Wedge Bonder Offers Versatile Production Capabilities

Designed for aluminum wire, gold wire and ribbon, the Model 4523 Manual Wedge Bonder offers the versatility to bond simple discrete devices up to complex hybrid, microwave devices. A bonding head with a deep access option and tail adjust system supports deep cavity microwave applications where tight control over the tail length is essential. With its small wire diameter capability of 0.0007" (18 microns), the Model 4523 also enables the creation of short wires with low loops to support RF devices. A manual Z mode allows operator control over looping and wire length, providing excellent results for tight spaces or unusual loop requirements. Offering capacity for a wide range of wire diameters, easy implementation, individual bond parameter and loop height control, the Model 4523 is ideal for use in various wedge bonding applications including Hybrid/MCM, Chip On Board, Microwave and Discrete devices.
Machine Specifications

**XY TABLE**

- **Bonding Area**
  - 134 mm x 134 mm (5.3" x 5.3")
- **Throat Depth**
  - 143 mm (5.6")
- **Gross Table Motion**
  - 140 mm (5.5")
- **Fine Table Motion**
  - 14 mm (0.55")
- **Mouse Ratio**
  - 6:1

**Z Motion System**
- DC servo/LVDT control

- **Z Travel: Low Reset**
  - 6.6 mm (260 mil)
- **Z Travel: High Reset**
  - 12.7 mm (500 mil)

**Ultrasonic System**
- High Q 60 kHz transducer, PLL Ultrasonic Generator
- Separate 1st and 2nd Bond Controls

**PARAMETERS**

- **Low Ultrasonic Power**
  - 1.3 W
- **High Ultrasonic Power**
  - 2.5 W
- **Bond Time**
  - 10-100 mSec/10 - 1000 mSec
- **Bond Force (no springs used)**
  - Force Coil 10 - 160 grams
  - Counterweight to 50 grams
  - Separate 1st and 2nd Bond Controls

- **Wire Feed Angle**
  - 30°, 38°, 45°
  - 90° option
  - Round Wire
  - Ribbon
  - 30°, 38°, 45° ribbon option
- **Temperature Controller**
  - 250°C ± 5°C maximum

**PROCESS CAPABILITY**

- **Wire Diameter Range**
  - Gold: 18 to 76 µm (0.7 to 3 mil)
  - Aluminum: 20 to 76 µm (.8 to 3 mil)
  - Gold Ribbon: Option Up to 25 x 250 µm (1 x 10 mil)

- **Spool**
  - Std: 1/2 "
  - Option: 2" x 1" Double Flange
  - Each is available for standard and deep access

**FACILITY REQUIREMENTS**

- **Electrical**
  - 100 – 120/220 – 240V +10%
  - 50/60 Hz 250 VA max.
- **Dimensions**
  - 680 mm (27") W x 700 mm (27.5") D x 530 mm (21") H
- **Weight (basic model)**
  - Shipping: 55 kg (122 lb)
  - Net: 31 kg (69 lb)

**OPTIONS**

- Leica and Olympus Microscopes and eyepieces
- LED ring illumination
- Spotlight target
- 90° feed angle kit for deep access wire or ribbon bonding
- Manual adjustable height, heated workholders up to 6" x 6" and 4" or 6" wafer type
- Mini-heater kit for heated wedge process
- Left or right mouse (no charge option)
- ESD protection kit for static sensitive work
- CCTV color monitor kit
- Electronic crosshair kit