

# はんだの変形にともなう起電力発生とその評価

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## Generation of Electromotive Force of Solder Wires and Solder Joints Caused by Their Deformation and Its Evaluation

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### Abstract

Deformation of solder under uniaxial tensile and shear loads was studied using an electromotive force (EMF) method. The EMF started to increase as the solder wires deformed plastically and reached its maximum when necking and tensile fracture of the wires were observed. The maximum value of EMF increased linearly as the deformation speed increased. EMF generation was measured for the shear deformation of both solder wires and ball joints. The EMF maximum values for shear fracture of solder joints varied according to the fracture surface conditions. These results demonstrate that the EMF method is a useful technique for evaluating the deformation of solder.

**Key Words:** *Electromotive Force, Solder Joint, Deformation, Shear Impact Test*