RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

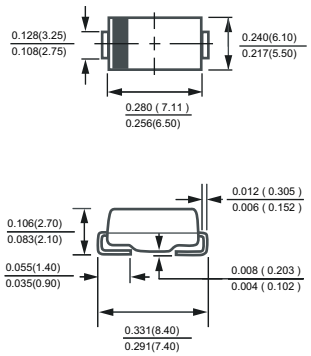
5.0SMCJ SERIES

Surface Mount Transient Voltage Suppressor Rectifiers
Reverse Voltage 11 ~ 440 V 5000 Watt Peak Pulse Power

FEATURES
* Excellent clamping capability
* Glass passivated chip construction
* 5000 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
* Low zener impedance
* Fast response time
* Halogen-free



DO-214AB



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
Ratings at 25 °C ambient temperature unless otherwise specified.

Maximum Ratings & Characteristics
Ratings at 25℃ ambient temperature unless otherwise specified.

Parameter	Symbols	Value	Unit
Peak power dissipation with a 10/1000 us waveform(1)	P_{PP}	5000	W
Peak pulse current wih a 10/1000 us waveform(1)	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at TL = 75 °C	P_D	6.5	W
Peak forward surge current, 8.3 ms single half sinewave unidirectional only(2)	I_{FSM}	300	A
Typical Current Squarad Time	I^2t	374	A^2S
Maximum instantaneous forward voltage at 100 A for unidirectional only(3)	V_F	3.5/6.5	V
Operating junction and storage temperature range	T_J , T_{STG}	-55 to +150	

Note:

2022-07/31
REV:F

1)Non-repetitive current pulse per Fig.5 and derated above TA= 25 °C per Fig.1 ;

2)Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum ;

3)VF<3.5V for devices of VBR<200V and VF<6.5V for devices of VBR>201V。

RATING AND CHARACTERISTICS CURVES (5.0SMCJ SERIES)

