



*Soft Touch™*

## MODEL 522A-40

### DEEP ACCESS/LONG REACH THERMOSONIC BALL BONDER

0.7 to 2.0mil (18 to 50 $\mu$ m) Gold Wire



#### STANDARD FEATURES:

- HYBOND *Soft Touch™* energy system.
- Independent 1<sup>st</sup> and 2<sup>nd</sup> bond controls.
- 1-2-2 stitch capability standard.
- Long horizontal reach of 6.5in. (16,5cm).
- Deep vertical access of 0.53in (1,35cm).
- 0.5in. and 2in. spool mounts standard.
- Loop height control adjustment.
- Electronic ball size control.
- Independent lever for Z bond head control.
- Swing away clamps for easier wire threading.
- Motorized vertical wire feed system
- High and low EFO power standard.
- Front panel ultrasonic test button.
- Fits 10 x 10in. (25,4 x 25,4cm) module or substrate.
- Infinite angle mounting for microscope.
- LED display for monitoring temperature.
- Tail length is adjustable in varying amounts by a front panel control.
- Audio and visual bond fault indicators.
- 10 x 12in.(25,4 x 30,4cm) X-Y work platform.

Model 522A-40 is a Deep Access, Long Reach, ThermoSonic Ball Bonder for wires from 0.7mil (18 $\mu$ m) to 2.0mil (50 $\mu$ m) in diameter featuring HYBOND's exclusive *Soft Touch™* force ramping system. Imitated but never duplicated, the *Soft Touch™* system bonds effectively with less trauma to sensitive materials like GaAs and InP. Wire control is provided by a motorized feed system which features front panel adjustment for tail length and a swing away clamp assembly which makes threading wire easier. Front panel controls include independent 1<sup>st</sup> and 2<sup>nd</sup> bond dials for U/S, Time & Force as well as a built in work stage temperature controller. The 522A-40 has a proven track record of safe and effective wire bonding worldwide

### Partial List of Available Options:

- **OP-06S6:** Leica S6 Zoom Stereo Microscope.
- **OP-06A:** Nikon SMZ660 Microscope.
- **OP-08A:** Dual Fiber Optic Illuminator.
- **OP-08R-LED:** White LED Ring Illuminator.
- **OP-12:** 240VAC 50/60Hz Input Wiring.
- **OP-13:** Board for Bump Bonding.
- **OP-30A:** 8:1 X-Y Manipulator.
- **OP-31:** Tool Heater and Temp. Controller.
- **OP-44:** High/Low U/S Power Selector.
- **OP-82:** Heated Transducer for Tool Heat.
- **WST-15A:** Heated Work Stage, 2.125 in. top.
- **WST-19A:** Heated Work Stage, 4 x 6 in. top.
- **WST-65:** Heated Work Stage, 10 x 6 in top.
- **Wire & Capillary** as ordered per application.

### Specifications for Model 522A-40:

- Ultrasonic (U/S) System: PLL self tuning 62.5KHz (nominal) system ( $\pm 2.5$ KHz).
- U/S Power Range: 0-1 watt on low setting (default) & 0-2 watts on high with OP-44.
- Bond Time Range: 10mSec. to 400mSec.
- Bond Force Range: 15gr. to 120gr.
- Temperature Control Range: Ambient to 250 degrees Celsius.
- Bondable Wire Diameters: 0.7 to 2.0mil (18 to 50 $\mu$ m) diameter.
- Bondable Wire Materials: Gold.
- Bonding Capillary Used: 0.750in. length capillary.
- Bond Head Movement: Manual.
- Bond Actuation: Switch at fixed height. Activated by lever.
- Z Travel: 0.5in. (1,27cm) maximum bond head travel.
- Vertical Bonding Window: 60-100mils (152-254 $\mu$ m) maximum height difference between 1<sup>st</sup> and 2<sup>nd</sup> bond height for proper bonding.
- Table Motion: 4:1, manual.
- Input Power Requirements: 110VAC 50/60Hz @ 10A max. standard or 240VAC with OP-12.
- Minimum Bench Space Required: Width: 20in., Depth: 25in. (50,8 x 63,5cm).
- Unit Weight/Shipping Weight: 70 lbs. (31,8Kg)/150 lbs. (68,6Kg). Shipping weight may vary.
- Industry Standards: CE.

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