AVX introduces full line of Automotive Grade Circuit Protection Devices

Design and manufactured with the highest standards for performance and reliability in TS qualified facilities. All products are AEC Q200 compliant. AVX has a long history of satisfying needs of the automotive sector. The new automotive series embraces that history to guarantee maintenance of high expectations by differentiating from the commercial grade product. The broad portfolio provides solutions for circuit protection needs in a large array of automotive applications.

### MULTILAYER VARISTORS

<table>
<thead>
<tr>
<th>Safety</th>
<th>Body Electronics</th>
<th>Drive Train</th>
<th>Comfort &amp; Convenience</th>
<th>Hybrid/Electric</th>
<th>Commercial Vehicle</th>
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<tbody>
<tr>
<td>TransGuard/ MultiGuard</td>
<td>External Diagnostic Equipment</td>
<td>N/A</td>
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<td>Automotive TransGuard Series</td>
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<td>AntennaGuard</td>
<td>Sensors</td>
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<td>Sub of AntennaGuard</td>
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<td>Controlled Capacitance Series</td>
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<td>Hi-Temp Automotive Series</td>
<td>Sensor Circuits</td>
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<td>Glass Encapsulated Automotive Series</td>
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<td>LCT TRANSIENT VOLTAGE SUPPRESSORS</td>
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</tbody>
</table>

### MULTILAYER VARISTORS

**TransGuard®/MultiGuard Automotive Series**

- **VCAS**
  - AEC Q200 qualified
  - High peak current and transient energy capability
  - Off state EMI filter, on state transient protection
  - 0.040 to 1210 case size

**High Temperature Automotive Series**

- **VCAT/CANAT/VCAT06AG**
  - AEC Q200 qualified
  - 150°C rated
  - High reliability
  - Low leakage current at rated temp/voltage
  - Sub 1ns turn on

**Controller Capacitance Automotive Series**

- **VCAC**
  - AEC Q200 qualified
  - Targeted center frequency
  - Low leakage, <10μA at 37V
  - Reduces emissions from high speed ASC
  - Offered in E6 capacitance values

**CANbus Series**

- **CAN**
  - AEC Q200 qualified
  - Available in Radial or Axial configuration
  - High peak current and transient energy capability
  - Off state EMI filter, on state transient protection

**LCT TRANSIENT VOLTAGE SUPPRESSORS**

- **TransFeed Series**
  - V2F1AES/V5F4AES

**LIGHTNING/HEAVY SURGE PROTECTION**

- **CapGuard Series**
  - MV

**NEGATIVE TEMPERATURE COEFFICIENT THERMISTORS**

- **NCT SMD & Leaded Thermistors**
  - NB/NC/ND/NE/NH/NJ/NK

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**TransGuard®/MultiGuard Automotive Series**

- AEC Q200 qualified
- General purpose ESD protection
- Low capacitance, low leakage current
- Ideal for CMOS ESD protection
- ESD protection for up to 15kV

**AntennaGuard Series**

- **VCAS04AG/VCAS06AG**
  - AEC Q200 qualified
  - Ultra low capacitance for RF circuit protection
  - Fastest response time to ESD strikes
  - Space savings of single chip solution

**Glass Encapsulated MLV – Automotive Range**

- MA/PA
  - AEC Q200 qualified
  - Specified with Load dump and Jump Start requirements of ISO 7637
  - Off state EMI filters, on state transient protection
  - Energy absorption 1.5 to 25J

**TransFeed Series**

- **V2F1AES/V5F4AES**
  - AEC Q200 qualified
  - L-C-T configured filter
  - Bi-directional TVS
  - Fastest sub ns turn on time
  - Narrow band, notch filter

**CapGuard Series**

- **MV**
  - AEC Q200 qualified
  - Ideal for high transient applications
  - User defined capacitor and varistor
  - Ultra low ESP/ESL
  - Fast Turn on time
  - Multiple Strike capability
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MULTILAYER VARISTORS

**TransGuard®/MultiGuard Automotive Series**

- **VCAS**
  - **AEC Q200 qualified**
  - High peak current and transient energy capability
  - Off state EMI filter, on state transient protection
  - 0402 to 1210 case size

**High Temperature Automotive Series**

- **VCAT/CANAT/VCAT06AG**
  - **AEC Q200 qualified**
  - Improved longevity of high speed ESD protection
  - 150°C rated

**CANbus Series**

- **CAN**
  - **AEC Q200 qualified**
  - Available in Radial or Axial configuration
  - High peak current and transient energy capability
  - Off state EMI filter, on state transient protection

**Lightning/Heavy Surge Protection**

- **TransFeed Series**
  - **V2F1AS/V3F4AS**
    - **AEC Q200 qualified**
    - L-C-T configured filter
    - Bi-directional TVS
    - Fastest sub ns turn on time
    - Narrow band, notch filter

**Negative Temperature Coefficient Thermistors**

- **NITC SMD & Ledged Thermistors**
  - **AEC Q200 qualified**
  - Negative Temperature Coefficient
  - Precision tolerance available
  - Multiple temperature stability options
  - Fast thermal response time