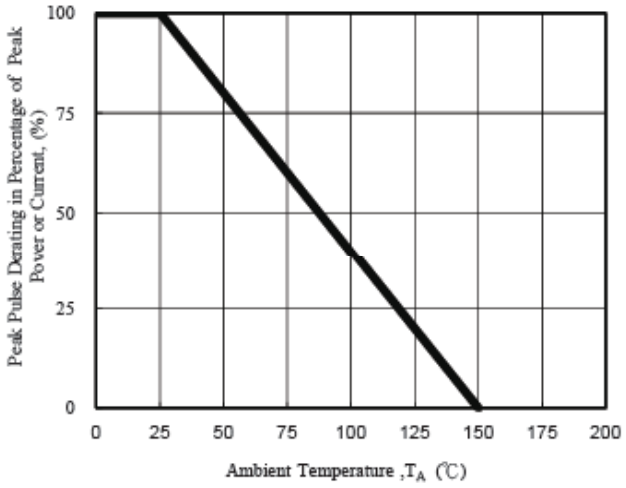


Fig. 1 - Pulse Derating Curve

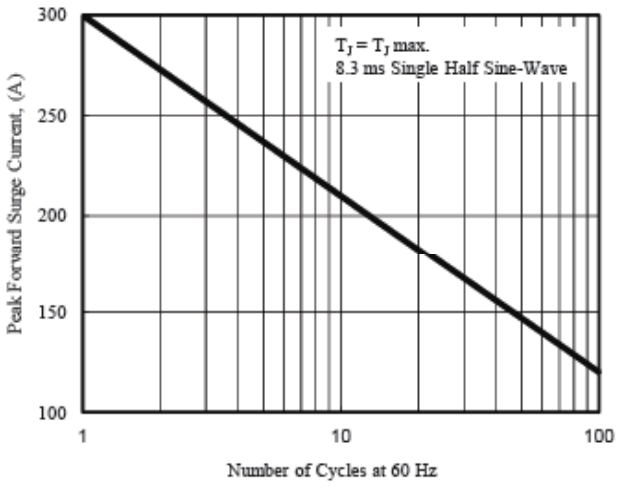


Fig. 2 - Maximum Non-Repetitive Surge Current

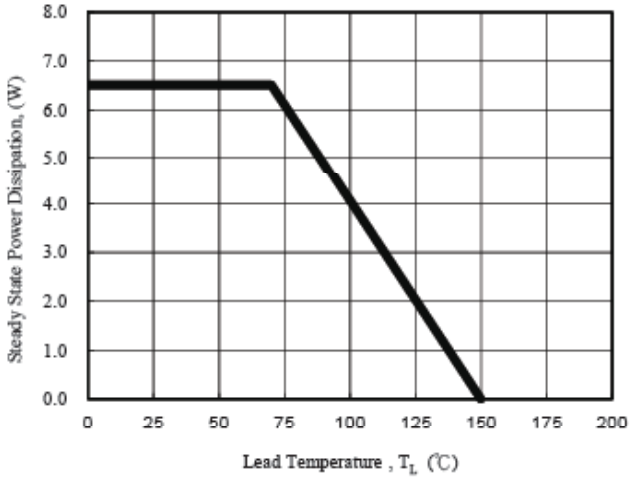


Fig. 3 - Steady State Power Derating Curve

