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***TaNFilm<sup>®</sup> element features absolute tolerance to  $\pm 0.05\%$ , ratio tolerance to  $\pm 0.01\%$ ...***

## **IRC'S PRECISION VOLTAGE DIVIDER DELIVERS STABILITY, ACCURACY FOR MILITARY SYSTEMS**

CORPUS CHRISTI, Texas (March 28, 2005) – Providing military and aerospace analog design engineers with a precision two-element resistor network in a 1206 chip package, TT Electronics IRC Advanced Film Division has developed a military voltage divider that provides two matched resistors with precision absolute and ratio tolerances ( $\pm 0.05\%/\pm 0.01\%$ ) on a single chip. Designated the D1206 Series, the ceramic chip exhibits better TCR tracking, higher accuracy, and significant board space savings compared to designs using two discrete resistors.

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## **IRC'S VOLTAGE DIVIDER DELIVERS STABILITY, ACCURACY FOR MILITARY SYSTEMS, PG 2**

According to Jerry Seams, applications engineering manager for IRC's Advanced Film Division, the D1206 Series dividers are ideal for precision analog circuit designs for military and aerospace applications, especially gain control circuits in op amps and as a reference voltage for military power supplies. "The tantalum nitride resistive element provides long term stability over time and temperature, and is impervious to the corrosion problems often experienced with other types of resistive materials under biased humidity, as well as other harsh environmental conditions."

The D1206 Series voltage divider is composed of two TaNFilm<sup>®</sup> tantalum nitride resistors on ceramic substrate, packaged on a standard 1206 size chip, which has a lower profile and occupies less board space than conventional plastic packaged (SOT-23) networks.

The D1206 Series dividers feature a resistance range of 10 $\Omega$  to 200k $\Omega$ , with absolute tolerances to  $\pm 0.05\%$  and ratio tolerances to  $\pm 0.01\%$ . TCRs are  $\pm 25\text{ppm}/^\circ\text{C}$  absolute and  $\pm 5\text{ppm}/^\circ\text{C}$  tracking. Power dissipation is 250mW and the operating temperature range is  $-55^\circ\text{C}$  to  $+125^\circ\text{C}$ . IRC's engineering team will also develop products outside these specifications to meet customer requirements.

The voltage divider is approved to DSCC Drawing #01033, and is referenced under MIL-PRF-55342, Group A & B screening. According to Seams, the devices are manufactured on the same production line, with the same materials under the same stringent processes as the company's MIL-PRF-55342 resistors, which meet Class "S" failure rate, one of the highest levels of military qualification.

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### **IRC'S VOLTAGE DIVIDER DELIVERS STABILITY, ACCURACY FOR MILITARY SYSTEMS, PG 3**

Typical pricing for the precision voltage divider is \$1.00 in quantities of a least 1,000 pieces, with lead times of 8-10 weeks.

For more information on the D1206 Series dividers, contact the TT electronics IRC Advanced Film Division Sales & Marketing Department at 361-992-7900; via mail at 4222 S. Staples St., Corpus Christi, TX 78411; e-mail at [afdsales@irctt.com](mailto:afdsales@irctt.com) or visit the IRC Web site at [www.irctt.com](http://www.irctt.com).

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.

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