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*TVS diode arrays provide 1 to 8 lines with ESD protection to >40kV; 500W peak power...*

***IRC DEVELOPS SOIC & SOT-23 PACKAGED DIODE ARRAYS TO DELIVER IEC-compatible TRANSIENT VOLTAGE SUPPRESSION***

**Corpus Christi, TX, October 5, 2010** – Providing design engineers with a compact means of protecting one to eight circuit traces against electrostatic discharge (ESD), lightning and other electrical fast transient (EFT) events, TT electronics IRC has developed a comprehensive series of IEC-compatible TVS diode arrays in 8-, 14- or 16-pin SOIC-N and SOT-23 surface mount packages. Available in unidirectional and bidirectional versions, the diode arrays are capable of ESD protection of <40kV and carry a peak pulse power rating of 500W ( $t_P = 8/20\mu s$ ).

“The introduction of these TVS diode arrays gives communications design engineers a convenient method of protecting multiple circuit traces while maintaining signal integrity,” explained Dr. Debasis Roy, director of IRC’s thin film business unit. “Our diode technology provides fast response times with low clamping and operating voltages; and they are available in unidirectional or bidirectional circuit configurations for protection of individual lines or up to eight circuit traces.”

IRC’s QDN Series TVS diode arrays provide protection to IEC standards for a variety of transient voltage events, including: IEC 61000-4-2 – ESD protection to 15kV (air) / 8kV (contact); IEC 61000-4-4 – EFT protection to 40A @ 5/50ns; and IEC 61000-4-5 – lightning/surge protection to 12A @ 8/20 $\mu s$  for Level 2 (line-to-ground) and Level 3 (line-to-line).

Specific applications for the TVS diode arrays include: low-voltage ASICs, wireless communications circuits in mobile phones and portable electronics; dataport protection for RS-422, RS-432 and RS-

485 lines; Ethernet 10/100 Base-T and other LAN/WAN equipment; as well as communications circuits in desktop computers and other microprocessor based systems.

Included in the new TVS diode array series are the following devices:

- QDN004LF Series – Low capacitance TVS diode array in a 16-pin SOIC-N surface mount package, available from 3.3V to 36V in unidirectional or bidirectional schematics. Maximum pulse clamping voltage ranges from 20V @ 35A to 72V @ 7A; with a maximum capacitance of 15pF. Peak pulse power rating is 500W ( $t_p = 8/20\mu s$ ).
- QDN005LF Series – Low leakage current TVS diode array in a 14-pin SOIC-N surface mount package, available with reverse standoff voltage ratings ( $V_{RWM}$ ) from 5V to 24V in a bidirectional schematic. Maximum pulse clamping voltage ratings range from 9.8V to 43V, with maximum pulse current ratings from 17A to 5A. Peak pulse power rating is 300W ( $t_p = 8/20\mu s$ ).
- QDN006LF Series – TVS diode array in an 8-pin SOIC-N surface mount package, available in voltage ratings from 5V to 24V in a bidirectional schematic. Maximum pulse clamping voltage ratings range from 9.8V to 43V, with maximum pulse current ratings from 17A to 5A. Peak pulse power rating is 300W ( $t_p = 8/20\mu s$ ).
- QDN007LF Series – TVS diode array in a SOT-23 surface mount package, available from 3.3V to 36V in unidirectional or bidirectional schematics. Maximum pulse clamping voltage ranges from 10.9V @ 43A to 76.8V @ 9A; with a typical capacitance of 500pF to 60pF. Peak pulse power rating is 500W ( $t_p = 8/20\mu s$ ).

All devices in the QDN Series are ROHS-compliant and have an operating temperature range from -55°C to +150°C. Packaging options include 7" and 13" reels as well as tube packaging for the SOIC devices.

For datasheets or more information on IRC's QDN Series diode arrays, please visit:

<http://www.irctt.com/products.aspx?frmCategory=33>. For pricing information and lead times, please contact TT electronics IRC.



For additional information, please access the Web site at <http://www.irctt.com>, or contact the TT electronics North America office at [sales@ttelectronics-na.com](mailto:sales@ttelectronics-na.com).

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#### **About IRC**

IRC Inc. is a leading international manufacturer of advanced film, metal glaze and wirewound resistive products with facilities in Corpus Christi, Texas, Boone, N.C., Smithfield, N.C., and Barbados. IRC is part of TT electronics plc, a global electronics company manufacturing a broad range of advanced electronic components, assemblies and sensor modules for the automotive, telecommunications, computer and aerospace markets.

#### **About TT electronics PLC**

TT electronics plc is a focused, global electronics group supplying leading manufacturers in the defense, aerospace, medical, transportation and industrial markets. The Group consists of five divisions: Components, Sensors, Secure Power, Integrated Manufacturing Services and General Industrial each delivering technology, products and services to customers in target markets worldwide. TT electronics plc operates from headquarters based in Weybridge, Surrey, with more than 20 global manufacturing locations and more than 6,000 employees worldwide.

Additional information is available from our corporate website: <http://www.ttelectronics.com/>.

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