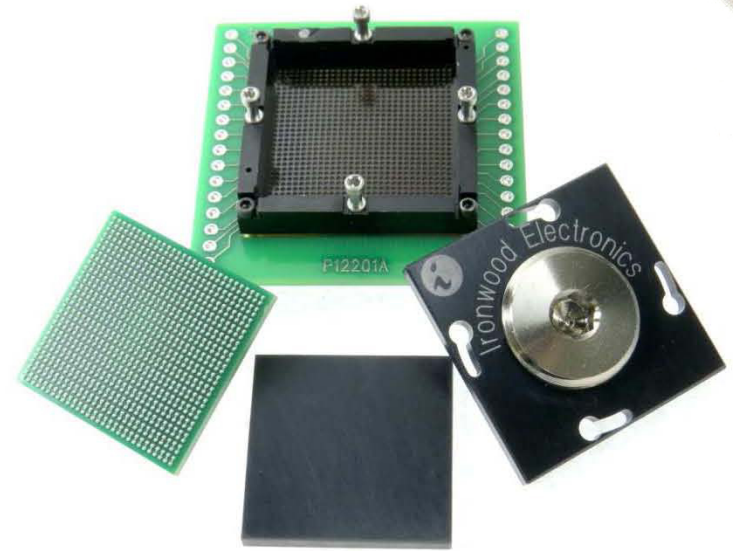




Ironwood
ELECTRONICS
www.ironwoodelectronics.com



SG 9000 Series

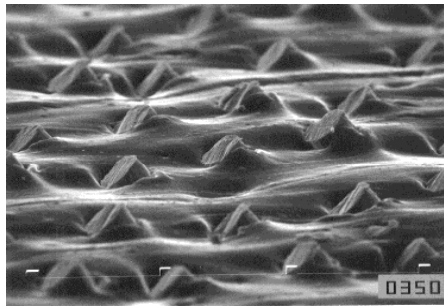
**High Performance
IC Sockets And
Test Adaptors**

Application Need & Solution

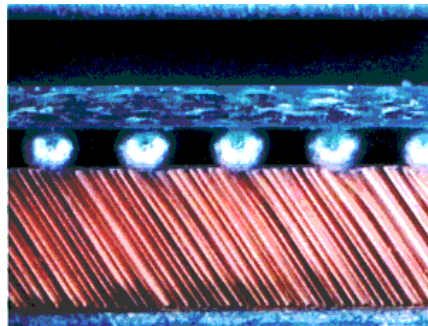
- Low cost for small quantity
- High bandwidth
- Low inductance
- Low contact resistance
- Low cycle count



GHz BGA socket technology provide up to 10 GHz bandwidth in a small, cost effective ZIF socket for prototype and test applications. The GHz BGA socket is a simple mechanical socket based on elastomer contact technology.



