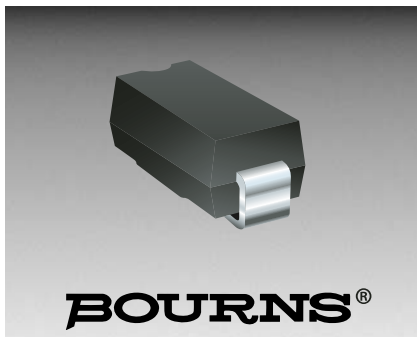




## Features

- Surface Mount SMA package
- Standoff Voltage: 5.0 to 170 volts
- Power Dissipation: 400 watts

## CD214A Transient Voltage Suppressor Diode Series

### General Information

The markets of portable communications, computing and video equipment are challenging the semiconductor industry to develop increasingly smaller electronic components.

Bourns offers Transient Voltage Suppressor Diodes for surge and ESD protection applications, in compact chip package DO-214AC (SMA) size format. The Transient Voltage Suppressor series offers a choice of Working Peak Reverse Voltage from 5 V up to 170 V and Breakdown Voltage up to 200 V. Typical fast response times are less than 1.0 ns for unidirectional devices and less than 5.0 ns for bidirectional devices from 0 V to Minimum Breakdown Voltage.

Bourns® Chip Diodes conform to JEDEC standards, are easy to handle with standard pick and place equipment and the flat configuration minimizes roll away.

### Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ Unless Otherwise Noted)

| Parameter                                                                                                                  | Symbol      | Value       | Unit             |
|----------------------------------------------------------------------------------------------------------------------------|-------------|-------------|------------------|
| Minimum Peak Pulse Power Dissipation ( $T_P = 1\text{ ms}$ ) <sup>(Note 1,2)</sup>                                         | $P_{PK}$    | 400         | Watts            |
| Peak Forward Surge Current<br>8.3ms Single Half Sine Wave Superimposed on Rated Load<br>(JEDEC Method) <sup>(Note 3)</sup> | $I_{FSM}$   | 40          | Amps             |
| Steady State Power Dissipation @ $T_L = 75^\circ\text{C}$                                                                  | $P_{M(AV)}$ | 1.0         | Watts            |
| Maximum Instantaneous Forward Voltage @ $I_{PP} = 35\text{ A}$<br>(For Unidirectional Units Only)                          | $V_F$       | 3.5         | 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 %.



*Reliable Electronic Solutions*

#### Asia-Pacific:

Tel: +886-2 2562-4117 • Fax: +886-2 2562-4116

#### Europe:

Tel: +41-41 768 5555 • Fax: +41-41 768 5510

#### North America:

Tel: +1-909 781-5500 • Fax: +1-909 781-5700

Tel: +1-951 781-5500 • Fax: +1-951 781-5700 (after 7/17/04)

[www.bourns.com](http://www.bourns.com)

### How To Order

**CD 214A - T 5.0 CA**

Common Code \_\_\_\_\_  
Chip Diode \_\_\_\_\_

Package \_\_\_\_\_  
214A = SMA/DO-214AC  
214B = SMB/DO-214AA  
214C = SMC/DO-214AB

Model \_\_\_\_\_  
T = Transient Voltage Suppressor Series

Working Peak Reverse Voltage \_\_\_\_\_  
5.0 = 5.0  $V_{RWM}$  (Volts)  
170 = 170  $V_{RWM}$  (Volts)

Suffix \_\_\_\_\_  
A = 5 % Tolerance Device  
C = Bidirectional Device  
CA = 5 % Tolerance Bidirectional Device  
— = 10 % Tolerance Unidirectional Device

