

Counterfeit Component Photographic Poster Guide

The 28 page colour poster guide is available at ASKbobwillis.com and was originally produced to accompany the "Practical Failure Analysis Workshops" run jointly with ITRI in St Albans. The photographic guide is ideal as a reference source to reduce the impact of counterfeit components on your organisation and is provided as an Acrobat pdf file. The individual sheets can be printed as A4 for bench top reference or as A3 colour posters for reference at goods receipt inspection. Each page features three images illustrating points to examine or steps in the inspection process. Currently the guide features 18 individual pages for on site printing and display.

A practical onsite Counterfeit Components Workshop is also available to train staff on testing and identification of counterfeit parts, which is becoming a significant threat to the reliability and profitability of the electronics industry. The colour guide covers many of the following topics

- Optical Inspection
- Solvent Testing
- Lead Inspection
- Component Packaging & Labelling
- Marking Durability
- X-Ray Analysis
- XRF Inspection
- Encapsulation



A copy of the guide is available at £45 plus VAT and provided for on site printing and display from a pdf file. To order a copy simply complete the following and fax your order to **(+44) 01245 496123**

Company VAT number (for EEC countries outside the UK) _____

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Conformal Coating Photographic Poster Guide

The 10 page colour poster guide is available at ASKbobwillis.com and was originally produced to accompany our workshops run jointly with ITRI in St Albans, England. The photographic guide is ideal as a reference source for operators, inspection and training departments in your organisation and is provided as an Acrobat pdf file. The individual sheets can be printed as A4 for bench top reference or as A3 colour posters for reference in manufacture. Alternatively they can be viewed on a PC with each page featuring three images illustrating points to examine or steps in the inspection process. Currently the guide features 10 individual pages for on site printing and display.

A practical onsite workshop is also available to train staff on inspection of coatings. A photo CD-ROM album featuring over 150 colour images is available to allow engineers to create your own training material, PowerPoint files, process documents and standards is also available for purchase. The colour poster guide covers many of the following topics:

Surface Corrosion	Solder Balls	Coating Runs
Through Hole Penetration	Vesication	Fish Eye Bubbles
Bubbles	Spitting	Bug Eye Bubbles
Delamination	Contamination	Surface Fibers
Excessive Coating	Finger Prints	Rework Over Spray
Insufficient Coating Thickness	Surface De-wetting	Conformal Coating Brush Hairs
Thickness Variation	Blistering	Surface dendrites
Coating Skips	Cracked Coating	Hand Brushing Debris
Masking Residues	Shadowing	

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Conformal Coating Applications, Inspection, Rework & Quality Control Workshop Bob Willis ASKbobwillis.com

Workshop Introduction:

The use of Conformal coating has provided benefits to industry for many years either in the high reliability market sector or where products have to deal with extreme environmental conditions or simply in use in consumer applications. The use of coatings is seen in different industries like telecommunications, automotive and consumer products have benefited from the use of selective coating but for different reasons.

This workshop will provide a simple guide to the use of coatings, their application and process, product benefits, inspection and quality control. A practical session will also allow delegates to examine coated boards using different materials and inspect the coating application.

Each delegate will also receive a **FREE** set of colour Inspection Wall Charts covering coating application and common defects to use on their manufacturing shop floor. During each workshop there are opportunities to win some of Bobs interactive CD ROMs for best questions of the session.

Who should attend?

This workshop is designed for design, process and quality engineers responsible for introducing coating materials, inspection or auditing presented is extremely visual and practical making it ideal for manufacturing staff, like all the instructors workshops it not just theory, it's a "How to Do It Session"

Workshop Topics Included:

- Why Conformal Coat
- Clean or No Clean
- Coating Material Options
- Coating Process Options
- Cost of coating assemblies
- SIR and cleanliness testing
- Cleanliness testing methods
- Reliability of Coating
- Testing & Evaluation of Coatings
- Correct design for coating
- Masking options and methods
- Inspection & Quality Control of Coating
- In-house or Contracting Services
- Inspection of coatings & methods
- Rework & repair of board assemblies



For further details and to arrange an on site workshop email Bob Willis at bob@ASKbobwillis.com

Counterfeit Component - Causes and Cures Workshop

Bob Willis ASKbobwillis.com

Workshop Introduction:

Quality, purchasing, design and production engineers need to review the growing commercial and technical issues surrounding counterfeit electronic components. They can look right, solder to the PCB but just fail to function. A typical first assumption by test engineering, it's a component failed due to the assembly process, but it's what's inside the package that counts, sometimes it's nothing at all.

Rather than making complicated copies of parts the simplest thing is to remark the packaging or the component body. Remarking the packaging is simple and quick, provided the component identification is not checked all the parts would be placed and soldered to the board before the problem was identified. AOI should find incorrectly marked or variations on the parts but the level of sophistication in marking is now becoming very sophisticated.

The workshop will not only illustrate the problems raised by counterfeit components within the electronics industry but it will also show you some of the different test methods that can be used to confirm the integrity of the components. Failure analysis techniques are now frequently being used to see if components are what they say they are rather than finding failure modes. Regular workshops with ITRI innovation in the UK show that counterfeiting is on the increase, we can find them, there is no hiding place!

Who should attend?

This workshop is designed for design, process and quality engineers responsible for introducing products containing LGA/QFN. Much of the material presented is extremely visual and practical making it ideal for manufacturing staff, like all the instructors workshops it not just theory, it's a **"How to Do It Session"**

Workshop Topics Included:

- Component trends in industry
- Counterfeit Avoidance strategy
- Component Identification Checksheet
- Component obsolescence
- Impact of lead-free on component availability
- Typical examples of component counterfeits
- Guidelines on reducing the possibility of counterfeits
- The different types of counterfeit
- Mechanical testing component packaging
 - Destructive and non-destructive
- Electrical testing of components
- Visual & microscopic inspection
- Solvent testing
- XRF techniques
- X-ray inspection of passive and active parts
- Practical examples of counterfeit components found
- Using Free On Line Defect Database

For further details and to arrange an on site workshop email Bob Willis at bob@ASKbobwillis.com