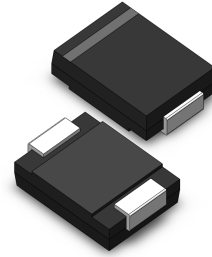


**VOLTAGE RANGE: 5.0 - 170V**  
**POWER: 1500Watts**

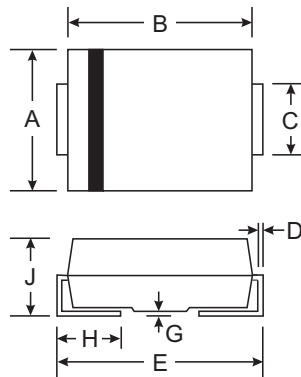
### Features

- Lead free versions available
- RoHS compliant (lead free version)\*
- Surface Mount SMC package
- Standoff Voltage: 5.0 to 170 volts
- Power Dissipation: 1500 watts



### Mechanical Data

- Case: SMC/DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.21 grams (approx.)



SMC/DO-214AB		
Dim	Min	Max
A	5.59	6.22
B	6.60	7.11
C	2.75	3.18
D	0.15	0.31
E	7.75	8.13
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>	$P_{PK}$	1500	Watts
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) <sup>(Note 3)</sup>	$I_{FSM}$	200	Amps
Steady State Power Dissipation @ $T_L = 75^\circ\text{C}$	$P_{M(AV)}$	5.0	Watts
Maximum Instantaneous Forward Voltage @ $I_{PP} = 100 \text{ A}$ (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 CD214C-T5.0A through CD214C-T90A and  $V_F = 5.0 \text{ V}$  on CD214C-T100A through CD214C-T170A.



