



August 2012 Newsletter

[DfR Published in Auto Electronics](#) | [DfR Joins AEC](#)

Best of the Best, Part II

As introduced in our July newsletter, DfR is turning back the clock (only slightly) and bringing you the most popular and widely read articles in our newsletter from all time. Read them for the first time or read them again. Hope you enjoy!

0201 and 01005 Parts: It's a Small World After All!

Introduced over 10 years ago, very small chip components (0201 and 01005) have proliferated throughout the industry. Or have they? In this [ground-breaking industry wide survey](#), DfR demonstrates that implementation of very small passives has been limited and provides insight on how the majority of OEMs are cautious on this potentially unproven technology (especially for capacitors). For more information on the risks, rewards and how to successfully implement 0201, contact [Cheryl Tulkoff](#).

The Five Do's and Don'ts of EMI/EMC

Speaking of good design, do EMI/EMC issues have you ready to explode? Plan ahead with good design practices using these [top five rules](#) of EMI/EMC design, provided to us by our partner facility, [MET Labs](#). For additional assistance on EMI/EMC, contact [Ron Wunderlich](#).

Keep It Tight: Understanding Hermeticity

Read Craig Hillman's column in the August issue of [Global SMT and Packaging](#) (you will need to register) to learn the basics of hermeticity and understanding the reality of the specifications and tests that are performed to ensure hermetic devices. For more information on how to select and qualify the right hermetic packages, contact [Gregg Kittlesen](#).

It's Raining, It's Pouring

Moisture is one of the most challenging environments for electronics. OEMs constantly struggle on how to pick the right test to qualify their products. In one of the only [comprehensive overviews](#) ever published, DfR

Sherlock

[Automated Design Analysis™](#)



In This Issue

[Small Part Survey](#)
[EMI/EMC](#)
[Understanding Hermeticity](#)
[Moisture Challenges](#)
[PoP Challenges](#)
[Dilbert on the Mark](#)
[Upcoming Events](#)



2012 Medical Electronics Symposium
September 26-27, 2012
Arizona State University, Tempe Campus

MEPTEC and SMTA are again partnering to present a two-day [Medical Electronics Symposium](#) which will cover a broad spectrum of topics highlighting innovative technologies and related issues in medical electronic applications and devices.

Solutions provides clear guidance on how to perform moisture testing, with key insight provided on temperature/humidity, cyclic humidity, and water spray testing. For more information, contact [Ed Dodd](#).

PoP! Goes the Package

The need for innovative packaging to maintain Moore's Law has become increasingly necessary and Package on Package (PoP) has become a [popular solution](#). While there are numerous advantages to PoP, including higher densities and yields, few are aware of PoP's limitations. In our insightful [white paper](#), DfR details some of the advantages and challenges of this wrinkle in 3D packaging. For more information, contact [Petri Savolainen](#).

Dilbert on the Mark

A [sign](#) that it is time to hire a new Director of Quality....

DfR News

Auto Electronics Article

Jim McLeish recently had an article published in Auto Electronics. [Physics of Failure Durability Simulations Accelerate Development and Improve Reliability and Safety of Automotive Electronics](#) highlighted the increasing trend of using state-of-the-art modeling and simulation tools to reduce or eliminate lengthy and costly design verification (DV) and product validation (PV) testing. For more information on this opportunity to accelerate time to market, contact Jim McLeish.

DfR Solutions Invited to Join Automotive Electronics Council (AEC)

DfR Solutions is proud to announce its membership in the [Automotive Electronics Council](#) (AEC). This industry-leading organization is one of the only technical bodies that is developing solutions for high quality, high reliability electronic components from the OEM perspective. For more information on DfR's engagement with the automotive industry, contact Jim McLeish.

Printed Circuit Boards-Always a Critical Commodity

Be on the lookout for this exciting article in Circuits Assembly's September issue. For more information on qualifying and controlling the PCB supply chain, contact [Cheryl Tulkoff](#).

Upcoming Events



Design and testing services for IC, ASIC, PCB and MEMS. Sensing Machines provides engineering consulting services to transition your ideas from concept to hardware. We help small and large companies perform R&D as well as bring products to market. Visit our [website](#) or send an [email](#) for an overview of our capabilities.

Google Calendar

Look for DfR at upcoming events, conferences, webinars, and sales visits that may be in your area on our new [link to Google Calendar](#). For more information on a specific activity, please contact [June Caswell](#).

University of Arkansas EpsCor Meeting (Fayetteville, AR: August 12-15)

[Greg Caswell](#) is on the Advisory Board for the (Generating Renewable Energy with Efficient Nanoplasmonic Solar Cells, GREEN); and smart energy grid research (Vertically Integrated Center for Transformative Energy Research, VICTER) projects. If you would like to meet with Greg while he is in your area please contact [June Caswell](#).