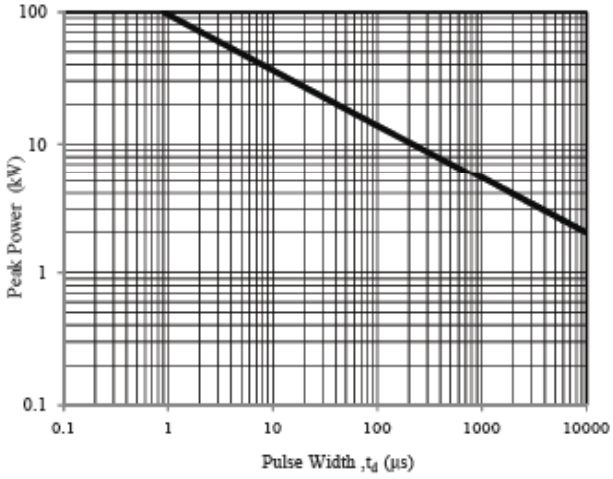


Fig. 4 - Peak Pulse Power Rating Curve

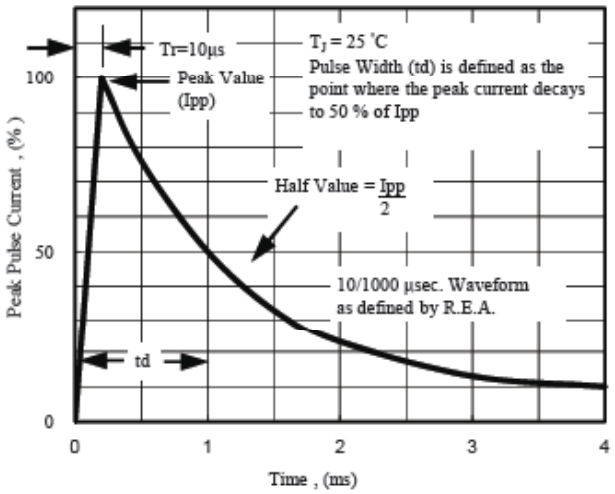


Fig. 5 - Pulse Waveform

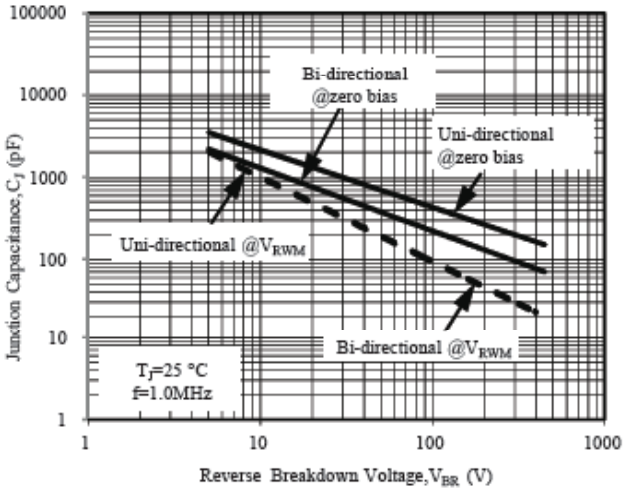
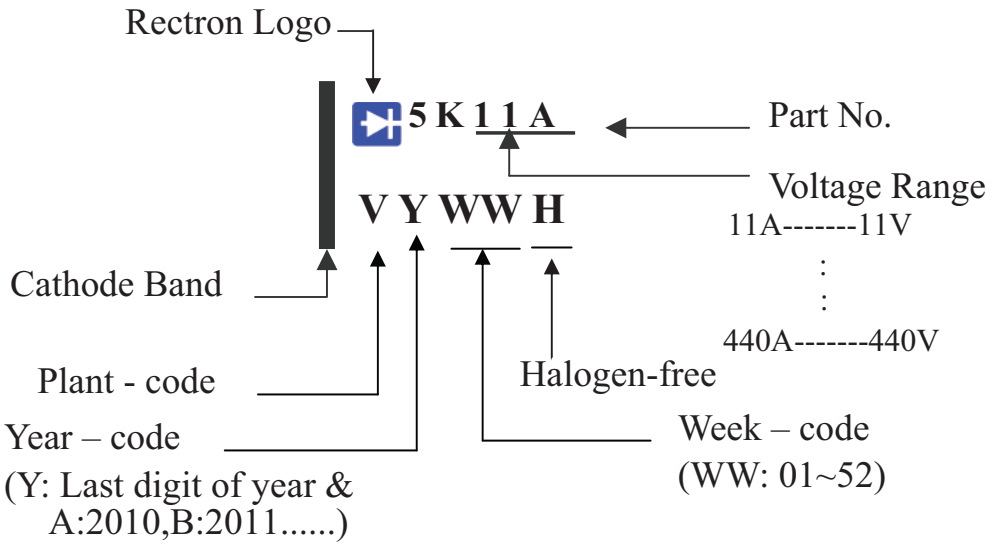


