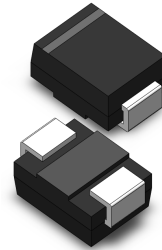


**VOLTAGE RANGE: 5.0 - 170V**  
**POWER: 600Watts**

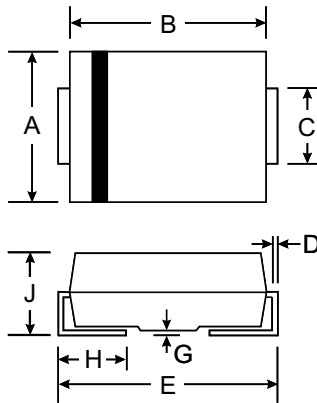
### Features

- Lead free versions available
- RoHS compliant (lead free version)\*
- Surface Mount SMB package
- Standoff Voltage: 5.0 to 170 volts
- Power Dissipation: 600 watts



### Mechanical Data

- Case: SMB/DO-214AA, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.093 grams (approx.)



SMB(DO-214AA)		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.70
C	1.91	2.21
D	0.15	0.31
E	5.00	5.59
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

### Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Value	Unit
Minimum Peak Pulse Power Dissipation ( $T_P = 1 \text{ ms}$ ) <sup>(Note 1,2)</sup>	$P_{PK}$	600	Watts
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) <sup>(Note 3)</sup>	$I_{FSM}$	100	Amps
Steady State Power Dissipation @ $T_L = 75^\circ\text{C}$	$P_{M(AV)}$	5.0	Watts
Maximum Instantaneous Forward Voltage @ $I_{PP} = 50 \text{ A}$ (For Unidirectional Units Only)	$V_F$	<sup>(Note 5)</sup>	Volts
Operating Temperature Range	$T_J$	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +175	$^\circ\text{C}$

1. Non-repetitive current pulse, per Pulse Waveform graph and derated above  $T_A = 25^\circ\text{C}$  per Pulse Derating Curve.
2. Thermal Resistance Junction to Lead.
3. 8.3 ms Single Half-Sine Wave duty cycle = 4 pulses maximum per minute (unidirectional units only).
4. Single Phase, Half Wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20 %.
5.  $V_F = 3.5 \text{ V}$  on CD214B-T5.0A through CD214B-T90A and  $V_F = 5.0 \text{ V}$  on CD214B-T100A through CD214B-T170A.



