

THERMAL TOPOGRAPHY

MANUFACTURER : Akrometrix

MODEL : TherMoiré AXP

Application

- Measurement of in-plane and out-of-plane strain during thermal profile with Shadow-Moiré or digital image correlation (DIC) techniques

Shadow-Moiré technique

- Maximum sample size: 400 mm X 400 mm (with radiant infrared heating) or 70 mm X 150 mm (with convective heating)
- Minimum sample size: 5 mm X 5 mm (with radiant infrared heating or convective heating)
- Gratings: 100LPI and 300 LPI
- Resolution: 2.5 μm for 100 LPI grating and 0.8 μm for 300 LPI
- Temperature control with PID controller
- Radiant infrared heating (temperature range: 25 to 250°C; maximum heating rate (25 to 250°C): 2°C/s; maximum cooling rate (250 to 25°C): 1°C/s; air cooling)
- Convective heating and cooling (temperature range: -50 to 250°C; maximum heating rate (25 to 250°C): 2°C/s; maximum cooling rate (250 to 25°C): 0.8°C/s ;maximum cooling rate (25 to -50°C): 0.1°C/s)
- Custom thermal profile

DIC technique

- Maximum sample size: 400 mm X 400 mm
- Resolution (Z-axis): 1-2 μm
- Resolution (XY-axis): 0.5-1 μm
- Temperature control with PID controller
- Radiant infrared heating (temperature range: 25 to 250°C; maximum heating rate (25 to 250°C): 2°C/s; maximum cooling rate (250 to 25°C): 1°C/s; air cooling)
- Custom thermal profile

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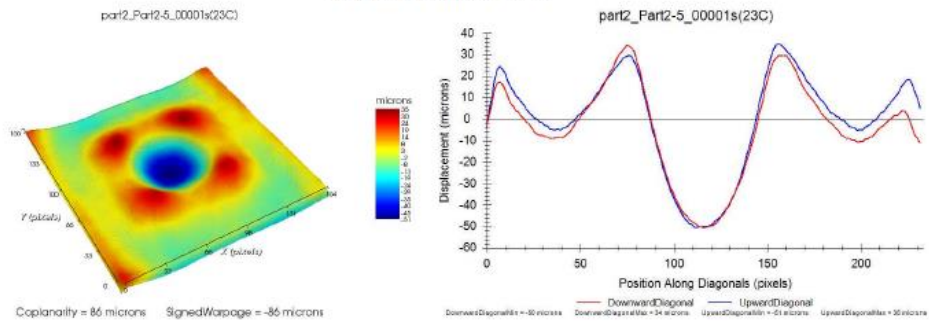
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Example

3D images and diagonals at ambient temperature and at 250°C for a FC PBGA module (Shadow-Moiré technique)

FC PBGA module

Ambient temperature



250°C

