UUG-040

Digital Ultrasonic Generator

The UUG-040 ultrasonic generator is a digital generator designed for use in ultrasonic flip-chip die bond machines. It is a digital signal processor based system with direct digital synthesis of the ultrasonic sine wave and operates over a wide frequency range from 30 kHz up to 150 kHz.
The UUG-040 works with all typical ultrasonic transducers for die bonding, but also with heavy wire bonding transducers.
Two control modes (voltage and power control mode) can be used for best adaptation to the bond process.
Diagnostic functions are easily available using a serial link to a computer.

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F&K PHYSIKTECHNIK

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Specification

Description	Item
Ultrasonic power is optimized for ultrasonic flip-chip die bond applications; maximum power depends on impedance of the ultrasonic transducer; max. output voltage 39 V_{rms} (typ. 40 Watts at 38 Ohms transducer impedance)	*Ultrasonic output power* *(more power at customer request possible)*
30 kHz to 150 kHz	*frequency range*
Full metal housing height: approx. 75 mm / 3 inch (with rubber feet) width: 253 mm / 9.96 inch depth: 250 mm / 9.84 inch weight: approx. 6.7 kg / 14.8 pounds	*Housing*
Integrated AC power supply configurable 115/230 VAC, 50/60 Hz max. 250 VA power consumption	*Power supply*
DSUB25m	*Transducer connector*
LEDs: all voltages + ready, bond, scan and error test button for ultrasonic (front panel) On/Off switch (rear panel) Fuse (rear panel) *Open communication protocol for setup of the UUG-040 and status/diagnosis*	*User interface*

Ultrasonic power input

Description	Item
Digital power input 8 bit parallel low active	*Power input selection*
Flat ribbon cable connector (rear panel)	

Bond time control

Description	Item
Automatic bond signal creation from 8 bit parallel power input	*Automatic trigger*
Flat ribbon cable connector	*Bond power connector*

Serial Interface

Description	Item
RS232	*Type*
DSUB9m (rear panel)	*Connector*
19200 Baud, 1 start bit. 8 data bits, 1 stop bit, no parity	*Data rate*
Fixed telegram length with CRC	*Data format*
Null modem cable (3 wire, RxD, TxD, GND)	*cable*

Options

Description	Item
PC host software for setup and diagnosis	*(for MS-Windows 2000 / XP)*
Data output during bond process or internal data sampling during bond process and output after finishing bond process	

F&K reserves the right to change these specification without notice.

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