**Electrical Characteristics (@T<sub>A</sub> = 25 °C unless otherwise noted)**

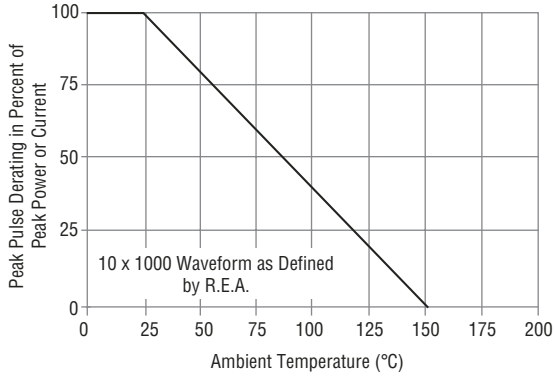
Unidirectional Device		Bidirectional Device		Breakdown Voltage V <sub>BR</sub> (Volts)			Working Peak Reverse Voltage	Maximum Reverse Leakage @ V <sub>RWM</sub>	Maximum Reverse Voltage @ I <sub>RSM</sub>	Maximum Reverse Surge Current
Part Number	Part Marking	Part Number	Part Marking	Min.	Max.	@ I <sub>T</sub> (mA)	V <sub>RWM</sub> (Volts)	I <sub>R</sub> (uA)	V <sub>RSM</sub> (Volts)	I <sub>RSM</sub> (Amps)
				CD214B-T5.0A	KE	CD214B-T5.0CA				
CD214B-T6.0A	KG	CD214B-T6.0CA	AG	6.67	7.67	10	6.0	800	10.3	58.3
CD214B-T6.5A	KK	CD214B-T6.5CA	AK	7.22	8.30	10	6.5	500	11.2	53.6
CD214B-T7.0A	KM	CD214B-T7.0CA	AM	7.78	8.95	10	7.0	200	12.0	50.0
CD214B-T7.5A	KP	CD214B-T7.5CA	AP	8.33	9.58	1.0	7.5	100	12.9	46.5
CD214B-T8.0A	KR	CD214B-T8.0CA	AR	8.89	10.2	1.0	8.0	50	13.6	44.1
CD214B-T8.5A	KT	CD214B-T8.5CA	AT	9.44	10.8	1.0	8.5	20	14.4	41.7
CD214B-T9.0A	KV	CD214B-T9.0CA	AV	10.0	11.5	1.0	9.0	10	15.4	39.0
CD214B-T10A	KX	CD214B-T10CA	AX	11.1	12.8	1.0	10	5.0	17.0	35.3
CD214B-T11A	KZ	CD214B-T11CA	AZ	12.2	14.4	1.0	11	5.0	18.2	33.0
CD214B-T12A	LE	CD214B-T12CA	BE	13.3	15.3	1.0	12	5.0	19.9	30.2
CD214B-T13A	LG	CD214B-T13CA	BG	14.4	16.5	1.0	13	5.0	21.5	27.9
CD214B-T14A	LK	CD214B-T14CA	BK	15.6	17.9	1.0	14	5.0	23.2	25.8
CD214B-T15A	LM	CD214B-T15CA	BM	16.7	19.2	1.0	15	5.0	24.4	24.0
CD214B-T16A	LP	CD214B-T16CA	BP	17.8	20.5	1.0	16	5.0	26.0	23.1
CD214B-T17A	LR	CD214B-T17CA	BR	18.9	21.7	1.0	17	5.0	27.6	21.7
CD214B-T18A	LT	CD214B-T18CA	BT	20.0	23.3	1.0	18	5.0	29.2	20.5
CD214B-T20A	LV	CD214B-T20CA	BV	22.2	25.5	1.0	20	5.0	32.4	18.5
CD214B-T22A	LX	CD214B-T22CA	BX	24.4	28.0	1.0	22	5.0	35.5	16.9
CD214B-T24A	LZ	CD214B-T24CA	BZ	26.7	30.7	1.0	24	5.0	38.9	15.4
CD214B-T26A	ME	CD214B-T26CA	CE	28.9	32.2	1.0	26	5.0	42.1	14.2
CD214B-T28A	MG	CD214B-T28CA	CG	31.1	35.8	1.0	28	5.0	45.4	13.2
CD214B-T30A	MK	CD214B-T30CA	CK	33.3	38.3	1.0	30	5.0	48.4	12.4
CD214B-T33A	MM	CD214B-T33CA	CM	36.7	42.2	1.0	33	5.0	53.3	11.3
CD214B-T36A	MP	CD214B-T36CA	CP	40	46.0	1.0	36	5.0	58.1	10.3
CD214B-T40A	MR	CD214B-T40CA	CR	44.4	51.1	1.0	40	5.0	64.5	9.3
CD214B-T43A	MT	CD214B-T43CA	CT	47.8	54.9	1.0	43	5.0	69.4	8.6
CD214B-T45A	MV	CD214B-T45CA	CV	50	57.5	1.0	45	5.0	72.7	8.3
CD214B-T48A	MX	CD214B-T48CA	CX	53.3	61.3	1.0	48	5.0	77.4	7.7
CD214B-T51A	MZ	CD214B-T51CA	CZ	56.7	65.2	1.0	51	5.0	82.4	7.3
CD214B-T54A	NE	CD214B-T54CA	DE	60	69	1.0	54	5.0	87.1	6.9
CD214B-T58A	NG	CD214B-T58CA	DG	64.4	74.6	1.0	58	5.0	93.6	6.4
CD214B-T60A	NK	CD214B-T60CA	DK	66.7	76.7	1.0	60	5.0	96.8	6.2
CD214B-T64A	NM	CD214B-T64CA	DM	71.1	81.8	1.0	64	5.0	103	5.8
CD214B-T70A	NP	CD214B-T70CA	DP	77.8	89.5	1.0	70	5.0	113	5.3
CD214B-T75A	NR	CD214B-T75CA	DR	83.3	95.8	1.0	75	5.0	121	4.9
CD214B-T78A	NT	CD214B-T78CA	DT	86.7	99.7	1.0	78	5.0	126	4.7
CD214B-T85A	NV	CD214B-T85CA	DV	94.4	109	1.0	85	5.0	137	4.4
CD214B-T90A	NX	CD214B-T90CA	DX	100	116	1.0	90	5.0	146	4.1
CD214B-T100A	NZ	CD214B-T100CA	DZ	111	128	1.0	100	5.0	162	3.7
CD214B-T110A	PE	CD214B-T110CA	EE	122	140	1.0	110	5.0	177	3.4
CD214B-T120A	PG	CD214B-T120CA	EG	133	153	1.0	120	5.0	193	3.1
CD214B-T130A	PK	CD214B-T130CA	EK	144	165	1.0	130	5.0	209	2.9
CD214B-T150A	PM	CD214B-T150CA	EM	167	192	1.0	150	5.0	243	2.5
CD214B-T160A	PP	CD214B-T160CA	EP	178	205	1.0	160	5.0	259	2.3
CD214B-T170A	PR	CD214B-T170CA	ER	189	218	1.0	170	5.0	275	2.2

