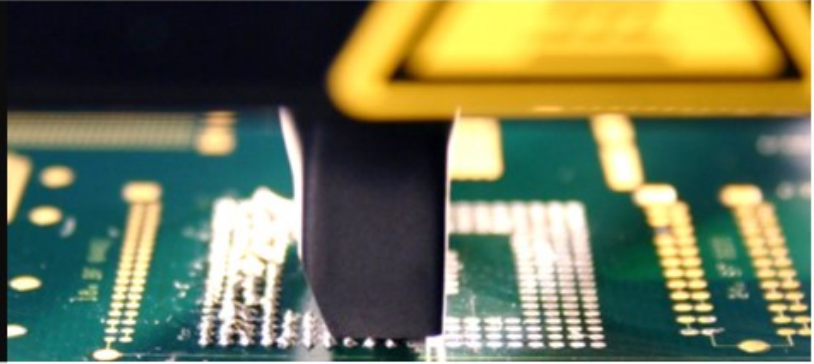


# BGA Rework Station

3-FA-016

*BGA rework station offers proven rework technology.*

*It includes thermal demount from PCB (de-soldering), solder removal of irregular shaped residues, and soldering after re-ball of a wide spectrum of SMT components.*



## Applications of Rework Fields

- BGA,  $\mu$ BGA/CSP, QFN, PoP, QFP, PGA
- Small passives
- RF shields, RF frames
- Connectors, sockets
- Sub assemblies, daughter boards

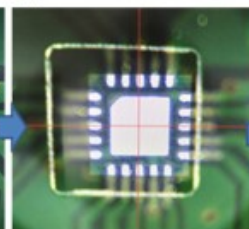
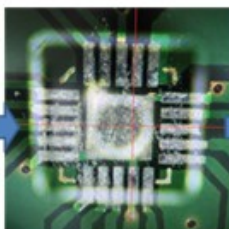
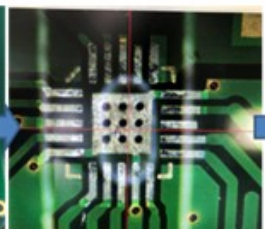
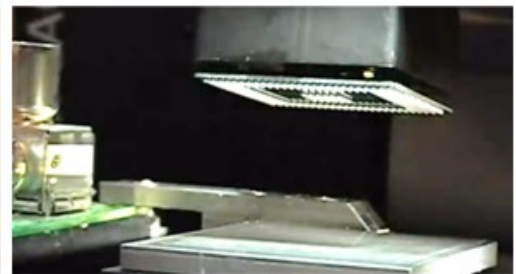


Through hole technology pin in paste reworkable underfill, conformal coating

**Executable sample size: 2 mm\*2 mm ~ 30 mm\*30 mm**

## Benefits

- Independent process operation
- Fixed prism doesn't need regular calibration
- The complete rework cycle is a cost-effective system solution
- Reproducible placement accuracy
- Coordinated control of all process parameters: temperature, gas flow, soaktime, process environment
- Immediate visual feedback reduces process development time
- Repeatable profiles from machine to machine



**Case Log-in, please Call : +886-3-611-6678 (TW)**

- Business Window ☎ ext.3821 ✉ sales@ma-tek.com
- Technical Window ☎ ext.3920 ✉ vichuang@ma-tek.com

You are highly welcome to use **Fedex** (Account No.2665-9953-6), **DHL** (Account No.968368648) or **UPS** services for sample shipping. MA-tek will pay the courier charge upon sample arrival.