# CD214A Transient Voltage Suppressor Diode Series

**BOURNS®**

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

| Unidirectional Device |                 | Bidirectional Device |                 | Breakdown Voltage<br>V <sub>BR</sub> (Volts) |      |                       | Working Peak<br>Reverse<br>Voltage<br>V <sub>RWM</sub> (Volts) | Maximum<br>Reverse<br>Leakage<br>@ V <sub>RWM</sub><br>I <sub>R</sub> (uA) | Maximum<br>Reverse<br>Voltage<br>@ I <sub>RSM</sub><br>V <sub>RSM</sub> (Volts) | Maximum<br>Reverse<br>Surge<br>Current<br>I <sub>RSM</sub> (Amps) |
|-----------------------|-----------------|----------------------|-----------------|----------------------------------------------|------|-----------------------|----------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Part<br>Number        | Part<br>Marking | Part<br>Number       | Part<br>Marking | Min.                                         | Max. | @ I <sub>T</sub> (mA) |                                                                |                                                                            |                                                                                 |                                                                   |
| CD214A-T5.0           | HD              | CD214A-T5.0C         | TD              | 6.40                                         | 7.30 | 10                    | 5.0                                                            | 800 / 1600                                                                 | 9.6                                                                             | 41.6                                                              |
| CD214A-T5.0A          | HE              | CD214A-T5.0CA        | TE              | 6.40                                         | 7.00 | 10                    | 5.0                                                            | 800 / 1600                                                                 | 9.2                                                                             | 43.5                                                              |
| CD214A-T6.0           | HF              | CD214A-T6.0C         | TF              | 6.67                                         | 8.15 | 10                    | 6.0                                                            | 800 / 1600                                                                 | 11.4                                                                            | 35.1                                                              |
| CD214A-T6.0A          | HG              | CD214A-T6.0CA        | TG              | 6.67                                         | 7.37 | 10                    | 6.0                                                            | 800 / 1600                                                                 | 10.3                                                                            | 38.8                                                              |
| CD214A-T6.5           | HH              | CD214A-T6.5C         | TH              | 7.22                                         | 8.82 | 10                    | 6.5                                                            | 500 / 1000                                                                 | 12.3                                                                            | 32.5                                                              |
| CD214A-T6.5A          | HK              | CD214A-T6.5CA        | TK              | 7.22                                         | 7.98 | 10                    | 6.5                                                            | 500 / 1000                                                                 | 11.2                                                                            | 35.7                                                              |
| CD214A-T7.0           | HL              | CD214A-T7.0C         | TL              | 7.78                                         | 9.51 | 10                    | 7.0                                                            | 200 / 400                                                                  | 13.3                                                                            | 30.1                                                              |
| CD214A-T7.0A          | HM              | CD214A-T7.0CA        | TM              | 7.78                                         | 8.60 | 10                    | 7.0                                                            | 200 / 400                                                                  | 12.0                                                                            | 33.3                                                              |
| CD214A-T7.5           | HN              | CD214A-T7.5C         | TN              | 8.33                                         | 10.3 | 1.0                   | 7.5                                                            | 100 / 200                                                                  | 14.3                                                                            | 28.0                                                              |
| CD214A-T7.5A          | HP              | CD214A-T7.5CA        | TP              | 8.33                                         | 9.21 | 1.0                   | 7.5                                                            | 100 / 200                                                                  | 12.9                                                                            | 31.0                                                              |
| CD214A-T8.0           | HQ              | CD214A-T8.0C         | TQ              | 8.89                                         | 10.9 | 1.0                   | 8.0                                                            | 50 / 100                                                                   | 15.0                                                                            | 26.5                                                              |
| CD214A-T8.0A          | HR              | CD214A-T8.0CA        | TR              | 8.89                                         | 9.83 | 1.0                   | 8.0                                                            | 50 / 100                                                                   | 13.6                                                                            | 29.4                                                              |
| CD214A-T8.5           | HS              | CD214A-T8.5C         | TS              | 9.44                                         | 11.5 | 1.0                   | 8.5                                                            | 10 / 20                                                                    | 15.9                                                                            | 25.1                                                              |
| CD214A-T8.5A          | HT              | CD214A-T8.5CA        | TT              | 9.44                                         | 10.4 | 1.0                   | 8.5                                                            | 10 / 20                                                                    | 14.4                                                                            | 27.7                                                              |
| CD214A-T9.0           | HU              | CD214A-T9.0C         | TU              | 10.0                                         | 12.2 | 1.0                   | 9.0                                                            | 5 / 10                                                                     | 16.9                                                                            | 23.6                                                              |
| CD214A-T9.0A          | HV              | CD214A-T9.0CA        | TV              | 10.0                                         | 11.1 | 1.0                   | 9.0                                                            | 5 / 10                                                                     | 15.4                                                                            | 26.0                                                              |
| CD214A-T10            | HW              | CD214A-T10C          | TW              | 11.1                                         | 13.6 | 1.0                   | 10                                                             | 5 / 10                                                                     | 18.8                                                                            | 21.2                                                              |
| CD214A-T10A           | HX              | CD214A-T10CA         | TX              | 11.1                                         | 12.3 | 1.0                   | 10                                                             | 5 / 10                                                                     | 17.0                                                                            | 23.5                                                              |
| CD214A-T11            | HY              | CD214A-T11C          | TY              | 12.2                                         | 14.9 | 1.0                   | 11                                                             | 5.0                                                                        | 20.1                                                                            | 20.0                                                              |
| CD214A-T11A           | HZ              | CD214A-T11CA         | TZ              | 12.2                                         | 13.2 | 1.0                   | 11                                                             | 5.0                                                                        | 18.2                                                                            | 22.0                                                              |
| CD214A-T12            | ID              | CD214A-T12C          | UD              | 13.3                                         | 16.3 | 1.0                   | 12                                                             | 5.0                                                                        | 22.0                                                                            | 18.1                                                              |
| CD214A-T12A           | IE              | CD214A-T12CA         | UE              | 13.3                                         | 14.7 | 1.0                   | 12                                                             | 5.0                                                                        | 19.9                                                                            | 20.1                                                              |
| CD214A-T13            | IF              | CD214A-T13C          | UF              | 14.4                                         | 17.6 | 1.0                   | 13                                                             | 5.0                                                                        | 23.8                                                                            | 16.8                                                              |
