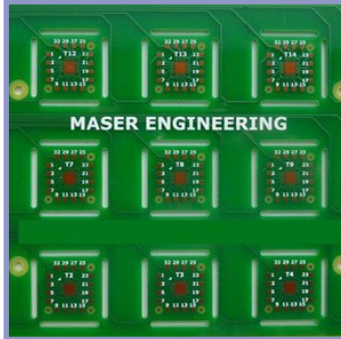


# BOARD LEVEL RELIABILITY (BLR) TEST SERVICE

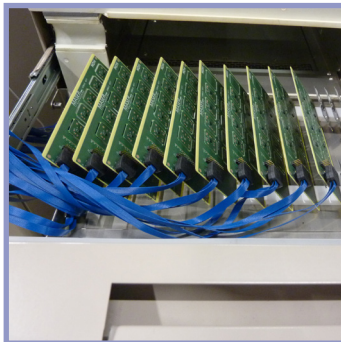
- SOLDER INTERCONNECT RELIABILITY
- BLR THERMAL CYCLING TEST
- BLR DROP TEST
- BLR BENDING TEST
- IN-HOUSE BLR BOARD DESIGN
- GLITCH / EVENT DETECTION AND MONITORING

# BOARD LEVEL RELIABILITY (BLR) TEST SERVICE



## TEST BOARD DESIGN

- In-house test board design capability and knowhow
- JEDEC 220 mm x 127 mm, 2-layer FR4 board for TC test
- JEDEC 77 mm x 77 mm, 10-layer FR4 board for drop test
- JEDEC 77 mm x 132 mm, 8-layer FR4 board for bending
- Break-out boards for fast FA
- Daisy chain resistance loop for monitoring



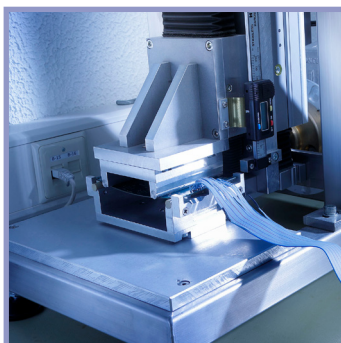
## THERMAL CYCLING TEST

- Typical test condition  $-40\text{ }^{\circ}\text{C}$  /  $+125\text{ }^{\circ}\text{C}$ , 1 cycle / hour, 10-11 K/min
- Data acquisition by daisy chain resistance monitoring
- Test according JEDEC JESD22-104
- Espec TCC-150, Espec HC-120, Espec EGNZ12-7.5cwl systems
- Central Monitoring System (CMS)



## DROP TEST

- Lansmont drop tester
- BLR drop tester, developed by MASER Engineering
- Glitch detection by daisy chain resistance monitoring
- JEDEC JESD22-B111, 1500g, half sine, 0.5ms, drop until fail or 1000 drop cycles
- Drop tests according customer specification
- Characterization of solder joint reliability using Weibull



## BEND TEST

- Bend tester, developed by MASER Engineering
- Data acquisition by daisy chain resistance monitoring
- Test according JEDEC JESD22-B113 (dynamic)
- Test according IPC9702 (static)
- Test according IEC 60068-2-21 (static)