SMDJ5.0(C)A thru SMDJ440(C)A

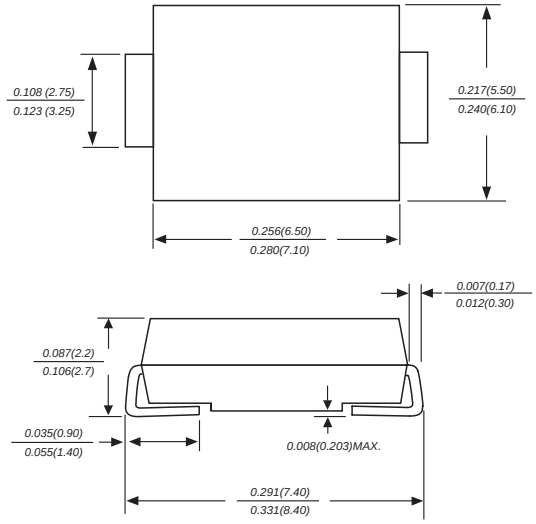
TRANSIENT VOLTAGE SUPPRESSOR

Standoff Voltage : 5.0~440 Volts

Peak Pulse Power : 3000W

Package Outline Dimensions

SMC(DO-214AB)



Dimensions in inches and (millimeters)

Features

- Low profile surface-mount package
- Glass passivated die construction
- Low leakage current
- Excellent stability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC

Mechanical Data

- Case:DO-214AB Plastic Package
- Polarity:Color band denotes cathode end
  (Note: Bi-directional devices have no polarity)
- Mounting position: Any
- Weight: 0.21g

Maximum ratings

Ratings at TA=25℃ (unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation with 10/1000 μs waveform (1) (fig. 1)	P_{PPM}	3000	W
Peak pulse current with 10/1000 μs waveform (1)	I_{PPM}	See next table	A
Steady State Power Dissipation	P_M	6.5	W
Peak forward surge current 8.3 ms single half sine-wave uni-directional only	I_{FSM}	300	A
Storage temperature range	T_S	-55 to 150	°C
Operating Junction temperature range	T_j	-55 to 150	°C

Note1： Non repetitive current pulse derated above TA = 25℃

Electrical characteristics (TA=25°C unless otherwise noted)

DEVICE TYPE	REVERSE STAND-OFF VOLTAGE V_{RWM} (V)	BREAKDOWN VOLTAGE VBR AT I_T (V)		TEST CURRENT I_T (mA)	MAXIMUM REVERSE LEAKAGE AT V_{RWM} Ir (μA)	MAXIMUM CLAMPING VOLTAGE AT I_{PPM} V_C (V)	MAXIMUM PEAK PULSE CURRENT I_{PPM} (A)
		MIN.	MAX.				
SMDJ5.0(C)A	5	6.4	7	10	800	9.2	326.1
SMDJ6.0(C)A	6	6.67	7.37	10	800	10.3	291.3
SMDJ6.5(C)A	6.5	7.22	7.98	10	500	11.2	267.9
SMDJ7.0(C)A	7	7.78	8.6	10	200	12	250.0
SMDJ7.5(C)A	7.5	8.33	9.21	1	100	12.9	232.6
SMDJ8.0(C)A	8	8.89	9.83	1	50	13.6	220.6
SMDJ8.5(C)A	8.5	9.44	10.4	1	20	14.4	208.3
SMDJ9.0(C)A	9	10	11.1	1	10	15.4	194.8
SMDJ10(C)A	10	11.1	12.3	1	5	17	176.5
SMDJ11(C)A	11	12.2	13.5	1	5	18.2	164.8
SMDJ12(C)A	12	13.3	14.7	1	2	19.9	150.8
SMDJ13(C)A	13	14.4	15.9	1	2	21.5	139.5
SMDJ14(C)A	14	15.6	17.2	1	2	23.2	129.3
SMDJ15(C)A	15	16.7	18.5	1	1	24.4	123.0
SMDJ16(C)A	16	17.8	19.7	1	1	26	115.4
SMDJ17(C)A	17	18.9	20.9	1	1	27.6	108.7
SMDJ18(C)A	18	20	22.1	1	1	29.2	102.7
SMDJ20(C)A	20	22.2	24.5	1	1	32.4	92.6
SMDJ22(C)A	22	24.4	26.9	1	1	35.5	84.5
SMDJ24(C)A	24	26.7	29.5	1	1	38.9	77.1
SMDJ26(C)A	26	28.9	31.9	1	1	42.1	71.3
SMDJ28(C)A	28	31.1	34.4	1	1	45.4	66.1
SMDJ30(C)A	30	33.3	36.8	1	1	48.4	62.0
SMDJ33(C)A	33	36.7	40.6	1	1	53.3	56.3
SMDJ36(C)A	36	40	44.2	1	1	58.1	51.6
SMDJ40(C)A	40	44.4	49.1	1	1	64.5	46.5
SMDJ43(C)A	43	47.8	52.8	1	1	69.4	43.2
SMDJ45(C)A	45	50	55.3	1	1	72.7	41.3
SMDJ48(C)A	48	53.3	58.9	1	1	77.4	38.8
SMDJ51(C)A	51	56.7	62.7	1	1	82.4	36.4
SMDJ54(C)A	54	60	66.3	1	1	87.1	34.4
SMDJ58(C)A	58	64.4	71.2	1	1	93.6	32.1
SMDJ60(C)A	60	66.7	73.7	1	1	96.8	31.0
SMDJ64(C)A	64	71.1	78.6	1	1	103	29.1
SMDJ70(C)A	70	77.8	86	1	1	113	26.6
SMDJ75(C)A	75	83.3	92.1	1	1	121	24.8
SMDJ78(C)A	78	86.7	95.8	1	1	126	23.8
SMDJ85(C)A	85	94.4	104	1	1	137	21.9
SMDJ90(C)A	90	100	111	1	1	146	20.6
SMDJ100(C)A	100	111	123	1	1	162	18.5
SMDJ110(C)A	110	122	135	1	1	177	17.0
SMDJ120(C)A	120	133	147	1	1	193	15.5