| CD214A-T13A           | IG              | CD214A-T13CA         | UG              | 14.4                                         | 15.9 | 1.0                   | 13                                                             | 5.0                                                                        | 21.5                                                                            | 18.6                                                              |
| CD214A-T14            | IH              | CD214A-T14C          | UH              | 15.6                                         | 19.1 | 1.0                   | 14                                                             | 5.0                                                                        | 25.8                                                                            | 15.5                                                              |
| CD214A-T14A           | IK              | CD214A-T14CA         | UK              | 15.6                                         | 17.2 | 1.0                   | 14                                                             | 5.0                                                                        | 23.2                                                                            | 17.2                                                              |
| CD214A-T15            | IL              | CD214A-T15C          | UL              | 16.7                                         | 20.4 | 1.0                   | 15                                                             | 5.0                                                                        | 26.9                                                                            | 14.8                                                              |
| CD214A-T15A           | IM              | CD214A-T15CA         | UM              | 16.7                                         | 18.5 | 1.0                   | 15                                                             | 5.0                                                                        | 24.4                                                                            | 16.4                                                              |
| CD214A-T16            | IN              | CD214A-T16C          | UN              | 17.8                                         | 21.8 | 1.0                   | 16                                                             | 5.0                                                                        | 28.8                                                                            | 13.8                                                              |
| CD214A-T16A           | IP              | CD214A-T16CA         | UP              | 17.8                                         | 19.7 | 1.0                   | 16                                                             | 5.0                                                                        | 26.0                                                                            | 15.3                                                              |
| CD214A-T17            | IQ              | CD214A-T17C          | UQ              | 18.9                                         | 23.1 | 1.0                   | 17                                                             | 5.0                                                                        | 30.5                                                                            | 13.1                                                              |
| CD214A-T17A           | IR              | CD214A-T17CA         | UR              | 18.9                                         | 20.9 | 1.0                   | 17                                                             | 5.0                                                                        | 27.6                                                                            | 14.5                                                              |
| CD214A-T18            | IS              | CD214A-T18C          | US              | 20.0                                         | 24.4 | 1.0                   | 18                                                             | 5.0                                                                        | 32.2                                                                            | 12.4                                                              |
| CD214A-T18A           | IT              | CD214A-T18CA         | UT              | 20.0                                         | 22.1 | 1.0                   | 18                                                             | 5.0                                                                        | 29.2                                                                            | 13.7                                                              |
| CD214A-T20            | IU              | CD214A-T20C          | UU              | 22.2                                         | 27.1 | 1.0                   | 20                                                             | 5.0                                                                        | 35.8                                                                            | 11.1                                                              |
| CD214A-T20A           | IV              | CD214A-T20CA         | UV              | 22.2                                         | 24.5 | 1.0                   | 20                                                             | 5.0                                                                        | 32.4                                                                            | 12.3                                                              |
| CD214A-T22            | IW              | CD214A-T22C          | UW              | 24.4                                         | 29.8 | 1.0                   | 22                                                             | 5.0                                                                        | 39.4                                                                            | 10.1                                                              |
| CD214A-T22A           | IX              | CD214A-T22CA         | UX              | 24.4                                         | 26.9 | 1.0                   | 22                                                             | 5.0                                                                        | 35.5                                                                            | 11.2                                                              |
| CD214A-T24            | IY              | CD214A-T24C          | UY              | 26.7                                         | 32.6 | 1.0                   | 24                                                             | 5.0                                                                        | 43.0                                                                            | 9.3                                                               |
| CD214A-T24A           | IZ              | CD214A-T24CA         | UZ              | 26.7                                         | 29.5 | 1.0                   | 24                                                             | 5.0                                                                        | 38.9                                                                            | 10.3                                                              |
| CD214A-T26            | JD              | CD214A-T26C          | VD              | 28.9                                         | 35.3 | 1.0                   | 26                                                             | 5.0                                                                        | 46.6                                                                            | 8.6                                                               |
| CD214A-T26A           | JE              | CD214A-T26CA         | VE              | 28.9                                         | 31.9 | 1.0                   | 26                                                             | 5.0                                                                        | 42.1                                                                            | 9.5                                                               |
| CD214A-T28            | JF              | CD214A-T28C          | VF              | 31.1                                         | 38   | 1.0                   | 28                                                             | 5.0                                                                        | 50.0                                                                            | 8.0                                                               |
| CD214A-T28A           | JG              | CD214A-T28CA         | VG              | 31.1                                         | 34.4 | 1.0                   | 28                                                             | 5.0                                                                        | 45.4                                                                            | 8.8                                                               |
| CD214A-T30            | JH              | CD214A-T30C          | VH              | 33.3                                         | 40.7 | 1.0                   | 30                                                             | 5.0                                                                        | 53.5                                                                            | 7.5                                                               |
| CD214A-T30A           | JK              | CD214A-T30CA         | VK              | 33.3                                         | 36.8 | 1.0                   | 30                                                             | 5.0                                                                        | 48.4                                                                            | 8.3                                                               |
| CD214A-T33            | JL              | CD214A-T33C          | VL              | 36.7                                         | 44.9 | 1.0                   | 33                                                             | 5.0                                                                        | 59.0                                                                            | 6.8                                                               |
| CD214A-T33A           | JM              | CD214A-T33CA         | VM              | 36.7                                         | 40.6 | 1.0                   | 33                                                             | 5.0                                                                        | 53.3                                                                            | 7.5                                                               |