Protruded wire
from elastomer



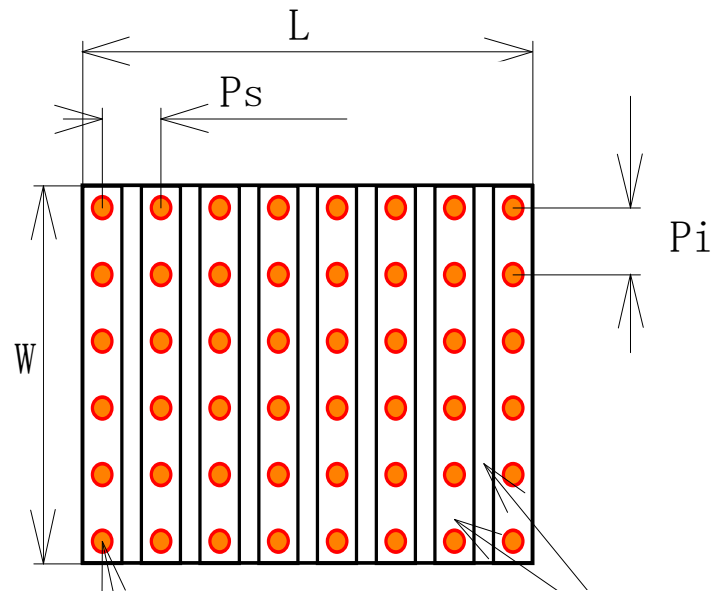
BGA compressed on Elastomer



Wire marks on BGA

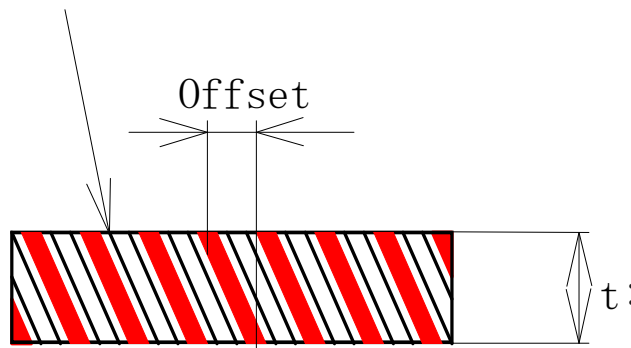
The elastomer consists of a fine pitch wire matrix which are embedded at a 63-degree angle in a soft insulating sheet of silicone rubber. The insulation resistance between connections with 500V DC is 1000 M Ω . The elastomer is ideal for high-current (50mA per filament) applications where a thin, high-density anisotropic connector is required. The gold-plated brass filaments protrude several microns from the top and bottom surfaces of the silicone sheet to penetrate heavily oxidized solder ball. The operating temperature range for the elastomer is -35° to 100° C.

Elastomer Classification



Insulation Silicone Rubber

Inclined Gold plated brass wire



SG-6000 series

$P_s, P_i = 0.1\text{mm}$

$L, W = 1\text{mm to } 50\text{mm}$

$t = 0.75\text{mm}$

BGA, QFN, etc, $\geq 0.75\text{mm}$ pitch

SG-7000 series

$P_s, P_i = 0.05\text{mm}$

$L, W = 1\text{mm to } 50\text{mm}$

$t = 0.5\text{mm}$

BGA, QFN, etc, $\geq 0.3\text{mm}$ pitch

SG-8000 series

$P_s, P_i = 0.1\text{mm}$

$L, W = 1\text{mm to } 50\text{mm}$

$t = 0.5\text{mm}$

BGA, QFN, etc, $\geq 0.75\text{mm}$ pitch

SG-9000 series

$P_s, P_i = 0.075\text{mm}$

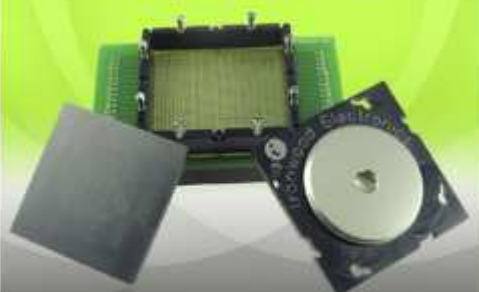
$L, W = 1\text{mm to } 50\text{mm}$

$t = 0.5\text{mm}$

BGA, QFN, etc, $\geq 0.4\text{mm}$ pitch

Socket Lid Options

IMPROVED SWIVEL LID



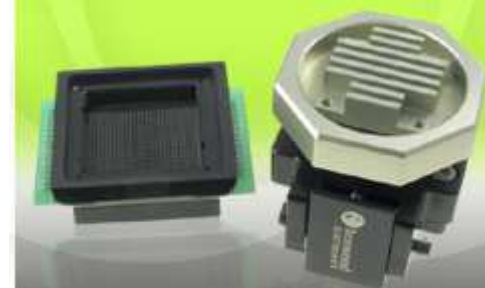
- Easier-to-use swivel lid
- Maintains low-profile design
- Quick IC installation

