



5 North Park Drive
Hunt Valley, MD 21030

TRACE LABORATORIES-EAST

Military Spotlight

UPDATE ON MILITARY QUALIFICATION AND CONFORMANCE of PRINTED CIRCUIT BOARD AND CONFORMAL COATING PRODUCTS

Rev. September 2005

Important DSCC News

MIL-PRF-55110G

A draft revision G of MIL-PRF-55110 is available for review and comment through DSCC's website (www.dscclia.mil).

Non - QPL / QML 55110/50884/31032 Testing

To eliminate the possibility of purchasing printed circuit boards produced by a non-QPL/QML listed company, DSCC is proposing mandating that all qualification and retention reports include the manufacturer's qualification number. This qualification number will be required with each Group B submission. If the board manufacturer is not a military-approved company, the test report shall state "Not Qualified" on the front cover.

MIL-PRF-55110 Rework Simulation and Via Holes

Trace has recognized a trend in submission of rework coupons with via holes for Group B testing. DSCC's position is that all of the group B testing (if possible) must be completed on a monthly basis. There may be instances where the most complex lot contains surface mount technology, only. In this case, DSCC expects the manufacturer to submit additional coupons from that particular production month from the next most complex design that has component holes.

Below is a brief summary of the design standards for the A coupon:

- IPC-D-275 (Sep 1991) states that the smallest component hole be used.
- IPC-2221 (Feb 1998) states that that the smallest solder coated hole be used.
- IPC-2221 Amendment 1 (Jan 2000) states that the largest component hole be used.
- IPC-2211A (May 2003) states that the largest component hole be used.
- Note: The above hole sizes must be able to fit on a 0.001 inch grid

Therefore, the only time the A coupon would have via holes is if the manufacturer is using IPC-2221 (Feb 1998) or if it was surface mount only. MIL-PRF-55110F Amendment 1 (Nov 1998) did not add the IPC-2221 design standard because of this. They have only started allowing manufactures to use IPC-2221 because it was revised to use a component hole.

Trace Tips

Tour your testing Laboratory. It is important to see what your lab is doing and to become familiar with what they have to offer and the surroundings in which your testing is being performed.



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Remember to submit your ANNUAL Group B testing to maintain MIL-I-46058 qualification. DSCC has notified several conformal coating suppliers regarding failure to meet this requirement.

Remember to submit your ANNUAL Group B reports (55110/50884/31032) to DSCC to maintain your qualification.

PCB Qualification Packet Available. Please contact us if you are interested in a military qualification packet or if you require information regarding upgrading to MIL-PRF-31032 qualification.

Meet Your Military Testing Team



Renee Michalkiewicz
Laboratory Director

Renee has been with Trace for ten years. Renee oversees printed circuit board and printed circuit board material (paste, flux, solder mask, conformal coating) qualification and testing, environmental testing, process validation (Cleanliness, SIR, MIR, ECM and CAF), and training and consultation. She chairs the IPC J-STD-004 Flux committee and the Ionic Conductivity Task Group and is a contributing member to many other committees across the industry.



Debora Obitz
Senior Engineer

Debby has been with Trace for twenty years. Her technical responsibilities include commercial and military conformal coating and printed circuit board qualification and retention testing, leading various training seminars including our formal IPC-A-600 course, and testing of solder masks. Her military expertise includes the MIL-I-46058 and MIL-A-28870 documents. Debby co-chairs the IPC Cleaning and Coating and the IPC-CC-830 Conformal Coating Committees and is a contributing member of many others.



Mia Heefner
Senior Engineer

Mia has been with Trace for nineteen years. Her technical responsibilities include military and commercial printed circuit board qualification and retention testing and leading various training seminars. Her military expertise includes the MIL-PRF-55110, MIL-P-50884 and MIL-PRF-31032 documents.

For more information concerning these topics or any other testing needs, please contact Renee Michalkiewicz at (410) 584-9099 or rmichalkiewicz@tracelabs.com. Visit us on the web at www.tracelabs.com/east.aspx.

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