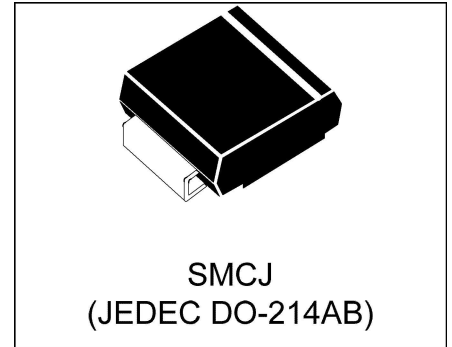


WSxxP15SMC(-B) Series

Transient Voltage Suppressor

Features

- 1500 watts Peak Pulse Power (10/1000 μ s)
- Unidirectional and Bidirectional Protection
- Fast Response Time: Typically < 1ps
- Excellent Clamping Capability
- Glass Passivated Junction
- Built-in Strain relief
- Low inductance
- Low profile package
- High temperature solder:260 $^{\circ}$ C/20 seconds at terminal
- RoHS/WEEE Compliant



Mechanical Characteristics

- JEDEC DO-214AB(SMCJ) package
- Molding compound flammability rating:
UL 94V-0
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481

Applications

- I/O Interfaces
- Power lines
- Automotive and Telecommunication
- Computers & Consumer Electronics
- Industrial Electronics

Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 10/1000\mu s$) (see Note1 & 2)	P_{PPM}	1500	Watts
Peak pulse current (10/1000 μ s) (see Note1 & 2)	I_{PPM}	See next table	A
Peak forward surge current (see Note3)	I_{FSM}	200	A
Power dissipation on infinite heat sink $T_A = 50^{\circ}C$	P_D	6.5	W
Operating junction temperature range	T_J	-65 to + 150	$^{\circ}C$
storage temperature range	T_{STG}	-65 to + 150	$^{\circ}C$

Electrical Characteristics

Part Number		Reverse Stand off Voltage V_{RWM} (Volts)	Breakdown Voltage $V_{BR}(\text{Volts})@I_T$		Test Current I_T (mA)	Maximum Clamping Voltage $V_C@I_{PP}$ (Volts)	Maximum Peak Pulse Current I_{pp} (Amps)	Maximum Reverse Leakage $I_R@V_{RWM}$ (μA)
			MIN	MAX				
UNI-POLAR	BI-POLAR							
WS5.0P15SMC	WS5.0P15SMC-B	5.0	6.40	7.00	10	9.2	163	800
WS6.0P15SMC	WS6.0P15SMC-B	6.0	6.67	7.37	10	10.3	145.7	800
WS6.5P15SMC	WS6.5P15SMC-B	6.5	7.22	7.98	10	11.2	134	500
WS7.0P15SMC	WS7.0P15SMC-B	7.0	7.78	8.60	10	12.0	125	200
WS7.5P15SMC	WS7.5P15SMC-B	7.5	8.33	9.21	1	12.9	116.3	100
WS8.0P15SMC	WS8.0P15SMC-B	8.0	8.89	9.83	1	13.6	110.3	50
WS8.5P15SMC	WS8.5P15SMC-B	8.5	9.44	10.40	1	14.4	104.2	20
WS9.0P15SMC	WS9.0P15SMC-B	9.0	10.00	11.10	1	15.4	97.4	10
WS10P15SMC	WS10P15SMC-B	10	11.10	12.30	1	17.0	88.3	5
WS11P15SMC	WS11P15SMC-B	11	12.20	13.50	1	18.2	82.5	1
WS12P15SMC	WS12P15SMC-B	12	13.30	14.7	1	19.9	75.4	1
WS13P15SMC	WS13P15SMC-B	13	14.40	15.90	1	21.5	69.8	1
WS14P15SMC	WS14P15SMC-B	14	15.60	17.20	1	23.2	64.7	1
WS15P15SMC	WS15P15SMC-B	15	16.70	18.50	1	24.4	61.5	1
WS16P15SMC	WS16P15SMC-B	16	17.80	19.70	1	26.0	57.7	1
WS17P15SMC	WS17P15SMC-B	17	18.90	20.90	1	27.6	54.4	1
WS18P15SMC	WS18P15SMC-B	18	20.00	22.10	1	29.2	51.4	1
WS20P15SMC	WS20P15SMC-B	20	22.20	24.50	1	32.4	46.3	1
WS22P15SMC	WS22P15SMC-B	22	24.40	26.90	1	35.5	42.3	1
WS24P15SMC	WS24P15SMC-B	24	26.70	29.50	1	38.9	38.6	1
WS26P15SMC	WS26P15SMC-B	26	28.90	31.90	1	42.1	35.7	1
WS28P15SMC	WS28P15SMC-B	28	31.10	34.40	1	45.4	33.1	1
WS30P15SMC	WS30P15SMC-B	30	33.30	36.80	1	48.4	31	1
WS33P15SMC	WS33P15SMC-B	33	36.70	40.60	1	53.3	28.2	1
WS36P15SMC	WS36P15SMC-B	36	40.00	44.20	1	58.1	25.9	1
WS40P15SMC	WS40P15SMC-B	40	44.40	49.10	1	64.5	23.3	1
WS43P15SMC	WS43P15SMC-B	43	47.80	52.80	1	69.4	21.7	1