### Notes:

- Suffix 'A' denotes a 5 % tolerance device.
- Suffix 'C' denotes a bidirectional device.
- Suffix 'CA' denotes a 5 % tolerance bidirectional device.
- No suffix denotes a 10 % tolerance unidirectional 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.

Specifications are subject to change without notice.  
Customers should verify actual device performance in their specific applications.

# CD214A Transient Voltage Suppressor Diode Series

**BOURNS®**

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

| Unidirectional Device |                 | Bidirectional Device |                 | Breakdown Voltage<br>V <sub>BR</sub> (Volts) |      |                       | Working Peak<br>Reverse<br>Voltage<br>V <sub>RWM</sub> (Volts) | Maximum<br>Reverse<br>Leakage<br>@ V <sub>RWM</sub><br>I <sub>R</sub> (uA) | Maximum<br>Reverse<br>Voltage<br>@ I <sub>RSM</sub><br>V <sub>RSM</sub> (Volts) | Maximum<br>Reverse<br>Surge<br>Current<br>I <sub>RSM</sub> (Amps) |
|-----------------------|-----------------|----------------------|-----------------|----------------------------------------------|------|-----------------------|----------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Part<br>Number        | Part<br>Marking | Part<br>Number       | Part<br>Marking | Min.                                         | Max. | @ I <sub>T</sub> (mA) |                                                                |                                                                            |                                                                                 |                                                                   |
| CD214A-T36            | JN              | CD214A-T36C          | VN              | 40                                           | 48.9 | 1.0                   | 36                                                             | 5.0                                                                        | 64.3                                                                            | 6.2                                                               |
| CD214A-T36A           | JP              | CD214A-T36CA         | VP              | 40                                           | 44.2 | 1.0                   | 36                                                             | 5.0                                                                        | 58.1                                                                            | 6.9                                                               |
| CD214A-T40            | JQ              | CD214A-T40C          | VQ              | 44.4                                         | 54.3 | 1.0                   | 40                                                             | 5.0                                                                        | 71.4                                                                            | 5.6                                                               |
| CD214A-T40A           | JR              | CD214A-T40CA         | VR              | 44.4                                         | 49.1 | 1.0                   | 40                                                             | 5.0                                                                        | 64.5                                                                            | 6.2                                                               |
| CD214A-T43            | JS              | CD214A-T43C          | VS              | 47.8                                         | 58.4 | 1.0                   | 43                                                             | 5.0                                                                        | 76.7                                                                            | 5.2                                                               |
| CD214A-T43A           | JT              | CD214A-T43CA         | VT              | 47.8                                         | 52.8 | 1.0                   | 43                                                             | 5.0                                                                        | 69.4                                                                            | 5.7                                                               |
| CD214A-T45            | JU              | CD214A-T45C          | VU              | 50                                           | 61.1 | 1.0                   | 45                                                             | 5.0                                                                        | 80.3                                                                            | 5.0                                                               |
| CD214A-T45A           | JV              | CD214A-T45CA         | VV              | 50                                           | 55.3 | 1.0                   | 45                                                             | 5.0                                                                        | 72.7                                                                            | 5.5                                                               |
| CD214A-T48            | JW              | CD214A-T48C          | VW              | 53.3                                         | 65.1 | 1.0                   | 48                                                             | 5.0                                                                        | 85.5                                                                            | 4.7                                                               |
| CD214A-T48A           | JX              | CD214A-T48CA         | VX              | 53.3                                         | 58.9 | 1.0                   | 48                                                             | 5.0                                                                        | 77.4                                                                            | 5.2                                                               |
| CD214A-T51            | JY              | CD214A-T51C          | VY              | 56.7                                         | 69.3 | 1.0                   | 51                                                             | 5.0                                                                        | 91.1                                                                            | 4.4                                                               |
| CD214A-T51A           | JZ              | CD214A-T51CA         | VZ              | 56.7                                         | 62.7 | 1.0                   | 51                                                             | 5.0                                                                        | 82.4                                                                            | 4.9                                                               |
| CD214A-T54            | RD              | CD214A-T54C          | WD              | 60                                           | 73.3 | 1.0                   | 54                                                             | 5.0                                                                        | 96.3                                                                            | 4.2                                                               |
| CD214A-T54A           | RE              | CD214A-T54CA         | WE              | 60                                           | 66.3 | 1.0                   | 54                                                             | 5.0                                                                        | 87.1                                                                            | 4.6                                                               |
| CD214A-T58            | RF              | CD214A-T58C          | WF              | 64.4                                         | 78.7 | 1.0                   | 58                                                             | 5.0                                                                        | 103                                                                             | 3.9                                                               |
| CD214A-T58A           | RG              | CD214A-T58CA         | WG              | 64.4                                         | 71.2 | 1.0                   | 58                                                             | 5.0                                                                        | 93.6                                                                            | 4.3                                                               |
| CD214A-T60            | RH              | CD214A-T60C          | WH              | 66.7                                         | 81.5 | 1.0                   | 60                                                             | 5.0                                                                        | 107                                                                             | 3.7                                                               |
| CD214A-T60A           | RK              | CD214A-T60CA         | WK              | 66.7                                         | 73.7 | 1.0                   | 60                                                             | 5.0                                                                        | 96.8                                                                            | 4.1                                                               |
| CD214A-T64            | RL              | CD214A-T64C          | WL              | 71.1                                         | 86.4 | 1.0                   | 64                                                             | 5.0                                                                        | 114                                                                             | 3.5                                                               |
| CD214A-T64A           | RM              | CD214A-T64CA         | WM              | 71.1                                         | 78.6 | 1.0                   | 64                                                             | 5.0                                                                        | 103                                                                             | 3.9                                                               |
