EECO MOBILITY

EECO POWER

# RAPID BATTERY CELL TESTING SOFTWARE

3 Second Production Test

AI Detects Faulty Cells (the one in a million)

Self Learning Technology

EECOMOBILITY's rapid battery cell test is designed for the production testing of battery cells. The EECOPower test takes 3 seconds, is easily implemented into production lines and does not interfere with productions' conventional tests.

Today, production can find the most severe faults, but defective cells are not common (one in a million) and greatly impact the safety / life of the battery pack.
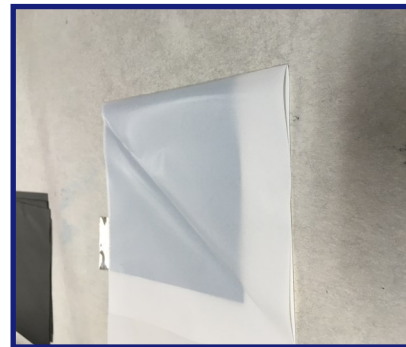
EECOMOBILITY has created a rapid battery test that is extremely sensitive. The test is a result of many years of research on batteries and EECOMOBILITY's advanced information extraction technologies. Over 450 indicators are generated and analyzed with AI and the result is an advanced AI algorithm that looks at both the temporal and spectral response of the battery.

Unique faults that can be found include:
⇒Defective Cathodes
⇒Variations in the cathode electrochemistry
⇒Separator Faults
⇒Misalignment of electrodes
⇒Contamination

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The rapid battery test consists of three key elements:

1. EECOMOBILITY's proprietary signal–a low-current high-frequency signal designed specifically to excite the battery cell providing a comprehensive temporal and spectral response from the cell. This signal provides information that typically takes hours or days to measure using traditional methods.

2. The process utilizes EECOMOBILITY's patented fault signature analysis—converting the recorded voltage into a signature that represents a fingerprint of the cell's response and dynamics

3. The application of artificial intelligence to determine if the cell has any faults.

Other measurements available include:

⇒ Ohmic Resistance/ACIR(1KHz)/DCIR Indicator/ - resolution 1µOhms
⇒ EIS - 0.4Hz to 10KHz for the 3sec test
⇒ Functional characterization – 0.1 - 10Khz
⇒ Temporal characterization – 1st order

EECOMOBILITY provides a complete system using proven off-the-shelf hardware that can apply the signal to the battery and measure the current and voltage and temperature of the battery cell.

EECOPower software controls the battery signal and analyses the response in less than 3 seconds.

This whole process takes less then 3 seconds to complete!

3D Clustering

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