Electrical Characteristics (Cont.)

Part Number		Reverse Stand off Voltage V_{RWM} (Volts)	Breakdown Voltage $V_{BR}(Volts)@I_T$		Test Current I_T (mA)	Maximum Clamping Voltage $V_c@I_{PP}$ (Volts)	Maximum Peak Pulse Current I_{PP} (Amps)	Maximum Reverse Leakage $I_R@V_{RWM}$ (μ A)
			MIN	MAX				
UNI-POLAR	BI-POLAR							
WS45P15SMC	WS45P15SMC-B	45	50.00	55.30	1	72.7	20.6	1
WS48P15SMC	WS48P15SMC-B	48	53.30	58.90	1	77.4	19.4	1
WS51P15SMC	WS51P15SMC-B	51	56.70	62.70	1	82.4	18.2	1
WS54P15SMC	WS54P15SMC-B	54	60.00	66.30	1	87.1	17.3	1
WS58P15SMC	WS58P15SMC-B	58	64.40	71.20	1	93.6	16.1	1
WS60P15SMC	WS60P15SMC-B	60	66.70	73.70	1	96.8	15.5	1
WS64P15SMC	WS64P15SMC-B	64	71.10	78.60	1	103	14.6	1
WS70P15SMC	WS70P15SMC-B	70	77.80	86.00	1	113	13.3	1
WS75P15SMC	WS75P15SMC-B	75	83.30	92.10	1	121	12.4	1
WS78P15SMC	WS78P15SMC-B	78	86.70	95.80	1	126	11.9	1
WS85P15SMC	WS85P15SMC-B	85	94.40	104	1	137	11	1
WS90P15SMC	WS90P15SMC-B	90	100	111	1	146	10.3	1
WS100P15SMC	WS100P15SMC-B	100	111	123	1	162	9.3	1
WS110P15SMC	WS110P15SMC-B	110	122	135	1	177	8.5	1
WS120P15SMC	WS120P15SMC-B	120	133	147	1	193	7.8	1
WS130P15SMC	WS130P15SMC-B	130	144	159	1	209	7.2	1
WS150P15SMC	WS150P15SMC-B	150	167	185	1	243	6.2	1
WS160P15SMC	WS160P15SMC-B	160	178	197	1	259	5.8	1
WS170P15SMC	WS170P15SMC-B	170	189	209	1	275	5.5	1
WS180P15SMC	WS180P15SMC-B	180	201	222	1	292	5.1	1
WS200P15SMC	WS200P15SMC-B	200	224	247	1	324	4.6	1
WS220P15SMC	WS220P15SMC-B	220	246	272	1	356	4.2	1
WS250P15SMC	WS250P15SMC-B	250	279	309	1	405	3.7	1
WS300P15SMC	WS300P15SMC-B	300	335	371	1	486	3.1	1
WS350P15SMC	WS350P15SMC-B	350	391	432	1	567	2.6	1
WS400P15SMC	WS400P15SMC-B	400	447	494	1	648	2.3	1
WS440P15SMC	WS440P15SMC-B	440	492	543	1	713	2.1	1