**Notes:**

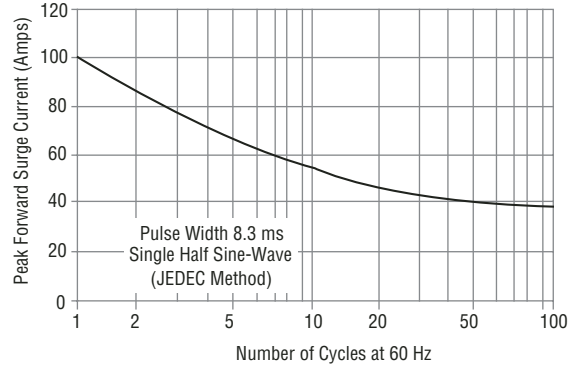
- Suffix 'A' denotes a 5 % tolerance device.
- Suffix 'CA' denotes a 5 % tolerance bidirectional device.
- For bidirectional devices with a V<sub>R</sub> of 10 volts or less, the I<sub>R</sub> limit is double.
- For unidirectional devices with a V<sub>F</sub> max. of 3.5 V at an I<sub>F</sub> of 35 A, 0.5 Sine Wave of 8.3 ms Pulse Width.



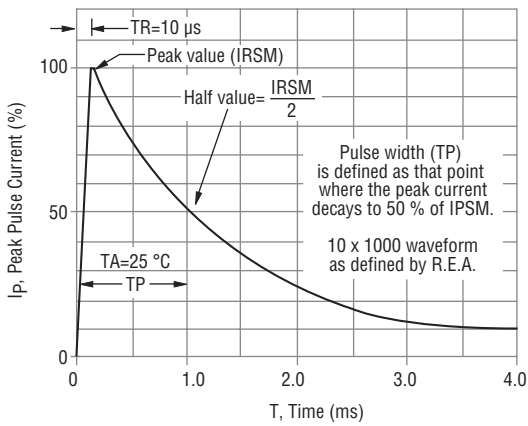
**Pulse Derating Curve**



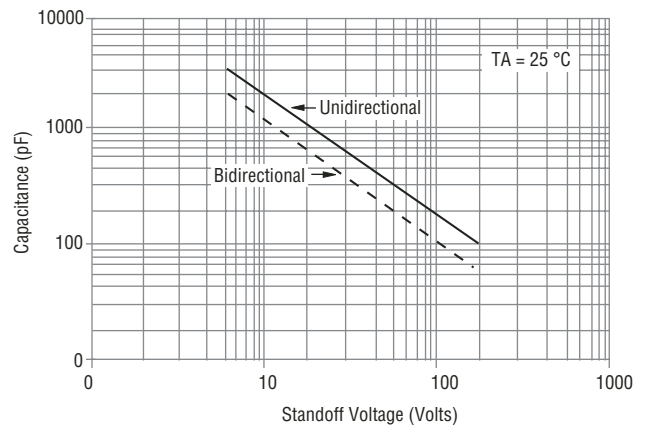
**Maximum Non-Repetitive Surge Current**



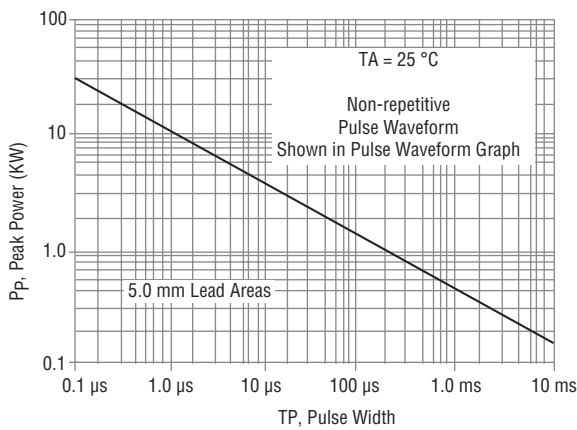
**Pulse Waveform**



**Typical Junction Capacitance**



**Pulse Rating Curve**



**Steady State Power Derating Curve**