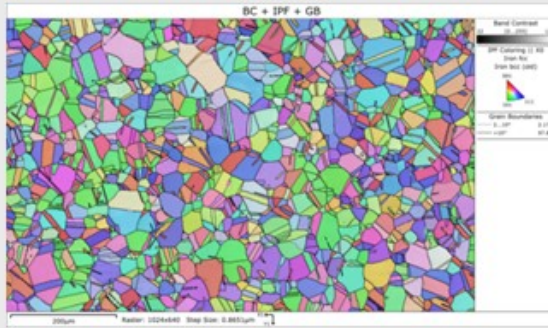
# Electron Backscatter Diffraction (EBSD)

*Uniquely suited to characterize crystallographic properties!*

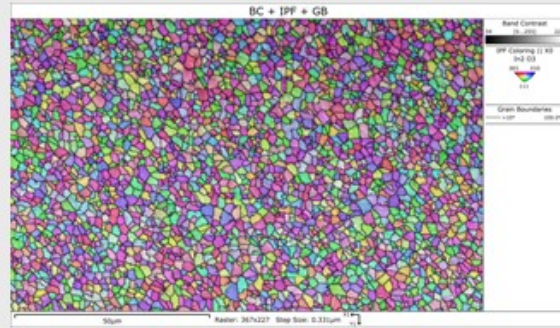
3-MA-D14



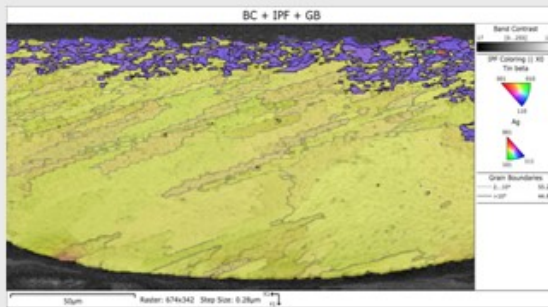
- A. Substructure analysis
- B. Grain size/boundary distribution
- C. Crystal orientation analysis
- D. Phase identification and distribution
- E. Deformed and recrystallized structures analysis
- F. Texture analysis



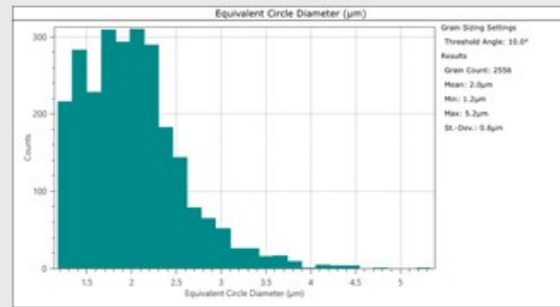
Orientation Map of Stainless steel



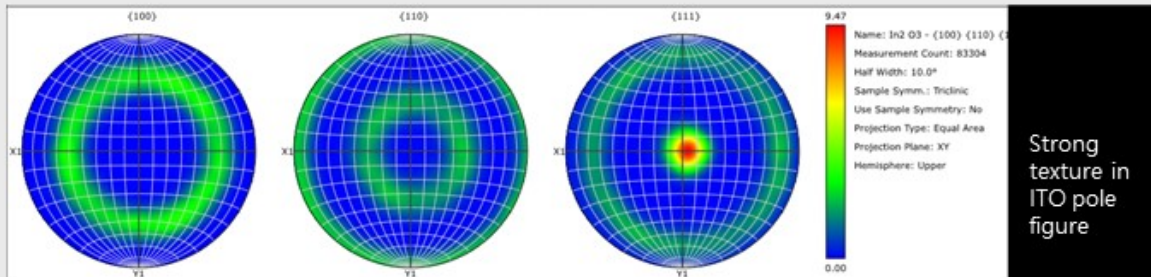
Preferred orientation of ITO grain structure



Grain structure of solder ball



ITO grain size distribution



Strong texture in ITO pole figure

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- Technical Window    ☎ ext.3896    ✉ tem@ma-tek.com

