

BondMaster LCD Production & Repair SMD-9000

Overview

A proven bonding repair and production system for Liquid Crystal Displays, which are bonded by Heat Seal Connector contacts (HSC) or Reflow Solder contacts, as used in Pagers, Portable Radios, PCMCIA, and PCS devices.

Automatic Control

A closed-loop system continually compensates for "Set Point" of temperature drop and overshoot, which is accomplished by a centrally located, low mass (fast response) thermocouple sensor, located directly within the Hot Bar.

The close tolerance temperature control eliminates thermal stress, delamination and heat degradation, providing a major advantage in the reliability of the bonded components.

Bonding Head

The BondMaster uses a self-aligning, free-floating Bond Head (Hot Bar Thermode), which is optimized by a Temperature Controller providing accurate and reliable temperature-time cycle control.

Bonding Thermal Stability

Uniform heat distribution throughout the Hot Bar is critical in ensuring a reliable bond.

Ingredients for a Successful Bond:

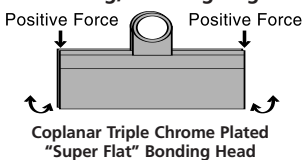
- Time
- Temperature
- Profile
- Pressure

Time, Temperature, and Profile are controlled by the PID Controller, which stores the correct program for the bond.

Pressure

Pressure is applied by a calibrated tension, maintained by a Bearing Carriage and determined by a Thumb Wheel Adjuster. A Locking Pin protects against intervention.

Free-Floating, Self-Aligning Head



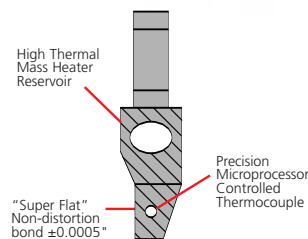
Bonding Lock

Once the subject is in place under the Bond Head and the pressure adjusted by the Thumb Wheel, the Bond Head is placed in position by a Locking Lever, which will remain until the bond time is completed.



VISION AWARD

Winner for the best new product in the category of rework and repair.

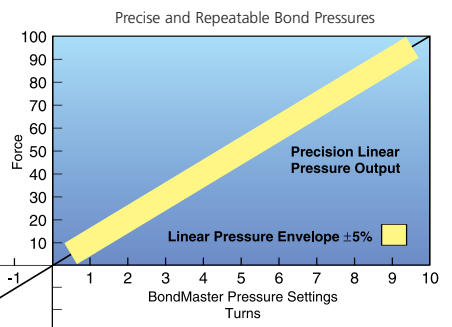
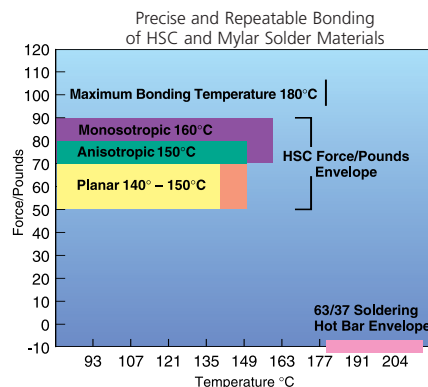
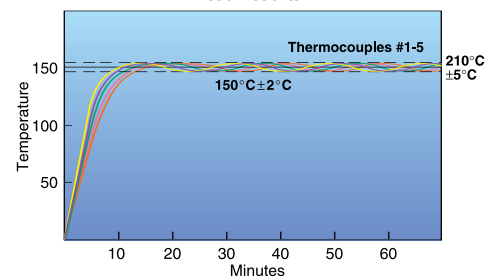


Bonding Surface Thermal Stability

Embedded Thermocouple Test (bottom view) in Bonding Head

1 2 3 4 5

Test Results



BondMaster LCD Production & Repair SMD-9000

Features:

- HSC, Mylar, PCMCIA, Flexible Circuit connections
- Microprocessor controlled
- Self-contained, no PC or factory air required
- Linear pressure control
- Precise temperature control and profiling
- Repeatable process control
- Continuous or pulse operation
- Pre-stored profile groups
- User programmable
- Floating and self-aligning Bond Head
- Thermal bonding reservoir
- "Super Flat" bonding surface
- Thermal stability throughout bonding cycle
- No silicone barrier required

Process Control Programmable

Features:

- Ramp rate degrees/sec
- Ramp rate time vs. temp
- Programmable set point Celsius or Fahrenheit
- Ramp time 15 (continuous) sec to 3 minutes

Applications

- LCD Repair
- Pager Repair
- Hot Bar Bonding
- Flex Panels
- OLED displays
- Reflow Soldering
- Heat Staking
- Hot Bar Soldering
- ACF Bonding
- Flex Circuits
- Ribbon Cables
- Gold Wire Bonding
- Anisotropic Conductive Adhesives
- TFT Modules
- Heat Sealing
- Radio Repair
- Solar Cell Production
- TAB Soldering
- Conductive Adhesives
- HSC Bonding
- Mobile Phones
- Thermocompression Bonding

Order Information

APE Part #	Motorola Part #	Description
9000-1000	R1346A	BondMaster 60Hz 110V
9000-1002	R1347A	BondMaster 50Hz 220V
9000-1010	0180304E22	Universal Bonding Fixture
9000-2000	0180304E24	X-Y Table and Microscope
9000-0899	0180302E51	MasterLens 110V
8200-1370	0180304E25	HSC Bond Tape, 3 pack
8200-1360	0180304E72	HSC Bond Tape, 6 Pack



BondMaster Fixturing

The BondMaster has been engineered to enable rapid interchange of differing product assemblies, not only for Pager products listed but also for production assembly of LCD and Flexible Circuits.

Fixturing:

We are pleased to offer advice in developing a Fixture. However in order to keep costs to a minimum we suggest that our customers use either in-house or local facilities to fabricate fixture requirements.

Specifications:

Electrical	110V/220V, 50/60Hz
Power	200 Watts
Mechanical	Aluminum Plate Construction
Dimension	15" x 12" x 12" (381 x 305 x 305 mm)
Weight	14 lbs. (6.36 Kg)
Temperature	Ambient up to 550°F (288°C)
Pressure	0-100 lbs. (45.45 Kg) Adjustable
Time	Programmable 1 sec to 3 minutes