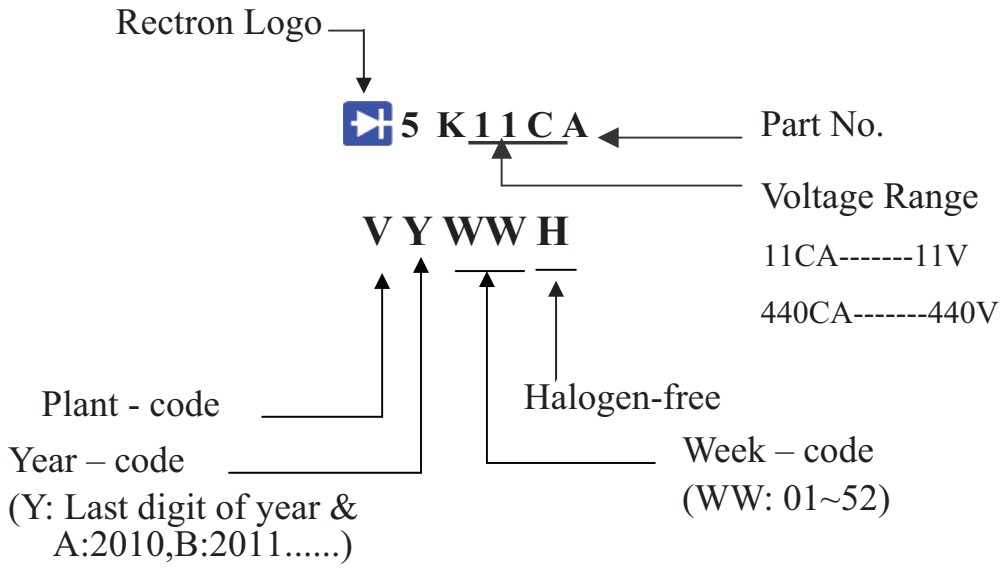
Fig. 6 - Typical Junction Capacitance

TYPE		Reverse Stand-off Voltage	Breakdown VoltageVbr@IT		Test current	Maximum Clamping Voltage@ Ipp	Max.Peak Pulse Current	Max.Rever se Leakage@ Vrwm	MAXIMUM TEMPERATURE COEFFICIENT OF VBR (%/°C)
UNI-POLAR	BI-POLAR	Vrwm(Volts)	Min(Volts)	Max(Volts)	IT(mA)	VcMax(Volts)	Ipp(A)	IR(uA)	
5.0SMCJ11A	5.0SMCJ11CA	11	12.2	13.5	10	18.2	274.7	800	0.081
5.0SMCJ12A	5.0SMCJ12CA	12	13.3	14.7	10	19.9	251.3	800	0.084
5.0SMCJ13A	5.0SMCJ13CA	13	14.4	15.9	10	21.5	232.6	500	0.085
5.0SMCJ14A	5.0SMCJ14CA	14	15.6	17.2	10	23.2	215.5	200	0.088
5.0SMCJ15A	5.0SMCJ15CA	15	16.7	18.5	1	24.4	204.9	100	0.089
5.0SMCJ16A	5.0SMCJ16CA	16	17.8	19.7	1	26	192.3	50	0.090
5.0SMCJ17A	5.0SMCJ17CA	17	18.9	20.9	1	27.6	181.2	20	0.091
5.0SMCJ18A	5.0SMCJ18CA	18	20	22.1	1	29.2	171.2	10	0.093
5.0SMCJ20A	5.0SMCJ20CA	20	22.2	24.5	1	32.4	154.3	5	0.095
5.0SMCJ22A	5.0SMCJ22CA	22	24.4	26.9	1	35.5	140.8	5	0.097
5.0SMCJ24A	5.0SMCJ24CA	24	26.7	29.5	1	38.9	128.5	5	0.097
5.0SMCJ26A	5.0SMCJ26CA	26	28.9	31.9	1	42.1	118.8	5	0.098
5.0SMCJ28A	5.0SMCJ28CA	28	31.1	34.4	1	45.4	110.1	5	0.099
5.0SMCJ30A	5.0SMCJ30CA	30	33.3	36.8	1	48.4	103.3	5	0.100
5.0SMCJ33A	5.0SMCJ33CA	33	36.7	40.6	1	53.3	93.8	5	0.101
5.0SMCJ36A	5.0SMCJ36CA	36	40	44.2	1	58.1	86.1	5	0.101
5.0SMCJ40A	5.0SMCJ40CA	40	44.4	49.1	1	64.5	77.5	5	0.102
5.0SMCJ43A	5.0SMCJ43CA	43	47.8	52.8	1	69.4	72	5	0.103
5.0SMCJ45A	5.0SMCJ45CA	45	50	55.3	1	72.7	68.8	5	0.103
5.0SMCJ48A	5.0SMCJ48CA	48	53.3	58.9	1	77.4	64.6	5	0.104
5.0SMCJ51A	5.0SMCJ51CA	51	56.7	62.7	1	82.4	60.7	5	0.105
5.0SMCJ54A	5.0SMCJ54CA	54	60	66.3	1	87.1	57.4	5	0.105
5.0SMCJ58A	5.0SMCJ58CA	58	64.4	71.2	1	93.6	53.4	5	0.105
5.0SMCJ60A	5.0SMCJ60CA	60	66.7	73.7	1	96.8	51.7	5	0.106
5.0SMCJ64A	5.0SMCJ64CA	64	71.1	78.6	1	103	48.5	5	0.106
5.0SMCJ70A	5.0SMCJ70CA	70	77.8	86	1	113	44.2	5	0.106
5.0SMCJ75A	5.0SMCJ75CA	75	83.3	92.1	1	121	41.3	5	0.107
5.0SMCJ78A	5.0SMCJ78CA	78	86.7	95.8	1	126	39.7	5	0.107
5.0SMCJ85A	5.0SMCJ85CA	85	94.4	104	1	137	36.5	5	0.107
5.0SMCJ90A	5.0SMCJ90CA	90	100	111	1	146	34.2	5	0.107
5.0SMCJ100A	5.0SMCJ100CA	100	111	123	1	162	30.9	5	0.108
5.0SMCJ110A	5.0SMCJ110CA	110	122	135	1	177	28.2	5	0.108
5.0SMCJ120A	5.0SMCJ120CA	120	133	147	1	193	25.9	5	0.109
5.0SMCJ130A	5.0SMCJ130CA	130	144	159	1	209	23.9	5	0.109
5.0SMCJ150A	5.0SMCJ150CA	150	155	171	1	226	22	5	0.109
5.0SMCJ160A	5.0SMCJ160CA	160	167	185	1	243	20.6	5	0.109
5.0SMCJ170A	5.0SMCJ170CA	170	178	197	1	259	19.3	5	0.109
5.0SMCJ180A	5.0SMCJ180CA	180	189	209	1	275	18.2	5	0.109
5.0SMCJ190A	5.0SMCJ190CA	190	200	220	1	291.6	17.1	5	0.109
5.0SMCJ200A	5.0SMCJ200CA	200	211	232	1	307.8	16.2	5	0.110
5.0SMCJ210A	5.0SMCJ210CA	210	224	247	1	324	15.4	5	0.110
5.0SMCJ220A	5.0SMCJ220CA	220	246	272	1	356	14	5	0.110
5.0SMCJ250A	5.0SMCJ250CA	250	279	309	1	405	12.3	5	0.111
5.0SMCJ300A	5.0SMCJ300CA	300	335	371	1	486	10.3	5	0.112
5.0SMCJ350A	5.0SMCJ350CA	350	391	432	1	567	8.8	5	0.113
5.0SMCJ400A	5.0SMCJ400CA	400	447	494	1	648	7.7	5	0.114
5.0SMCJ440A	5.0SMCJ440CA	440	492	543	1	713	7	5	0.115

RECTRON

Marking on the body





PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SMC	-W/-T	3,000	3,000	---	---	330	360*355*360	24,000	11.50

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