FORCE INDICATING COMPRESSION SCREW



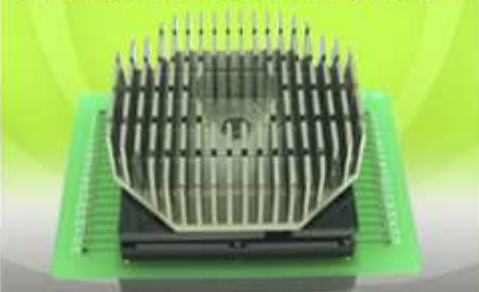
- No tools required
- Reliable installation
- Available for all IC's

DOUBLE LATCH LID



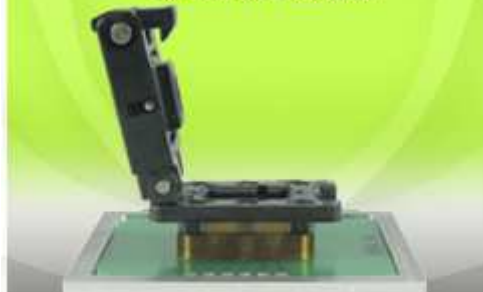
- Fully removable lid
- Optional heat sink
- Easy access to IC

HEAT SINK COMPRESSION SCREW



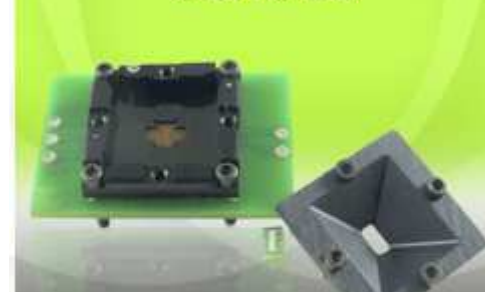
- Easy 2-in-1 installation
- Up to 100 watts
- Optional fan available

