# SENSITRON SEMICONDUCTOR

## TECHNICAL DATA DATA SHEET 4606, REV. -

# SMDA03C-5-G thru SMDA24C-5-G

## **Green Products**

#### FEATURES

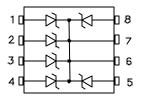
- ✓ Protects 3.3, 5, 12, 15, 24 V Components
- ✓ Bidirectional
- ✓ Provides Electrically Isolated Protection
- ✓ 300 W @ 8/20 μs
- ✓ Protects 5 Lines
- ✓ SO-8 Packaging
- ✓ Green Products in Compliance with the RoHS Directive

#### DESCRIPTION

The SMDAXXC-5-G series of TVS array have been designed to provide bidirectional protection for sensitive electronics from damage due to voltage transients caused by electrostatic discharge (ESD), electrical fast transients (EFT), lightning and other voltage-induced transient events. The device can be used to protect combinations of five bidirectional lines.

## **SCHEMATIC & PIN CONFIGURATION**

SO-8



#### APPLICATION

- ✓ RS-232 & RS-422 Data Lines
- ✓ Microprocessor Based Equipment
- ✓ Notebooks, Desktops, & Servers
- ✓ LAN/WAN Equipment
- ✓ Serial and Parallel Port
- ✓ Peripherals

## MECHANICAL CHARACTERISTICS

- ✓ SO-8 Surface Mount Package
- ✓ Approximate Weight: 0.1 grams
- ✓ Marking: Device number, Date code, & Logo
- ✓ PIN #1 Indicator: DOT on top of package
- ✓ Packaging: Tubes or Tape & Reel per EIA Standard 481

| ABSOLUTE MAXIMUM RATINGS |                                     |               |      |  |  |  |  |  |
|--------------------------|-------------------------------------|---------------|------|--|--|--|--|--|
| Symbol                   | Parameter                           | Value         | Unit |  |  |  |  |  |
| Р                        | Peak Pulse Power, 8/20 μs Waveshape | 300           | W    |  |  |  |  |  |
| TJ                       | Operating Temperature               | -55 to +125   | °C   |  |  |  |  |  |
| T <sub>STG</sub>         | Storage Temperature                 | -55 to +150   | С°   |  |  |  |  |  |
| TL                       | Lead Soldering Temperature          | 260 (10 Sec.) | °C   |  |  |  |  |  |

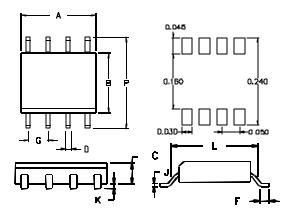
## TVS ARRAY SERIES

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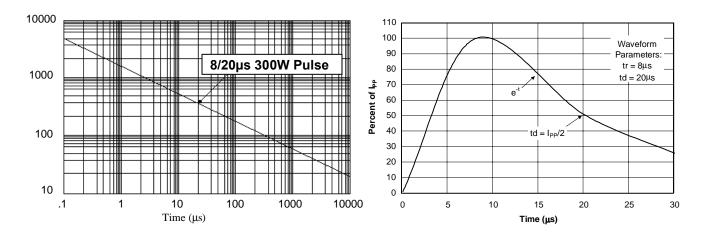
| ELECTRICAL CHARACTERISTICS @ 25 °C |                 |                 |          |                  |             |                     |  |  |
|------------------------------------|-----------------|-----------------|----------|------------------|-------------|---------------------|--|--|
| Part Number                        | Stand-off       | Breakdown       | Clamping | Leakage          | Capacitance | Temperature         |  |  |
|                                    | Voltage         | Voltage         | Voltage  | Current          | (f = 1MHz)  | Coefficient         |  |  |
|                                    |                 | V <sub>BR</sub> | Vc       | I <sub>R</sub>   | С           | of V <sub>BR</sub>  |  |  |
|                                    | V <sub>wm</sub> | @1mA            | @ 1 A    | @V <sub>wm</sub> | @ 0V        | a(V <sub>BR</sub> ) |  |  |
|                                    | (v)             | (V)             | (V)      | (μA)             | (pF)        | mv/°C               |  |  |
|                                    | Max             | Min             | Max      | Max              | Max         | Max                 |  |  |
| SMDA03C-5-G                        | 3.3             | 4               | 7        | 200              | 300         | -5                  |  |  |
| SMDA05C-5-G                        | 5.0             | 6               | 9.8      | 40               | 200         | 3                   |  |  |
| SMDA12C-5-G                        | 12.0            | 13.3            | 19       | 1                | 75          | 10                  |  |  |
| SMDA15C-5-G                        | 15.0            | 16.7            | 24       | 1                | 50          | 13                  |  |  |
| SMDA24C-5-G                        | 24.0            | 26.7            | 43       | 1                | 35          | 30                  |  |  |

## PACKAGE OUTLINES & DEMENSIONS



|     | INCHES    |       | MILLIMETERS |      |
|-----|-----------|-------|-------------|------|
| DIM | MIN.      | MAX   | MIN.        | MAX. |
| А   | 0.189     | 0.196 | 4.8         | 5.0  |
| В   | 0.150     | 0.157 | 3.8         | 4.0  |
| С   | 0.053     | 0.069 | 1.35        | 1.75 |
| D   | 0.011     | 0.021 | 0.28        | 0.53 |
| F   | 0.016     | 0.050 | 0.41        | 1.27 |
| G   | 0.050 BSC |       | 1.27 BSC    |      |
| J   | 0.006     | 0.010 | 0.15        | 0.25 |
| K   | 0.004     | 0.008 | 0.10        | 0.20 |
| L   | 0.189     | 0.206 | 4.80        | 5.23 |
| Р   | 0.228     | 0.244 | 5.79        | 6.19 |

#### **TYPICAL CHARACTERISTICS**





#### Figure 2. Pulse Wave Form

 221 West Industry Court • Deer Park, NY 11729-4681 • Phone (631) 586-7600 • Fax (631) 242-9798 • World Wide Web Site - http://www.sensitron.com • E-Mail Address - sales@sensitron.com •

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