muRata

Murata Americas

Using RFID to Manage PCB Assembly

The Customer's Challenge:

Utilize RFID to improve production efficiencies with the ability to read and record measurable product data throughout the manufacturing process.

The Market:

Manufacturing, IT/infrastructure, Operations

Engineering Challenges:

- Modify PCB to accommodate MAGICSTRAP® RFID tag.
- Add RFID reader/writers within production line to capture and record data.
- Ensure data integrity / security
- Coordinate implementation responsibilities between key departments – R&D, IT, operations, manufacturing, logistics, etc.

The Murata Solution:

The Products:

LXMS31 Series

RFID Module – MAGICSTRAP®

EPC UHF Gen2 Compatible RFID Tag

Overcoming the Hurdles:

Simplify the process and development time of adding RFID on the printed circuit board to replace existing bar code technology.

How We Did It:

- Selected location on PCB to mount MAGICSTRAP®
- Utilized Murata's mini test boards and antenna reference designs to test and validate performance.
- Technical support that included doing verification testing for the customer.

The Product Features:

- EPC Global Gen2 / ISO 18000-6C compatible - UHF frequencies (860 ~ 960MHz)
- Antenna impedance matching function integrated into MAGICSTRAP®
- Memory capacity – 512bits
- Ease of implementation – utilizes ground as antenna
- Utilizes standard handling equipment
- Data can be password protected

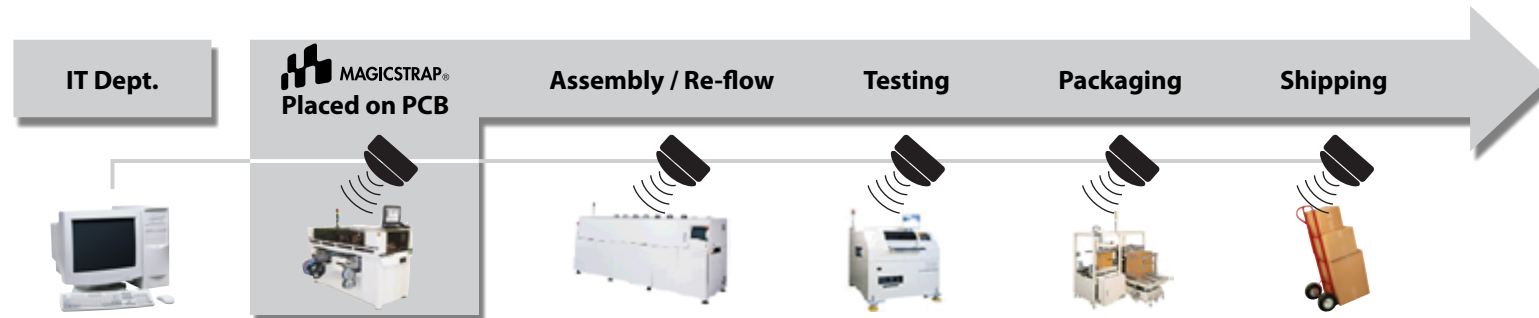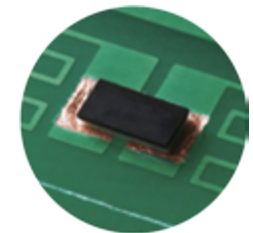### Potential Industries:

- Telecom equipment manufacturers
- Automotive
- Industrial
- Computer / Servers
- EMS / Contract manufacturers

More info:

For further information about RFID solutions please contact your local sales manager.

Data sheets and application notes for Murata Electronics products can be found at: **www.murataamericas.com**

MAGICSTRAP®

To see more RFID solutions, visit www.murataamericas.com/rfid

IT Dept. | **MAGICSTRAP®** Placed on PCB | Assembly / Re-flow | Testing | Packaging | Shipping