CLAM-SHELL LID



- Easy to use snap lid
- Quick IC installation
- Low profile designs available

OPEN TOP LID

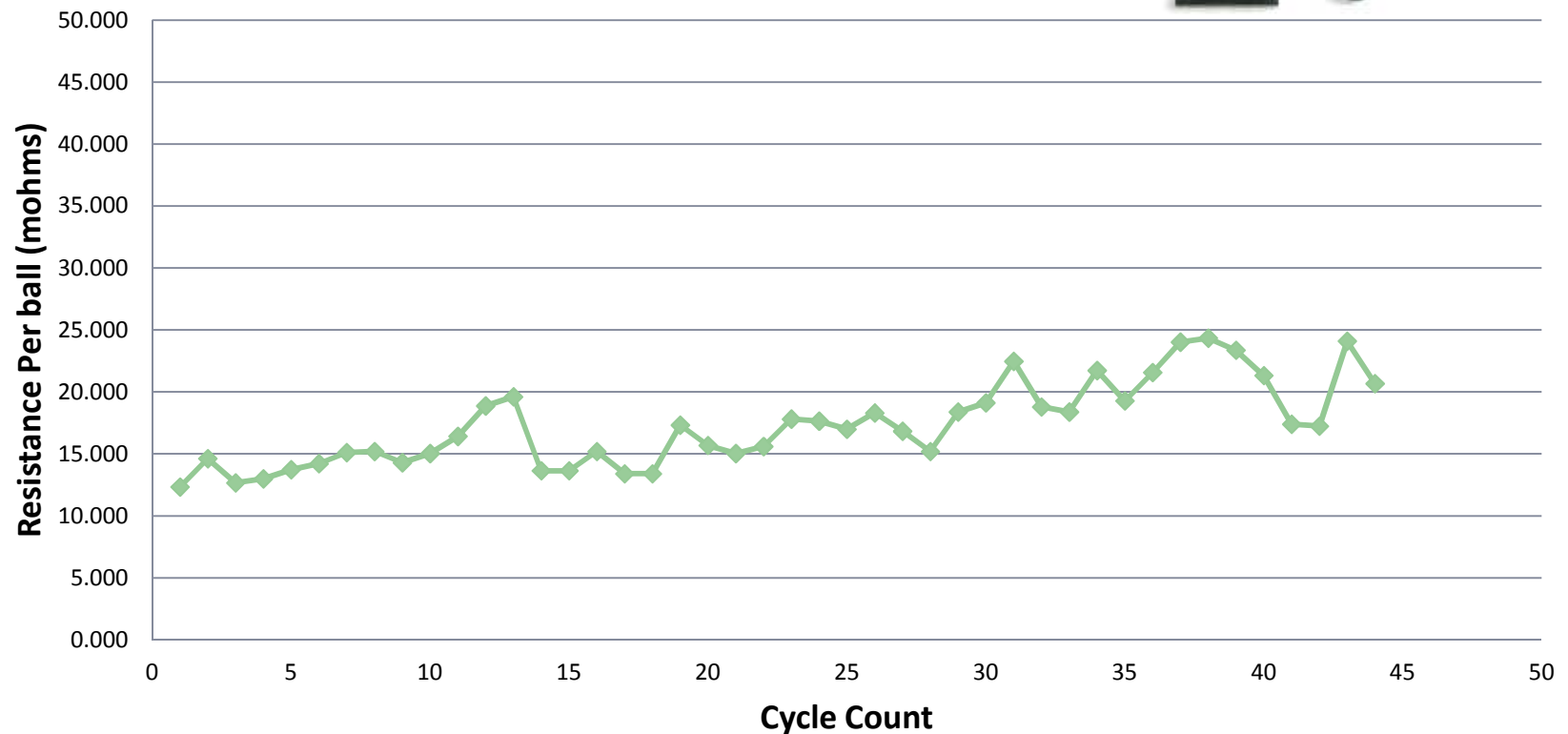
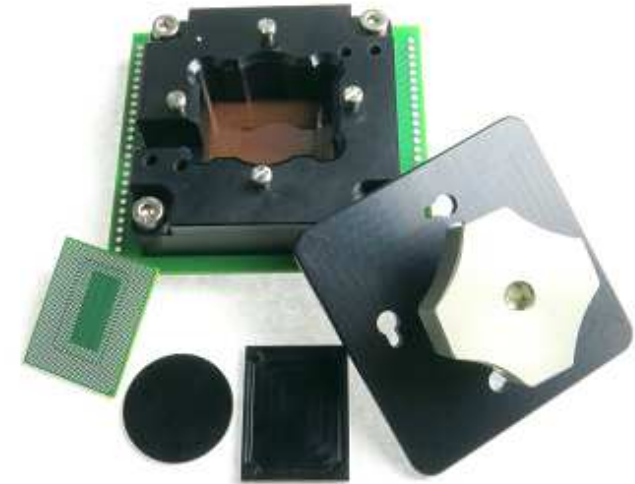