Typical Characteristics

Figure 1: Peak Pulse Power Rating Curve

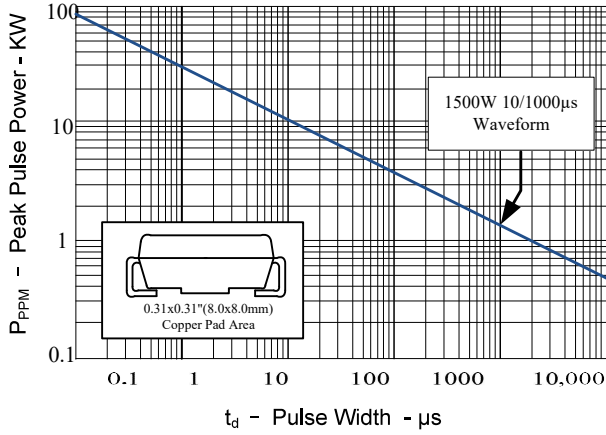


Figure 2: Pulse Derating Curve

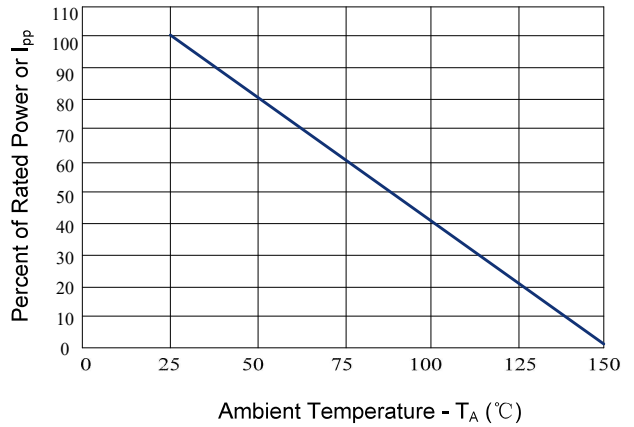


Figure 3: Pulse Waveform

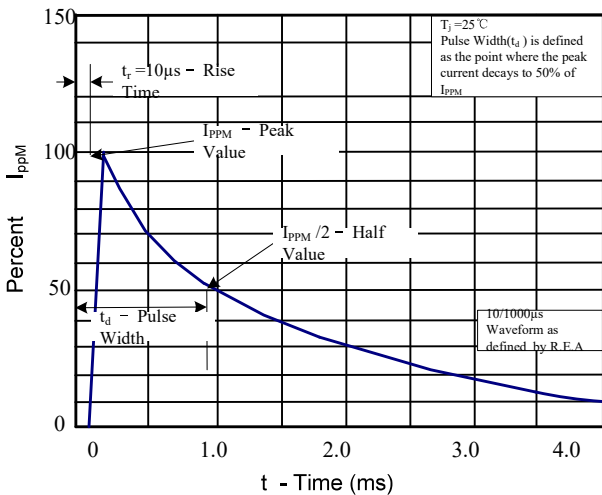


Figure 4: Typical Junction Capacitance

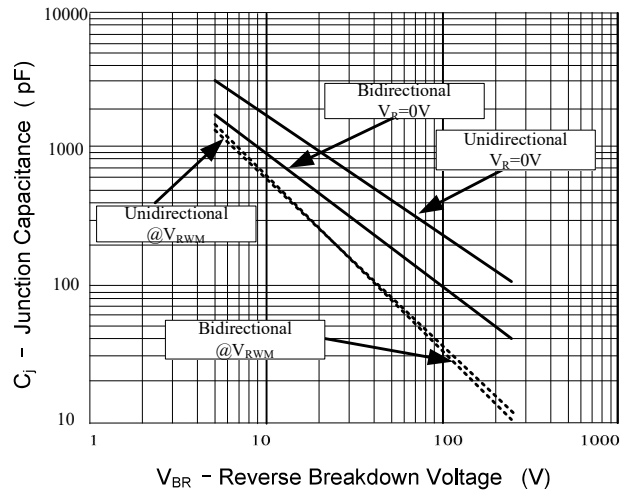


Figure 5: Steady State Power Dissipation Derating Curve

