

Crocus Technology Unleashes the World's Fastest and Most Accurate XtremeSense® TMR Current Sensor with No Performance Compromises

The CT430 and CT431 enables design engineers to simplify their product design while still achieving higher efficiency solutions

Santa Clara, California, August 16, 2021 – Crocus Technology Inc., the leading supplier of disruptive Tunnel Magneto-Resistance XtremeSense™ TMR sensors, today announces the CT430 and CT431 isolated current sensor with 1MHz bandwidth and <1% total error over the full temperature range. The high speed operation and accurate output allow customers to optimize system design for smaller size and higher efficiency. In contrast to existing designs that utilize a Hall Sensor, the XtremeSense™ TMR sensor enables a no-compromise design solution by combining high bandwidth response and high accuracy.

The CT43x products are coreless devices which utilize Crocus' state-of-the-art XtremeSense™ TMR technology to detect extremely small variations in AC or DC currents while achieving an unprecedented total output error of less than $\pm 1.0\%$ over the full temperature range from -40°C to $+125^{\circ}\text{C}$. In addition, the CT43x has robust built-in immunity to common-mode fields which allows the device to reject > 99% of stray fields without the need for external shielding. The Crocus proprietary TMR technology inherently offers very high signal-to-noise ratio (SNR) which allow for high resolution measurements required for precision control or monitoring applications. The linear error and offset performance is intrinsically more accurate permitting the elimination of system level calibration normally done with an external voltage reference, thus freeing up processor time and simplifying system design. "I'm excited to introduce this truly differentiated current sensor product which highlights the benefits the Crocus XtremeSense™ TMR technology can bring." states Zack Deiri, President and CEO of Crocus Technology. "Our customers have been astounded by the level of performance we are able to deliver in their applications. The combination of high response time and accuracy provides system designers the flexibility they have been eager to achieve without any compromises."

Product features and performance:

CT430 (5 V version), CT431 (3.3 V version)

Integrated $0.5\text{ m}\Omega$ conductor enabling 20 A, 30 A and 50 A applications

Total error output $\pm 0.7\%$ (typ)

300ns response time, 1-MHz bandwidth

Low noise 9 mArms

Integrated Common Mode Field Rejection (CMFR) with > 99% immunity

Over-Current Detection output pin

Investments made last year to expand our production capacity has enabled Crocus to be prepared to support high volume production today. To date we have shipped over 50M XtremeSense™ TMR sensors, and our customer base continues to rapidly expand. Products like the CT430 and

CT431 which have an industry standard footprint enable customers to easily upgrade their existing products and accelerate product adoption.

Targeting applications in Solar Power Inverters, Power-Factor Correction (PFC), Battery Management Systems (BMS), Smart Appliances, IoT, and Power Supplies applications. These state-of-the-art devices are perfect companions to emerging applications utilizing GaN and SiC power devices where the fast response time of the Crocus TMR current sensors will ensure the highest operational efficiency.

The CT430 and CT431 are available in an industry standard 16-lead SOIC-Wide package with dimensions of 10.20 × 10.31 × 2.54 mm. Samples and evaluation boards are currently available, and the devices will be in full production in August 2021. For more information on the CT430 and CT431 products, please visit the product webpage:

CT430 <https://crocus-technology.com/products/ct430/>

CT431 <https://crocus-technology.com/products/ct431/>

About Crocus Technology

Crocus Technology develops and manufactures state-of-the-art magnetic sensors based on its patented XtremeSense™ TMR sensor technology. Crocus' disruptive magnetic sensor technology brings significant advancements to IoT and smart devices, industrial, consumer, medical, and automotive electronics applications demanding high accuracy, high resolution, stable temperature performance, and low power consumption. Crocus is headquartered in Santa Clara, California. For more information, please visit <http://www.crocus-technology.com>.

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