Electrical characteristics (TA=25°C unless otherwise noted)

DEVICE TYPE	REVERSE STAND-OFF VOLTAGE V_{RWM} (V)	BREAKDOWN VOLTAGE VBR AT I_T (V)		TEST CURRENT I_T (mA)	MAXIMUM REVERSE LEAKAGE AT V_{RWM} Ir (μA)	MAXIMUM CLAMPING VOLTAGE AT I_{PPM} V_C (V)	MAXIMUM PEAK PULSE CURRENT I_{PPM} (A)
		MIN.	MAX.				
SMDJ130(C)A	130	144	159	1	1	209	14.35
SMDJ150(C)A	150	167	185	1	1	243	12.35
SMDJ160(C)A	160	178	197	1	1	259	11.58
SMDJ170(C)A	170	189	209	1	1	275	10.91
SMDJ180(C)A	180	200	220	1	1	291.6	10.29
SMDJ190(C)A	190	211	232	1	1	307.8	9.75
SMDJ200(C)A	200	224	247	1	1	324	9.26
SMDJ220(C)A	220	246	272	1	1	356	8.43
SMDJ250(C)A	250	279	309	1	1	405	7.41
SMDJ300(C)A	300	335	371	1	1	486	6.17
SMDJ350(C)A	350	391	432	1	1	567	5.29
SMDJ400(C)A	400	447	494	1	1	648	4.63
SMDJ440(C)A	440	492	543	1	1	713	4.21

Characteristics Curves

Fig. 1 -Peak Pulse Power Rating Curve

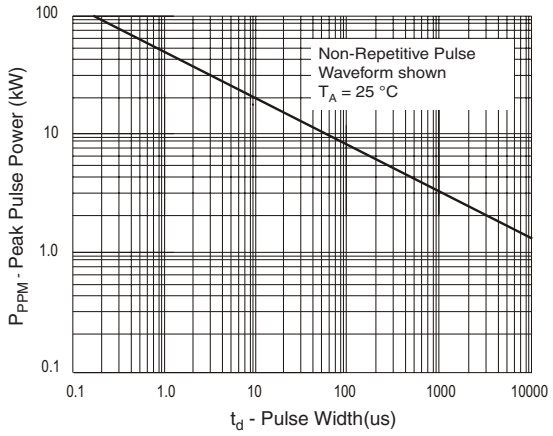


Fig. 2 - Pulse Derating Curve

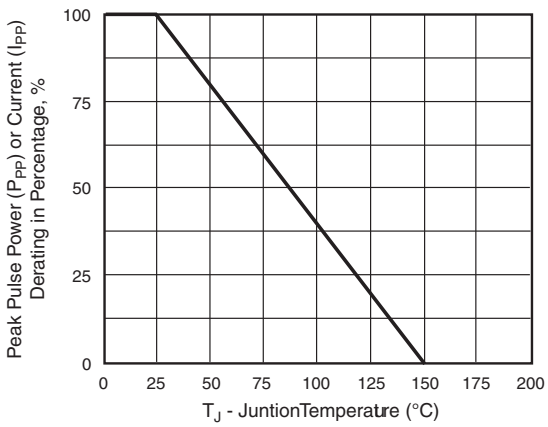


Fig. 3 - Pulse Waveform

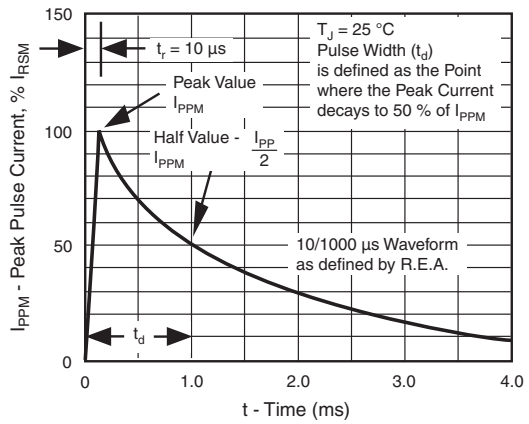


Fig. 4 -Maximum Non-Repetitive Forward Surge Current
Uni-Directional Only