| CD214A-T70            | RN              | CD214A-T70C          | WN              | 77.8                                         | 95.1 | 1.0                   | 70                                                             | 5.0                                                                        | 125                                                                             | 3.2                                                               |
| CD214A-T70A           | RP              | CD214A-T70CA         | WP              | 77.8                                         | 86.0 | 1.0                   | 70                                                             | 5.0                                                                        | 113                                                                             | 3.5                                                               |
| CD214A-T75            | RQ              | CD214A-T75C          | WQ              | 83.3                                         | 102  | 1.0                   | 75                                                             | 5.0                                                                        | 134                                                                             | 3.0                                                               |
| CD214A-T75A           | RR              | CD214A-T75CA         | WR              | 83.3                                         | 92.1 | 1.0                   | 75                                                             | 5.0                                                                        | 121                                                                             | 3.3                                                               |
| CD214A-T78            | RS              | CD214A-T78C          | WS              | 86.7                                         | 106  | 1.0                   | 78                                                             | 5.0                                                                        | 139                                                                             | 2.9                                                               |
| CD214A-T78A           | RT              | CD214A-T78CA         | WT              | 86.7                                         | 95.8 | 1.0                   | 78                                                             | 5.0                                                                        | 126                                                                             | 3.2                                                               |
| CD214A-T85            | RU              | CD214A-T85C          | WU              | 94.4                                         | 115  | 1.0                   | 85                                                             | 5.0                                                                        | 151                                                                             | 2.6                                                               |
| CD214A-T85A           | RV              | CD214A-T85CA         | WV              | 94.4                                         | 104  | 1.0                   | 85                                                             | 5.0                                                                        | 137                                                                             | 2.9                                                               |
| CD214A-T90            | RW              | CD214A-T90C          | WW              | 100                                          | 122  | 1.0                   | 90                                                             | 5.0                                                                        | 160                                                                             | 2.5                                                               |
| CD214A-T90A           | RX              | CD214A-T90CA         | WX              | 100                                          | 111  | 1.0                   | 90                                                             | 5.0                                                                        | 146                                                                             | 2.7                                                               |
| CD214A-T100           | RY              | CD214A-T100C         | WY              | 111                                          | 136  | 1.0                   | 100                                                            | 5.0                                                                        | 179                                                                             | 2.2                                                               |
| CD214A-T100A          | RZ              | CD214A-T100CA        | WZ              | 111                                          | 123  | 1.0                   | 100                                                            | 5.0                                                                        | 162                                                                             | 2.5                                                               |
| CD214A-T110           | SD              | CD214A-T110C         | XD              | 122                                          | 149  | 1.0                   | 110                                                            | 5.0                                                                        | 196                                                                             | 2.0                                                               |
| CD214A-T110A          | SE              | CD214A-T110CA        | XE              | 122                                          | 135  | 1.0                   | 110                                                            | 5.0                                                                        | 177                                                                             | 2.3                                                               |
| CD214A-T120           | SF              | CD214A-T120C         | XF              | 133                                          | 163  | 1.0                   | 120                                                            | 5.0                                                                        | 214                                                                             | 1.9                                                               |
| CD214A-T120A          | SG              | CD214A-T120CA        | XG              | 133                                          | 147  | 1.0                   | 120                                                            | 5.0                                                                        | 193                                                                             | 2.0                                                               |
| CD214A-T130           | SH              | CD214A-T130C         | XH              | 144                                          | 176  | 1.0                   | 130                                                            | 5.0                                                                        | 231                                                                             | 1.7                                                               |
| CD214A-T130A          | SK              | CD214A-T130CA        | XK              | 144                                          | 159  | 1.0                   | 130                                                            | 5.0                                                                        | 209                                                                             | 1.9                                                               |
| CD214A-T150           | SL              | CD214A-T150C         | XL              | 167                                          | 204  | 1.0                   | 150                                                            | 5.0                                                                        | 268                                                                             | 1.5                                                               |
| CD214A-T150A          | SM              | CD214A-T150CA        | XM              | 167                                          | 185  | 1.0                   | 150                                                            | 5.0                                                                        | 243                                                                             | 1.6                                                               |
| CD214A-T160           | SN              | CD214A-T160C         | XN              | 178                                          | 218  | 1.0                   | 160                                                            | 5.0                                                                        | 287                                                                             | 1.4                                                               |
| CD214A-T160A          | SP              | CD214A-T160CA        | XP              | 178                                          | 197  | 1.0                   | 160                                                            | 5.0                                                                        | 259                                                                             | 1.5                                                               |
| CD214A-T170           | SQ              | CD214A-T170C         | XQ              | 189                                          | 231  | 1.0                   | 170                                                            | 5.0                                                                        | 304                                                                             | 1.3                                                               |
| CD214A-T170A          | SR              | CD214A-T170CA        | XR              | 189                                          | 209  | 1.0                   | 170                                                            | 5.0                                                                        | 275                                                                             | 1.4                                                               |