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

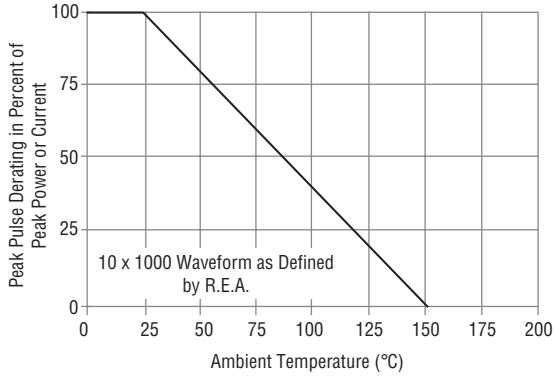
Unidirectional Device		Bidirectional Device		Breakdown Voltage V <sub>BR</sub> (Volts)			Working Peak Reverse Voltage	Maximum Reverse Leakage @ V <sub>RWM</sub>	Maximum Reverse Voltage @I <sub>RSM</sub>	Maximum Reverse Surge Current
Part Number	Part Marking	Part Number	Part Marking	Min.	Max.	@ I <sub>T</sub> (mA)	V <sub>RWM</sub> (Volts)	I <sub>R</sub> (uA)	V <sub>RSM</sub> (Volts)	I <sub>RSM</sub> (Amps)
CD214C-T5.0A	GDE	CD214C-T5.0CA	BDE	6.4	7.23	10	5	1000	9.2	163
CD214C-T6.0A	GDG	CD214C-T6.0CA	BDG	6.67	7.67	10	6	1000	10.3	145.6
CD214C-T6.5A	GDK	CD214C-T6.5CA	BDK	7.22	8.3	10	6.5	500	11.2	133.9
CD214C-T7.0A	GDM	CD214C-T7.0CA	BDM	7.78	8.95	10	7	200	12	125
CD214C-T7.5A	GDP	CD214C-T7.5CA	BDP	8.33	9.58	1	7.5	100	12.9	116.3
CD214C-T8.0A	GDR	CD214C-T8.0CA	BDR	8.89	10.2	1	8	50	13.6	110.3
CD214C-T8.5A	GDT	CD214C-T8.5CA	BDT	9.44	10.8	1	8.5	20	14.4	104.2
CD214C-T9.0A	GDV	CD214C-T9.0CA	BDV	10	11.5	1	9	10	15.4	97.4
CD214C-T10A	GDX	CD214C-T10CA	BDX	11.1	12.8	1	10	5	17	88.2
CD214C-T11A	GDZ	CD214C-T11CA	BDZ	12.2	14.4	1	11	5	18.2	82.4
CD214C-T12A	GEE	CD214C-T12CA	BEE	13.3	15.3	1	12	5	19.9	75.3
CD214C-T13A	GEG	CD214C-T13CA	BEG	14.4	16.5	1	13	5	21.5	69.7
CD214C-T14A	GEK	CD214C-T14CA	BEK	15.6	17.9	1	14	5	23.2	64.7
CD214C-T15A	GEM	CD214C-T15CA	BEM	16.7	19.2	1	15	5	24.4	61.5
CD214C-T16A	GEP	CD214C-T16CA	BEP	17.8	20.5	1	16	5	26	57.7
CD214C-T17A	GER	CD214C-T17CA	BER	18.9	21.7	1	17	5	27.6	53.3
CD214C-T18A	GET	CD214C-T18CA	BET	20	23.3	1	18	5	29.2	51.4
CD214C-T20A	GEV	CD214C-T20CA	BEV	22.2	25.5	1	20	5	32.4	46.3
CD214C-T22A	GEX	CD214C-T22CA	BEX	24.4	28	1	22	5	35.5	42.2
CD214C-T24A	GEZ	CD214C-T24CA	BEZ	26.7	30.7	1	24	5	38.9	38.6
CD214C-T26A	GFE	CD214C-T26CA	BFE	28.9	32.2	1	26	5	42.1	35.6
CD214C-T28A	GFG	CD214C-T28CA	BFG	31.1	35.8	1	28	5	45.4	33
CD214C-T30A	GFK	CD214C-T30CA	BFK	33.3	38.3	1	30	5	48.4	31
CD214C-T33A	GFM	CD214C-T33CA	BFM	36.7	42.2	1	33	5	53.3	28.1
CD214C-T36A	GFP	CD214C-T36CA	BFP	40	46	1	36	5	58.1	25.8
CD214C-T40A	GFR	CD214C-T40CA	BFR	44.4	51.1	1	40	5	64.5	23.3
CD214C-T43A	GFT	CD214C-T43CA	BFT	47.8	54.9	1	43	5	69.4	21.6
CD214C-T45A	GFV	CD214C-T45CA	BFV	50	57.5	1	45	5	72.7	20.6
CD214C-T48A	GFX	CD214C-T48CA	BFX	53.3	61.3	1	48	5	77.4	19.4
CD214C-T51A	GFZ	CD214C-T51CA	BFZ	56.7	65.2	1	51	5	82.4	18.2
CD214C-T54A	GGE	CD214C-T54CA	BGE	60	69	1	54	5	87.1	17.2
CD214C-T58A	GGG	CD214C-T58CA	BGG	64.4	74.6	1	58	5	93.6	16
CD214C-T60A	GGK	CD214C-T60CA	BGK	66.7	76.7	1	60	5	96.8	15.5
CD214C-T64A	GGM	CD214C-T64CA	BGM	71.1	81.8	1	64	5	103	14.6
CD214C-T70A	GGP	CD214C-T70CA	BGP	77.8	89.5	1	70	5	113	13.3
CD214C-T75A	GGR	CD214C-T75CA	BGR	83.3	95.8	1	75	5	121	12.4
CD214C-T78A	GGT	CD214C-T78CA	BGT	86.7	99.7	1	78	5	126	11.4
CD214C-T85A	GGV	CD214C-T85CA	BGV	94.4	108.2	1	85	5	137	10.4
CD214C-T90A	GGX	CD214C-T90CA	BGX	100	115.5	1	90	5	146	10.3
CD214C-T100A	GGZ	CD214C-T100CA	BGZ	111	128	1	100	5	162	9.3
CD214C-T110A	GHE	CD214C-T110CA	BHE	122	140	1	110	5	177	8.4
CD214C-T120A	GHG	CD214C-T120CA	BHG	133	153	1	120	5	193	7.9
CD214C-T130A	GHK	CD214C-T130CA	BHK	144	165	1	130	5	209	7.2
CD214C-T150A	GHM	CD214C-T150CA	BHM	167	192	1	150	5	243	6.2
CD214C-T160A	GHP	CD214C-T160CA	BHP	178	205	1	160	5	259	5.8
CD214C-T170A	GHR	CD214C-T170CA	BHR	189	217.5	1	170	5	275	5.5

