



**For Immediate Release  
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***Chip resistor delivers 3W power rating, 0.003Ω resistance values in 1225 size...***

## **TT electronics IRC Develops High Power Current Sense Resistor Qualified for Military, Aerospace Electronics**

**Corpus Christi, TX, October 25, 2010:** Providing aerospace and military electronics design engineers with a compact high power current sense resistor capable of precision current measurements at ultralow resistance values, TT Electronics IRC has developed a series of high-reliability thick film chip resistors tested to MIL-PRF-55342-level specifications. Designated the LRF3W-MIL Series, the resistors are terminated on the long sides of the 1225-size chip package to provide the maximum thermal transport path, which gives the resistors their exceptionally high current-handling capability, and improves their overall reliability.

“We’ve seen an increasing demand for our current sense resistors, especially in high-reliability applications in military and space-based electronics systems,” said Gary Bleasdel, director of TT electronics IRC’s thick film business unit. “By developing our LRF3W Series resistors to meet the demanding requirements of MIL-PRF-55342, we’ve been able to provide our customers with a robust thick film current sense resistor capable of handling up to 3 watts @70°C in a chip size that is normally limited to 1 watt. This provides a significant reduction in board footprint and overall weight, both of which are critical for space applications.”

According to Bleasdel, a key feature of the resistor’s design is the long-side termination, which provides a shorter signal path as well as a wider termination contact with the traces on the PC board layout pads. Increasing the PC board copper land pad area to (900mm<sup>2</sup>) on each side of the chip gives the resistor the ability to handle 3 watts of power at 70°C.

The LRF3W-MIL Series resistors employ a high-reliability thick film resistive element on a high purity alumina substrate with nickel barrier layers on copper-plated wraparound terminations and a protective overcoat to ensure stability in harsh environments. Standard Sn/Pb terminations, as well as lead-free (matte Sn) terminations are available.

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Resistance values for the LRF3W-MIL Series range from 0.003Ω to 1.0Ω, with tolerances available down to ±1% and TCRs to ±100ppm/°C. Operating temperature range is from -55°C to +150°C.

The resistors can be screened to MIL-PRF-55342, NASA EE-INST-002, or customer source control drawing to meet special application requirements.

Typical lead time for the LRF3W-MIL Series resistors is 14 weeks if stock is not available.

For additional information, please access the Web site at <http://www.ircct.com>, or contact the TT electronics North America office at [sales@ttelectronics-na.com](mailto:sales@ttelectronics-na.com). To access the data sheet and other product information for the LRF3W-MIL Series resistors, visit:

<http://www.ircct.com/products.aspx?frmCategory=32>.

Visit TT electronics at the AUSA show in Washington D.C, booth number 2060.

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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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