

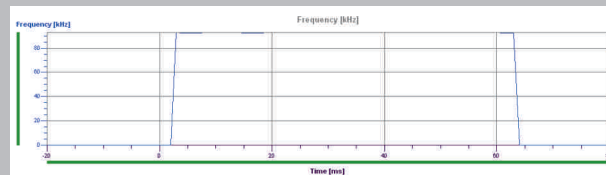
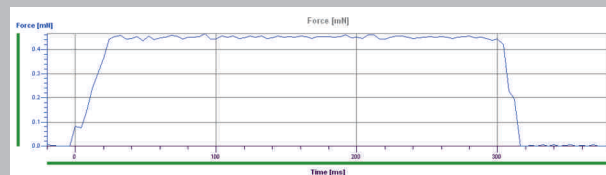
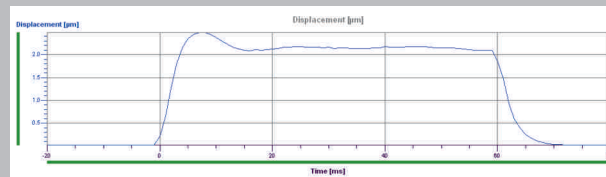
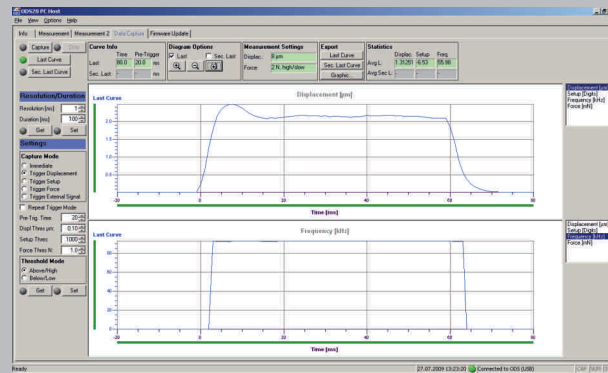
The optical displacement measurement system **ODS-20** is now able not only to measure the vibration excursion of bond tools for wire and die bonders, but also to measure the bond force dynamically.

The **ODS-20** scans the mechanical oscillating tool using eye-safe visible red laser light.

An optional available load cell, integrated in the sensor head or as a separate sensor head, is used for bond force measurement.

With the **ODS-20** one can check and calibrate the output of the ultrasonic generator using the displacement values, measured at the tip of the bonding tool. Now it will become easy to evaluate also the function of the bond force generating system of a bonder.

The **ODS-20** can be used for all common bonding tools - wedges, capillaries and die collets.



Specification

ODS-20 Model name

100184 Order number

Mechanical displacement (peak-peak) Measured values

Mechanical vibration frequency

Bond force ¹⁾

3 selectable ranges Displacement measuring

range 1: 0.1 to 2 μm @ 30..250 kHz ranges ^{2) 3)}

range 2: 0.1 to 8 μm @ 30..200 kHz

range 3: 0.1 to 20 μm @ 30..150 kHz

range 1: $\pm 0.05 \mu\text{m}$ Displacement measuring

range 2: $\pm 0.1 \mu\text{m}$ accuracy

range 3: $\pm 0.2 \mu\text{m}$

range 1 & 2: $\pm 0.001 \mu\text{m}$ Displacement measuring

range 3: $\pm 0.01 \mu\text{m}$ Resolution

30 kHz .. 250 kHz with ± 20 Hz accuracy Frequency measurement range and accuracy

2 selectable ranges Bond force measuring

range 1: 0 to 2 N ranges ¹⁾

range 2: 0 to 20 N

range 1: ± 0.01 N ($\pm 1\text{g}$) Bond force measuring

range 2: $\pm 0.5\%$, minimum ± 0.02 N ($\pm 2\text{g}$) accuracy

$\pm 0.5\%$ Bond force linearity

Class II (eye safe) Laser class

Power supply

Plug-in power supply Type

100 – 240 VAC, 50/60 Hz Input voltage

15 VDC, stabilized Output voltage

max. 1.0 A Output current

Dimensions, Weight

length / height / width (weight) Laser sensor

2.47" x 0.79" x 0.59" (approx. 40g)

length / height (w/o force sensor) / width (weight) Force sensor

2.47" x 0.42" x 0.59" (approx. 40g)

length / height / width (weight) Electronic unit

6.1" x 3.54" x 8.03" (approx. 1100g)

length / height / width (weight) Power supply

2.76" x 1.97" x 1.57" (approx. 150g)

Communication

USB and RS232 communication port
for use with data sampling software

¹⁾ Applicable, if bond force option ordered.

²⁾ Other measuring ranges are possible,
please ask for special calibrations.

³⁾ All displacement values are peak-peak.