**Notes:**

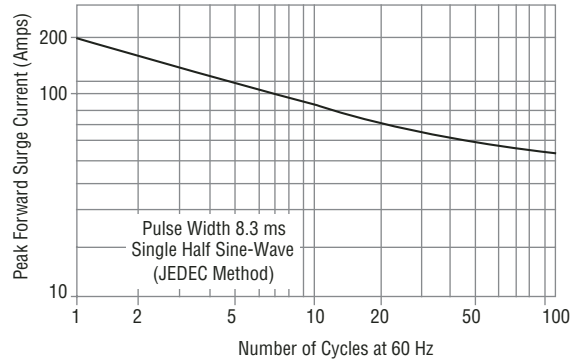
1. Suffix 'A' denotes a 5 % tolerance device.
2. Suffix 'CA' denotes a 5 % tolerance bidirectional device.
3. For bidirectional devices with a V<sub>R</sub> of 10 volts or less, the I<sub>P</sub> limit is double.
4. For unidirectional devices with a V<sub>F</sub> max. of 3.5 V at an I<sub>F</sub> of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



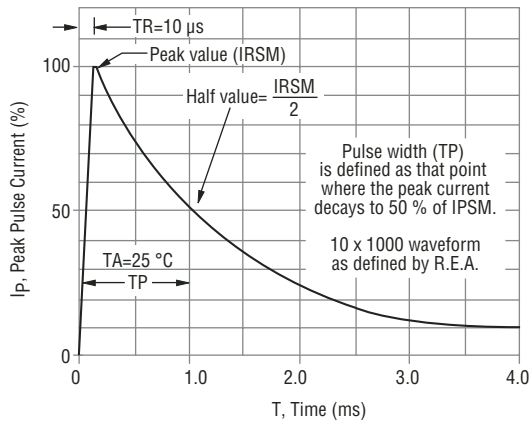
**Pulse Derating Curve**



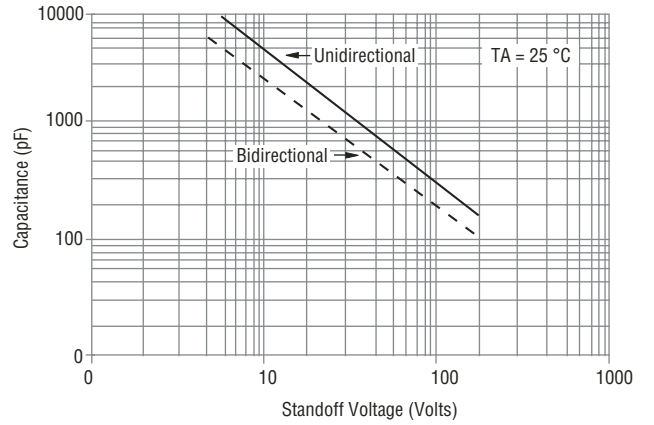
**Maximum Non-Repetitive Surge Current**



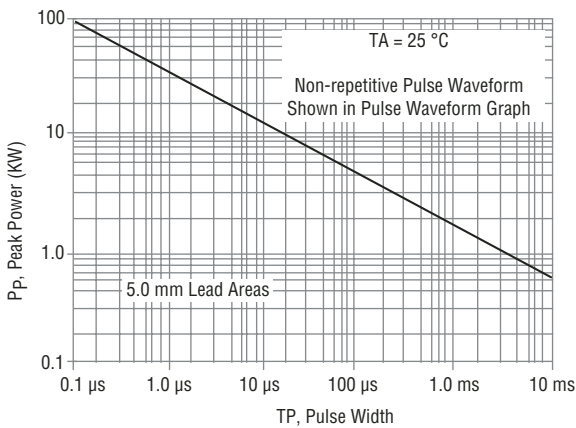
**Pulse Waveform**



**Typical Junction Capacitance**



**Pulse Rating Curve**



**Steady State Power Derating Curve**

