A	47C	40.20	44.70	49.40	1	64.8	23.5	1
1.5SMC51A	1.5SMC51CA	51A	51C	43.60	48.50	53.60	1	70.1	21.7	1
1.5SMC56A	1.5SMC56CA	56A	56C	47.80	53.20	58.80	1	77.0	19.7	1
1.5SMC62A	1.5SMC62CA	62A	62C	53.00	58.90	65.10	1	85.0	17.9	1
1.5SMC68A	1.5SMC68CA	68A	68C	58.10	64.60	71.40	1	92.0	16.5	1
1.5SMC75A	1.5SMC75CA	75A	75C	64.10	71.30	78.80	1	103.0	14.8	1
1.5SMC82A	1.5SMC82CA	82A	82C	70.10	77.90	86.10	1	113.0	13.5	1
1.5SMC91A	1.5SMC91CA	91A	91C	77.80	86.50	95.50	1	125.0	12.2	1
1.5SMC100A	1.5SMC100CA	68A	100C	85.50	95.00	105.00	1	137.0	11.1	1
1.5SMC110A	1.5SMC110CA	75A	110C	94.00	105.00	116.00	1	152.0	10.0	1
1.5SMC120A	1.5SMC120CA	120A	120C	102.00	114.00	126.00	1	165.0	9.2	1
1.5SMC130A	1.5SMC130CA	130A	130C	111.00	124.00	137.00	1	179.0	8.5	1
1.5SMC150A	1.5SMC150CA	150A	150C	128.00	143.00	158.00	1	207.0	7.3	1
1.5SMC160A	1.5SMC160CA	160A	160C	136.00	152.00	168.00	1	219.0	6.9	1
1.5SMC170A	1.5SMC170CA	170A	170C	145.00	162.00	179.00	1	234.0	6.5	1
1.5SMC180A	1.5SMC180CA	180A	180C	154.00	171.00	189.00	1	246.0	6.2	1
1.5SMC200A	1.5SMC200CA	200A	200C	171.00	190.00	210.00	1	274.0	5.5	1
1.5SMC220A	1.5SMC220CA	220A	220C	185.00	209.00	231.00	1	328.0	4.6	1
1.5SMC250A	1.5SMC250CA	250A	250C	214.00	237.00	263.00	1	344.0	4.4	1
1.5SMC300A	1.5SMC300CA	300A	300C	256.00	285.00	315.00	1	414.0	3.7	1
1.5SMC350A	1.5SMC350CA	350A	350C	300.00	332.00	368.00	1	482.0	3.2	1
1.5SMC400A	1.5SMC400CA	400A	400C	342.00	380.00	420.00	1	548.0	2.8	1
1.5SMC440A	1.5SMC440CA	440A	440C	376.00	418.00	462.00	1	602.0	2.5	1
1.5SMC480A	1.5SMC480CA	480A	480C	408.00	456.00	504.00	1	658.0	2.3	1
1.5SMC510A	1.5SMC510CA	510A	510C	434.00	485.00	535.00	1	698.0	2.1	1
1.5SMC530A	1.5SMC530CA	530A	530C	477.00	503.50	556.50	1	725.0	2.1	1
1.5SMC540A	1.5SMC540CA	540A	540C	486.00	513.00	567.00	1	740.0	2.0	1
1.5SMC550A	1.5SMC550CA	550A	550C	495.00	522.50	577.50	1	760.0	2.0	1