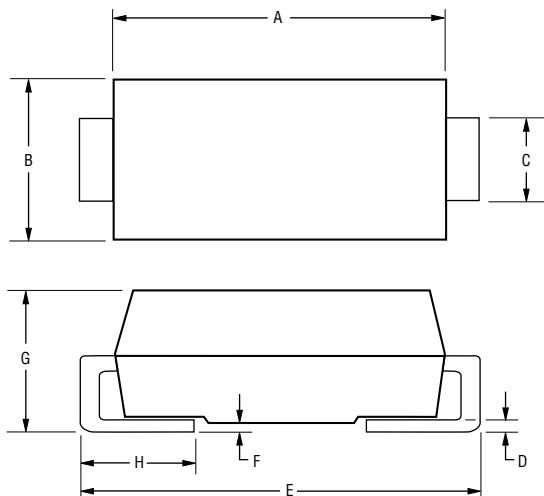
### Notes:

1. Suffix 'A' denotes a 5 % tolerance device.
2. Suffix 'C' denotes a bidirectional device.
3. Suffix 'CA' denotes a 5 % tolerance bidirectional device.
4. No suffix denotes a 10 % tolerance unidirectional device.
5. For bidirectional devices with a V<sub>P</sub> of 10 volts or less, the I<sub>P</sub> limit is double.
6. 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.

# CD214A Transient Voltage Suppressor Diode Series

**BOURNS®**

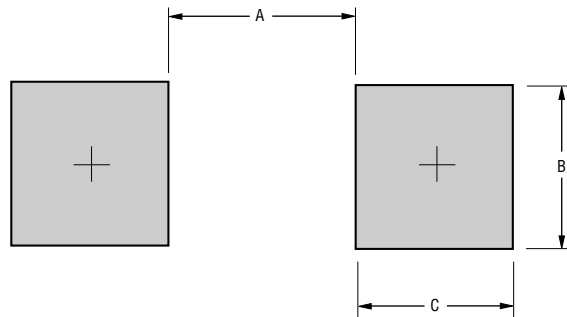
## Product Dimensions



| Dimension | SMA (DO-214AC)                        |
|-----------|---------------------------------------|
| A         | $\frac{4.06 - 4.57}{(0.160 - 0.180)}$ |
| B         | $\frac{2.29 - 2.92}{(0.090 - 0.115)}$ |
| C         | $\frac{1.27 - 1.63}{(0.050 - 0.064)}$ |
| D         | $\frac{0.15 - 0.31}{(0.006 - 0.112)}$ |
| E         | $\frac{4.83 - 5.59}{(0.190 - 0.220)}$ |
| F         | $\frac{0.05 - 0.20}{(0.002 - 0.008)}$ |
| G         | $\frac{2.01 - 2.62}{(0.080 - 0.103)}$ |
| H         | $\frac{0.76 - 1.52}{(0.030 - 0.060)}$ |

DIMENSIONS:  $\frac{\text{MM}}{(\text{INCHES})}$

## Recommended Pad Layout



| Dimension | SMA (DO-214AC)         |
|-----------|------------------------|
| A (Max.)  | $\frac{2.70}{(0.106)}$ |
| B (Min.)  | $\frac{2.10}{(0.083)}$ |
| C (Min.)  | $\frac{1.27}{(0.050)}$ |