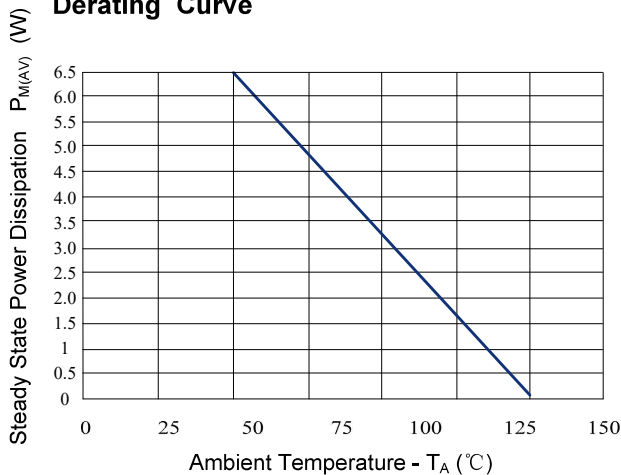
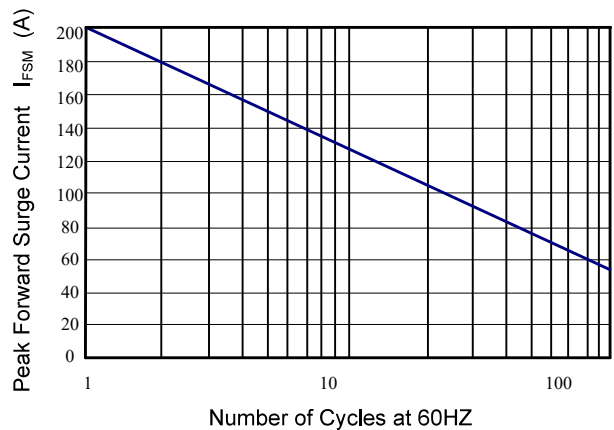
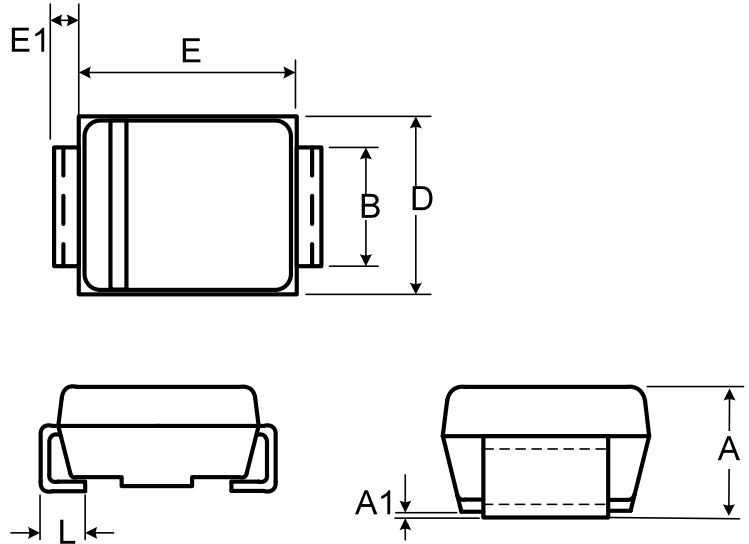


Figure 6: Maximum Non-Repetitive Forward Surge Current Only Unidirectional



Outline Drawing – SMCJ (DO-214AB)

Ref. (mm)	Millimeters	
	Min.	Max.
A	2.060	2.620
A1	-	0.203
B	2.900	3.200
E	6.600	7.110
E1	0.152	0.305
D	5.590	6.220
L	0.760	1.520



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