RATING AND CHARACTERISTIC CURVES

Figure 1. Peak Pulse Power Rating Curve

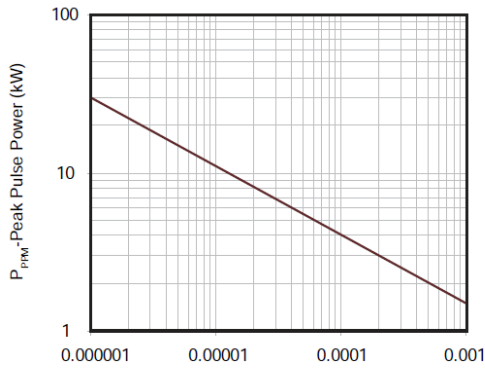


Figure 2. Pulse Derating Curve

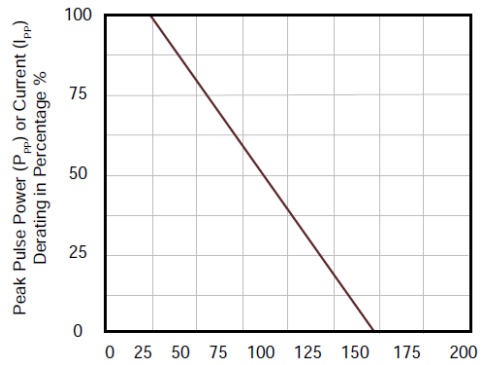


Figure 3. Pulse Waveform

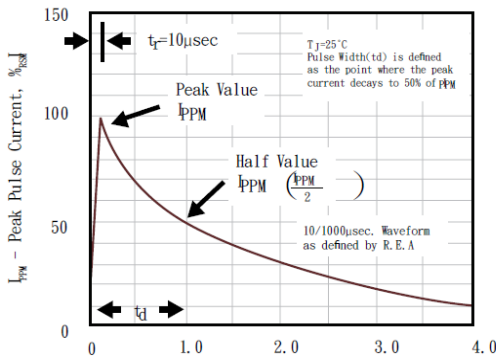


Figure 4. Typical Junction Capacitance

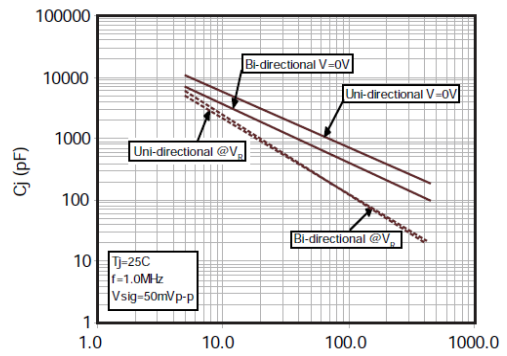


Figure 5. Steady Power Dissipation Derating Curve

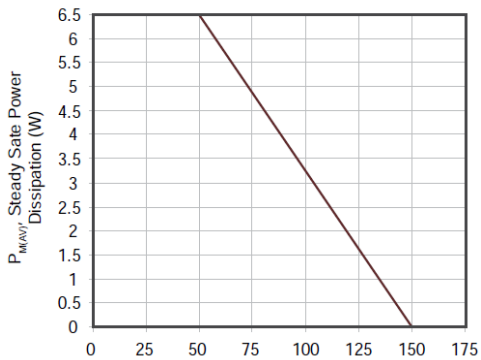
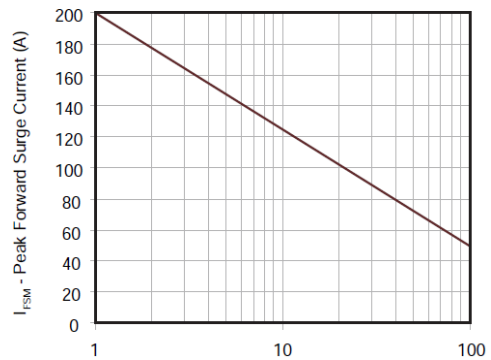


Figure 6. Maximum Non-Repetitive Forward Surge Current Uni-Directional Only



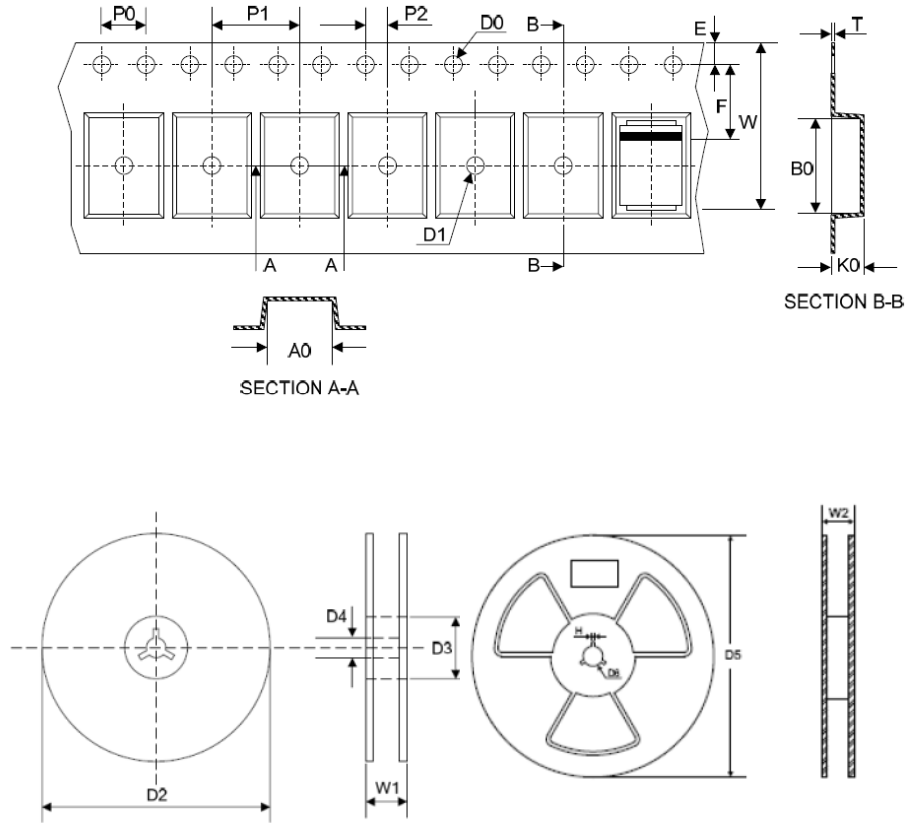
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PACKAGING SPECIFICATION

Tape	
Symbol	Dimension(mm)
W	16.00±0.20
P0	4.00±0.10
P1	8.00±0.10
P2	2.00±0.10
D0	Φ1.5±0.10
D1	Φ1.5±0.10
E	1.75±0.10
F	7.50±0.10
A0	6.27±0.10
B0	8.30±0.10
K0	3.15±0.15
T	0.30±0.05
D2	Φ178.0±2.0
D3	Φ50.0Min.
D4	Φ13.0±0.5
W1	20.0±2.0
Quantity	500PCS
Reel	
Symbol	Dimension(mm)
D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	20.0±2.0
Quantity	3000PCS



RECOMMENDED SOLDERING PROFILES

Reflow Condition		
Pre Heat	Temp. Min $T_{S(min)}$	150°C
	Tempe. Max $T_{S(max)}$	200°C
	Time (min. to max.) (t_s)	60-180 seconds
Average ramp up rate (Liquidus Temperature) (T_A) to peak		3°C/second max.
$T_{S(max)}$ to T_A (Ramp-up rate)		3°C/second max.
Reflow	Temp. (T_A) (Liquidus)	217°C
	Time (min. to max.) (t_s)	60-150 seconds
Peak Temperature (T_P)		260 ^{+/-0.5} °C
Time within 5°C of actual peak Temperature (t_p)		20-40 seconds
Ramp-down Rate		6°C/second max.
Time 25°C to peak Temp. (T_P)		8 minutes max.