DIMENSIONS:  $\frac{\text{MM}}{(\text{INCHES})}$

## Physical Specifications

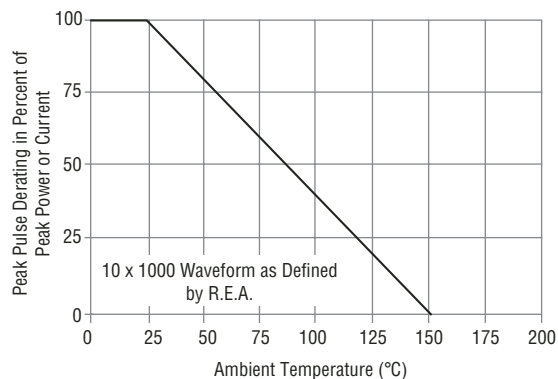
Case .....Molded plastic per UL Class 94V-0  
Polarity .....Cathode band indicates unidirectional device  
No cathode band indicates bidirectional device  
Weight .....0.002 ounces / 0.064 grams

# CD214A Transient Voltage Suppressor Diode Series

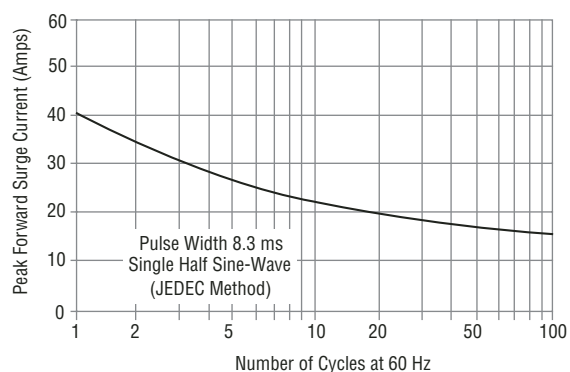
**BOURNS®**

## Rating and Characteristic Curves

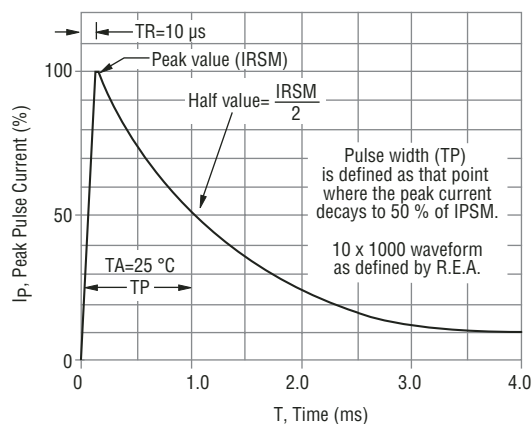
### Pulse Derating Curve



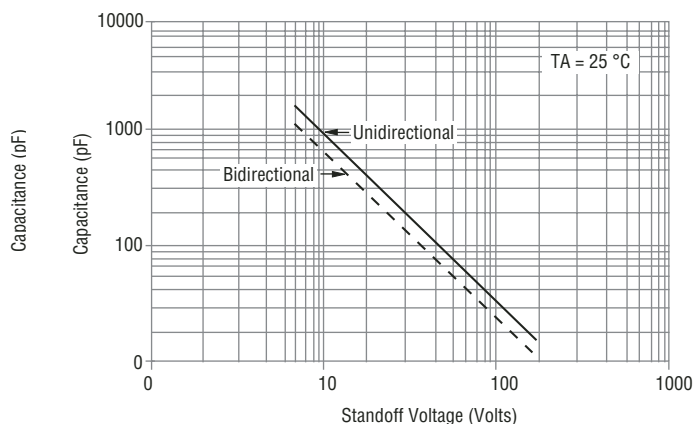
### Maximum Non-Repetitive Surge Current