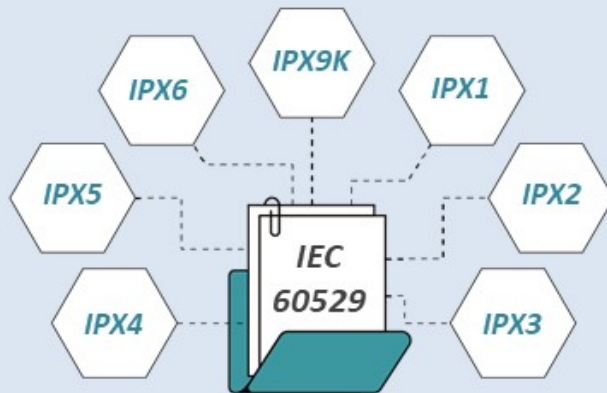
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# Waterproof Test Services

## Ingress Protection

3-RA-021

### Protected Against Water Test Equipment



■ This equipment is suitable for the waterproof performance verification of the following industry and products.



Automobile /  
Motorcycle Lamps



5G Products



Medical  
Equipment



Wearable  
Products



Aerospace  
Industry



Mobile Phones



Watches



Electrical  
Enclosures



### IPX9K Powerful High-Temperature Water Jets

- A. Water Temperature :  $80 \pm 5^{\circ}\text{C}$
- B. Pressure : 8000~10000 KPa
- C. Test Angle : 0/30/60/90°
- D. Test Angle : 30 seconds per angle
- E. Test Platform Rotation Speed :  $5 \pm 1 \text{ r.p.m}$

#### | Standard |

ISO 20653 、 ISO 16750 、 IEC 60529 、 GB 4208 、  
GB 2423.38 、 CNS 7138 、 DIN-40500-9

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- Business Window    ☎ ext.3821    ✉ sales@ma-tek.com
- Technical Window    ☎ ext.6555    ✉ pd\_service@ma-tek.com

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# X-ray Fluorescence Spectrometer - XRF

*portable XRF is Ready!*

3-SA-014



## Applications and Strengths

- A. Non-contact and non destructive analysis
- B. Liquid, powder or solid can be analyzed
- C. The analysis diameter is 2mm in minimum
- D. Mg to U can be detected. The detection limit is able to reach ppm level.
- E. The thickness analysis of metal coating
- F. XRF is able to do the analysis of PMI, precious metals, RoHS and Halogen free

alloyPlus-240

304 321

**304** 1/2

Exact - aka CF-8

El	%	+/- 3σ
Fe	70.06	0.33
Cr	18.23	0.24
Ni	8.03	0.23
Mn	1.92	0.16
Mo	0.583	0.020
Si	0.554	0.067
Cu	0.496	0.066

Ready OLYMPUS

PMI Analysis

Film Thickness Measurement

Polymer - Pass

El	PPM	+/- 3σ	
Cr	10	4	Pass
Br	190	3	Pass
Cd	21	4	Pass
Hg	2	0.9	Pass
Pb	11	2	Pass

Notes

Mu Spectrum

Ready OLYMPUS

RoHS Analysis

Si	310996.48 (ppm)
K	20475.95 (ppm)
Ca	41247.82 (ppm)
Ti	0.00 (ppm)
Mn	625.85 (ppm)
Fe	26497.94 (ppm)
Co	7584.39 (ppm)
Ni	105.29 (ppm)
Cu	30.91 (ppm)
Zn	27.80 (ppm)
Ga	22.82 (ppm)
As	158.72 (ppm)
Rb	275.59 (ppm)
Sr	89.44 (ppm)
Y	12.32 (ppm)
Zr	256.25 (ppm)
Sn	34.48 (ppm)
Be	1171.63 (ppm)
Pb	12.07 (ppm)
O	582374.25 (ppm)

Antiquities Identification

Case Log-in, please Call : +886-3-611-6678 (TW)

- Business Window ext.3821 sales@ma-tek.com
- Technical Window ext.3960 xps@ma-tek.com

You are highly welcome to use **Fedex** (Account No.2665-9953-6), **DHL** (Account No.968368648) or **UPS** services for sample shipping. MA-tek will pay the courier charge upon sample arrival.