

# **MEMS Accelerometer with screen printed thick film PZT**

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## **ABSTRACT**

A bulk-micromachined piezoelectric MEMS accelerometer with screen printed  $\text{Pb}(\text{Zr}_x\text{Ti}_{1-x})\text{O}_3$  (PZT) thick film (TF) as the sensing material has been fabricated. The accelerometer has a four beam structure with a central seismic mass ( $3.6 \times 3.6 \times 0.5 \text{ mm}^3$ ,  $\sim 16 \text{ mg}$ ) and a total chip size of  $10 \times 10 \text{ mm}^2$ . For three different designs the resonant frequencies range from 14.3 - 29.0 kHz depending on the beam thickness. Measured sensitivities range from 0.57 - 1.83 mV/g.