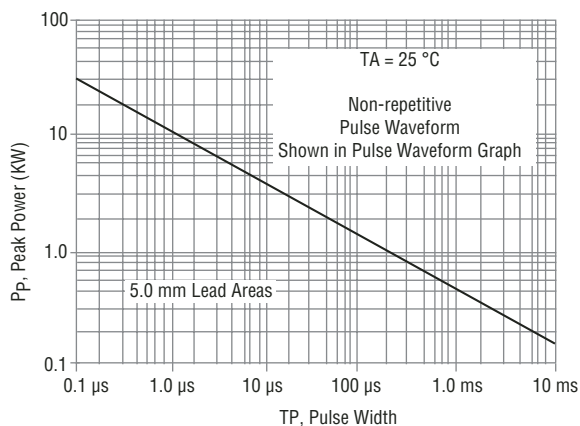
### Pulse Waveform



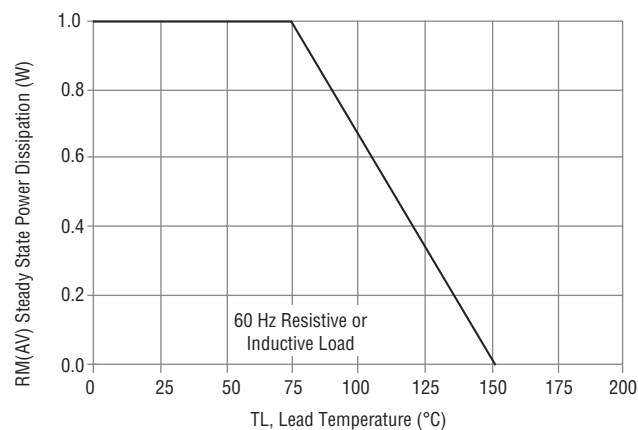
### Typical Junction Capacitance



### Pulse Rating Curve



### Steady State Power Derating Curve

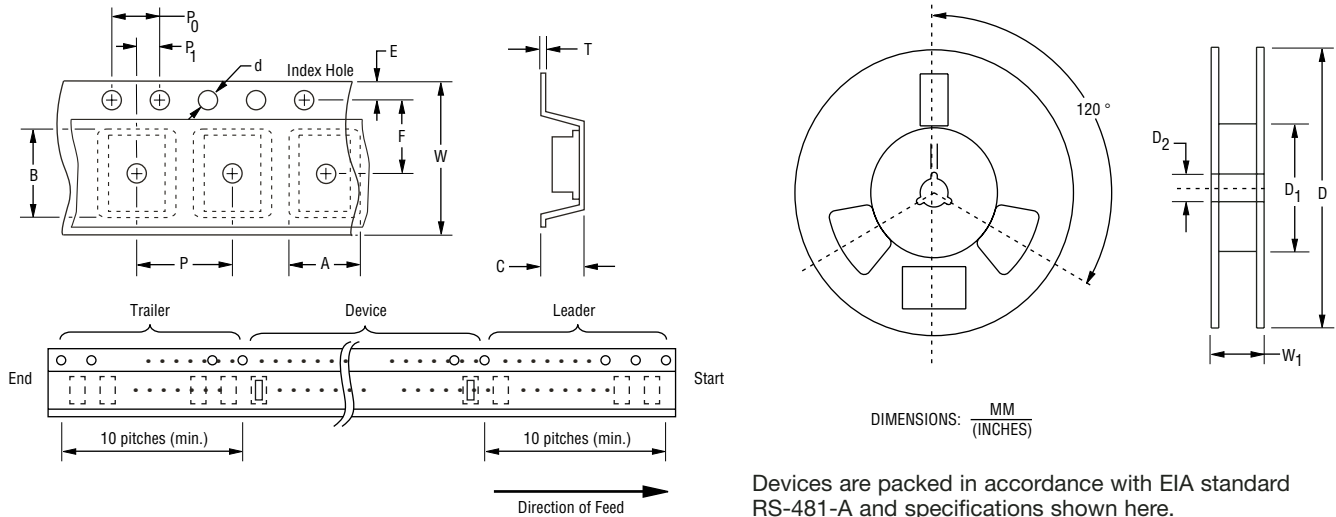


# CD214A Transient Voltage Suppressor Diode Series

**BOURNS®**

## Packaging Information

The product will be dispensed in Tape and Reel format (see diagram below).



| Item                   | Symbol         | SMA (DO-214AC)                           |
|------------------------|----------------|------------------------------------------|
| Carrier Width          | A              | $\frac{2.90 \pm 0.10}{(0.114 - 0.004)}$  |
| Carrier Length         | B              | $\frac{5.59 \pm 0.10}{(0.220 - 0.004)}$  |
| Carrier Depth          | C              | $\frac{2.36 \pm 0.10}{(0.093 - 0.004)}$  |
| Sprocket Hole          | d              | $\frac{1.55 \pm 0.05}{(0.061 - 0.002)}$  |
| Reel Outside Diameter  | D              | $\frac{330}{(12.992)}$                   |
| Reel Inner Diameter    | D <sub>1</sub> | $\frac{50.0}{(1.969)}$ MIN.              |
| Feed Hole Diameter     | D <sub>2</sub> | $\frac{13.0 \pm 0.20}{(0.512 - 0.008)}$  |
| Sprocket Hole Position | E              | $\frac{1.75 \pm 0.10}{(0.069 - 0.004)}$  |
| Punch Hole Position    | F              | $\frac{5.50 \pm 0.05}{(0.217 - 0.002)}$  |
| Punch Hole Pitch       | P              | $\frac{4.00 \pm 0.10}{(0.157 - 0.004)}$  |
| Sprocket Hole Pitch    | P <sub>0</sub> | $\frac{4.00 \pm 0.10}{(0.157 - 0.004)}$  |
| Embossment Center      | P <sub>1</sub> | $\frac{2.00 \pm 0.05}{(0.079 - 0.002)}$  |
| Overall Tape Thickness | T              | $\frac{0.30 \pm 0.10}{(0.012 - 0.004)}$  |
| Tape Width             | W              | $\frac{12.00 \pm 0.20}{(0.472 - 0.008)}$ |
| Reel Width             | W <sub>1</sub> | $\frac{18.4}{(0.724)}$ MAX.              |
| Quantity per Reel      | --             | 5,000                                    |