- Optical applications
- Easy access to chip
- Thermal applications

SG 9000 Test Data

BGA1224, 31x24mm, 0.65mm pitch
interstitial ball array

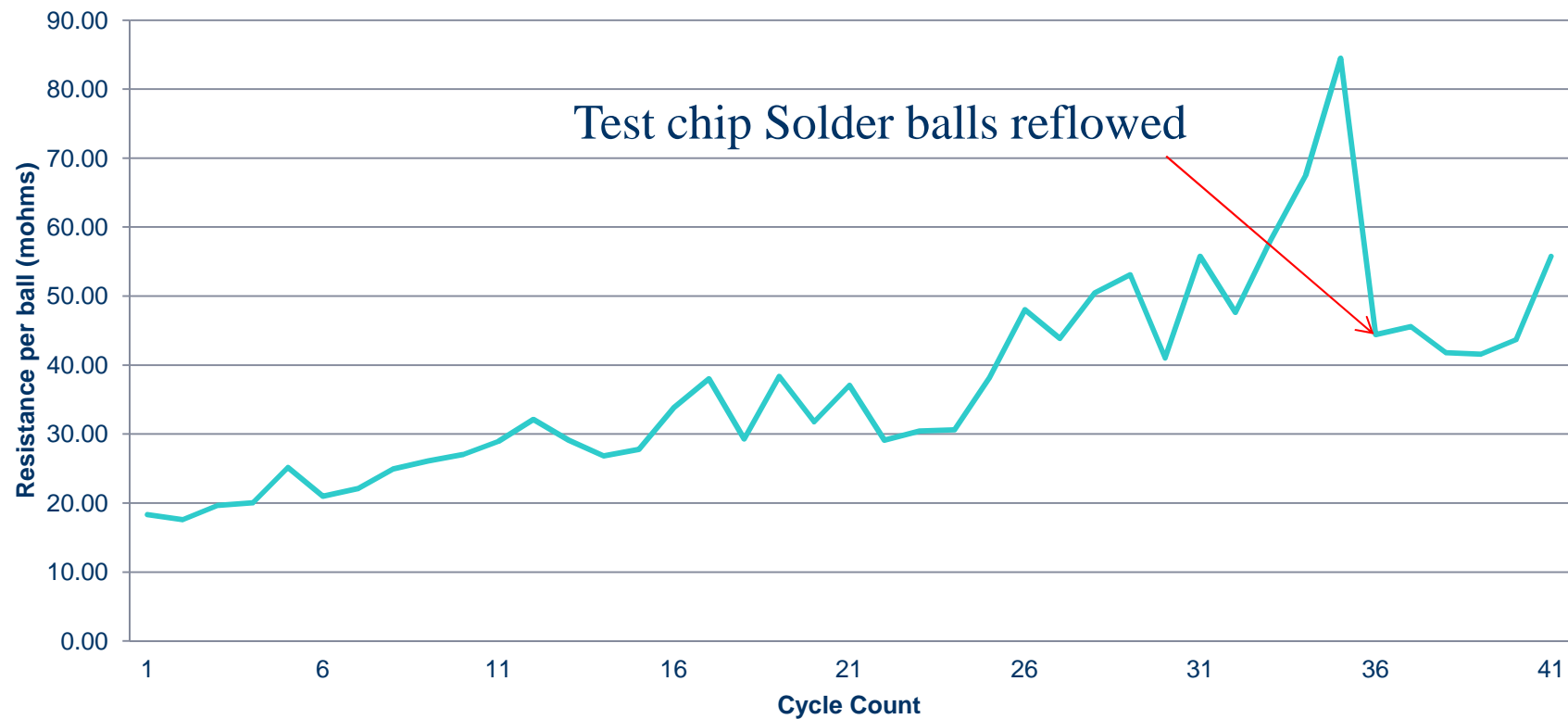
1. Socket assembled to daisy chain test PCB.
2. Daisy chain device simulator placed inside the socket.
3. Recommended torque applied.
4. Contact resistance measured using multi-meter.
5. Un-tighten the compression screw.
6. Step 3-5 repeated.



