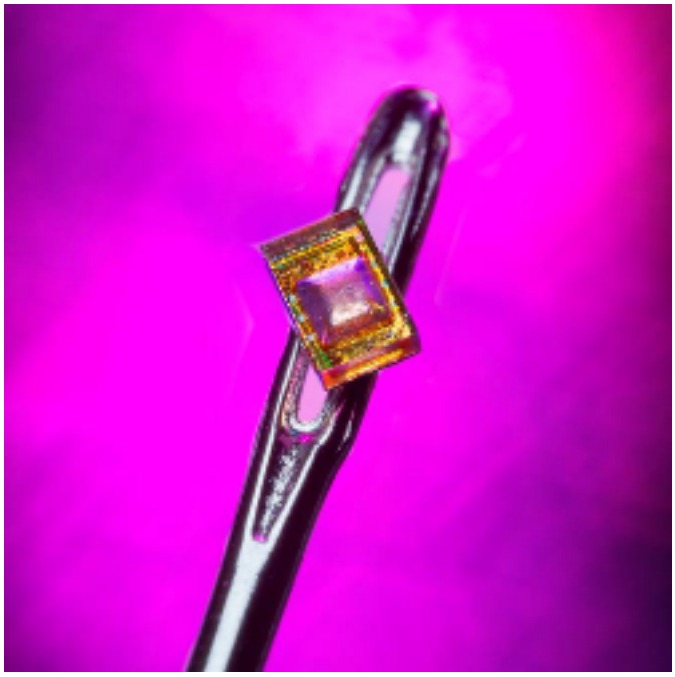
MEMS Accelerometer Presented as Smallest of its Type



MEMSIC, a leading provider of MEMS devices and sensor- based systems, has announced the availability of its MXC6226XC MEMS two-axis digital accelerometer, presented as the world's smallest, fully-integrated MEMS accelerometer. Based on MEMSIC's patented MEMS thermal technology, it is manufactured using a standard 0.18um CMOS process and advanced wafer- level packaging (WLP). The resulting device demonstrates MEMSIC's leadership in providing state-of-the-art motion sensing functions at a price- point never before available to designers of cost sensitive systems like cell phones, toys, games, cameras and appliances. The MXC6226XC accelerometer provides superior performance and functionality to designers who have previously not been able to consider motion sensing for their products. MEMSIC's MXC6226XC enables designers to significantly enhance the value of their product. It also serves as a high value-added replacement to designs employing mechanical switches, which are much less reliable and less capable.

The MEMSIC MXC6226XC digital accelerometer is the world's smallest production accelerometer measuring 1.2 mm. x 1.7mm. x 1.0 mm. and thus is approximately 50% smaller than competitive offerings. Its extremely small size and availability in a ball grid array (BGA) package provides designers enhanced flexibility for integration into space-constrained designs. The MXC6226XC integrates extensive signal conditioning circuitry, including a DSP, to enable superior motion sensing performance. Since it is based on MEMSIC's proven thermal accelerometer technology, which has no moving internal structures, the MXC6226XC exhibits extremely high shock survivability (up to 50,000g). This is five times greater than the shock survivability of capacitive accelerometers, and thus makes the MXC6226XC ideal for application in toys and cell phones, or other devices which are

prone to being dropped onto hard surfaces. The MXC6226XC Digital Accelerometer can detect four orientation positions, offers shake detection and can measure acceleration over a +/- 2 g range with an absolute 0 g offset of less than +/- 50 mg. An I2C interface is used for communications and an interrupt pin (INT) is provided for shake and orientation detection. The device also has a power-down capability enabled through the I2C interface. Operating voltage is 2.5 v to 5.5 v. It operates over a -20 to +70 degree C. temperature range.

Dr. Yang Zhao, MEMSIC Chairman, President and CEO said, “Our wafer-level packaged digital accelerometer is truly a breakthrough design. We have listened to the voice of our customers who requested a small, low- priced, higher performance and function-rich solution to their existing and future motion sensing needs. Our engineers developed a design that perfectly matched their requirements by “pulling out all the stops” when it comes to innovative design. Measuring only 2.0 mm. square in size, the MEMSIC digital accelerometer is the smallest full-function production accelerometer on the market today, the only one using wafer- level packaging (WLP) technology and the only single-chip MEMS accelerometer being built on a standard 0.18 um CMOS process. This is how we met their challenge.” Dr. Zhao added, “Our solution leverages one of the inherent benefits of MEMSIC’s approach- the elimination of moving parts. This makes our solution extremely robust and reliable in comparison to the mechanical approach used by other MEMS companies. The size reduction achievable with our high level of monolithic integration and WLP technology minimizes parts count and required board real estate. With our integrated DSP core, our digital accelerometer has the ability to add smart functionality and programmability. This simply is the best solution available today for consumer orientation sensing and control applications at this price. We expect to enable many new products through the adoption of the MXC6226XC.”

The MEMSIC MXC6226XC unit price in OEM quantities is $0.35 and delivery is in 8 weeks ARO. Samples are available upon request.

FOR MOR INFORMATION
MEMSIC Inc.
One Tech Drive, Suite 325
Andover, MA 01810
Tel: 978-738-0900
Fax: 978-738-0156
Email: info@memsic.com [1]

Source URL (retrieved on *09/18/2014 - 7:38am*):
http://www.mdtmag.com/product-releases/2011/11/mems-accelerometer-presented-smallest-its-type?qt-most_popular=0

Links:
[1] mailto:info@memsic.com