SG 9000 Test Data

BGA529, 10x10mm, 0.4mm pitch
23x23 ball array

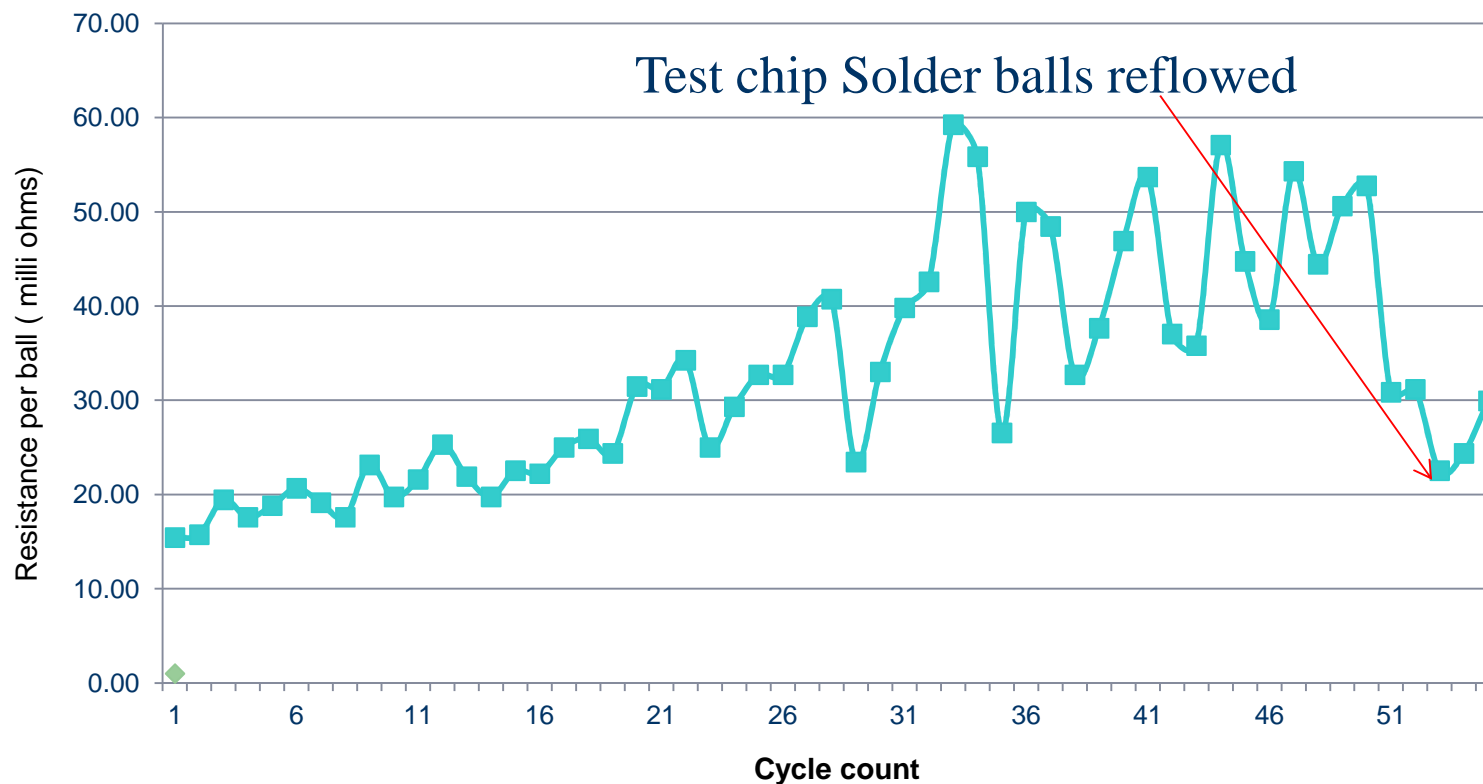
1. Socket assembled to daisy chain test PCB.
2. Daisy chain device simulator placed inside the socket.
3. Recommended torque applied.
4. Contact resistance measured using multi-meter.
5. Un-tighten the compression screw.
6. Step 3-5 repeated.



SG 9000 Test Data

BGA324, 10x10mm, 0.5mm pitch
18x18 ball array

1. Socket assembled to daisy chain test PCB.
2. Daisy chain device simulator placed inside the socket.
3. Recommended torque applied.
4. Contact resistance measured using multi-meter.
5. Un-tighten the compression screw.
6. Step 3-5 repeated.



Thanks for your time and attention !!



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