DfR in Bay Area (San Francisco, CA: August 14-17)

[Gregg Kittlesen](#) will be visiting customers and clients in the Bay Area and is available to have technical discussions on optoelectronics, component qualification, foundry qualification, and the use of Sherlock to accelerate time to market. If you would like Dr. Kittlesen to visit your facility, please contact [June Caswell](#).

CORPE Workshop (Aalborg, Denmark: August 21)

[Petri Savolainen](#) will be giving a presentation on the successful reliability modeling and simulation of power supply electronics. For more information, please contact [Petri Savolainen](#).

DMSMS (New Orleans, LA: August 27-30)

[Walt Tomczykowski](#) will be attending this key conference as the lead for System Supportability. Walt will have time to visit with customers at the conference. To arrange a time to meet with Walt, contact [June Caswell](#).

IMAPS Nordic (Denmark: September 2-4)

[Petri Savolainen](#) will be presenting two papers at this conference. The first will be on "Harsh Environments and Electronics" and the 2nd will be on "Predicting the Reliability of Zero Level TSVs" at this local event. For more information please contact [Petri Savolainen](#).

DfR in Australia (September 2-17)

[Craig Hillman](#) will be visiting companies and clients in Sydney, Australia, and is available to discuss a wide range of topics, including system-level reliability assurance, reliability management, and customer satisfaction. If you are interested in having Craig visit your facility, contact [June Caswell](#).

IMAPS Symposium (San Diego, CA: September 9-13)

[Greg Caswell](#) will be teaching a ½ day course on "Understanding Failure

and Root Cause Analysis in Pb-free Electronics" and will be presenting a paper on "Predicting the Reliability of Zero Level TSVs" at the symposium. For more information, or to arrange a meeting with Greg at the symposium, contact [Greg Caswell](#).

DfR in Southern California (San Diego, CA: September 10-13)

[Greg Caswell](#) will be visiting customers in the San Diego area. He will be available to discuss, Pb-free issues, circuit board materials, DfM, and DfR's Sherlock software. If you would like to have Greg visit please contact [June Caswell](#).

Solar Power International (Orlando, FL: September 11)

[Cheryl Tulkoff](#) will be presenting "Reliability Modeling of Electronics for Solar Inverters" at the SPI Conference. For more information or to arrange a meeting with Cheryl at the Conference, please contact [Cheryl](#) or [June Caswell](#).

MET Labs (Baltimore, MD: September 13)

[Ed Dodd](#) will be presenting on ISO-26262 and its impact on the reliability and safety of automotive electronics. For more information or to register for the meeting please contact [Ed Dodd](#).

ESTC Conference (Amsterdam, Netherlands: September 16-19)

[Petri Savolainen](#) will be attending this conference. If you would like to meet with Petri at the conference, please contact either [Petri](#) or [June Caswell](#).

DfR Solutions in Benelux Area (September 16-19)

[Petri Savolainen](#) will be visiting companies in the Belgium and the Netherlands. If you would like to arrange for Petri to visit your company and make a presentation there, contact either [Petri](#) or [June Caswell](#).

DfR in New England (September 17-21)

[Nathan Blattau](#) and [Ed Dodd](#) will be visiting companies and clients throughout the New England area and will be available to discuss a wide range of topics, including failure analysis, simulation and modeling, and component selection. For more information or to arrange a visit to your facility, please contact [June Caswell](#).

Design East 2012 (Boston, MA: September 19)

[Nathan Blattau](#) will be presenting on Common Hardware Mistakes by Embedded System Designers. For more information on this presentation, please contact [Nathan Blattau](#).

Darnell's Power Forum (San Jose, CA: September 19-21)

[Craig Hillman](#) will be making a presentation entitled "Using Physics and Industry Best Practices to Predict the Lifetime of LED Power Supplies" at this special conference on Power Electronics.

DfR Solutions in Bay Area (Northern CA: September 24-26)

[Ed Dodd](#) will be visiting companies in the Bay Area. If you would like to arrange a visit to your facility contact [June Caswell](#).

PCB West (San Francisco, CA: September 25)

DfR Solutions will have a booth at this important conference. Visit with [Ed Dodd](#) while at the conference or, if you would like us to visit your facility, please contact [June Caswell](#).

DfR in Arizona (September 25-28)

[Randy Schueller](#) will be visiting companies and clients in the Phoenix and Tuscon areas and will be available to discuss a wide range of topics, including copper wire bonds, electronic materials, PCB manufacturing and failure modes, and best practices in component selection. For more information or to arrange a visit to your facility, please contact [June Caswell](#).

MEPTEC / SMTA Medical Electronics Conference (Tempe, AZ: September 26-27)

[Randy Schueller](#) will be making a presentation entitled "Leveraging Existing Market Knowledge to Ensure a Successful Transition to Pb-free," at this conference. For more information contact Randy Schueller. For arranging a visit to your company while Randy is in the area, contact [June Caswell](#).

Webtorial - 25 Year Life Solar (Virtual: September 27)

[Cheryl Tulkoff](#) and [Greg Caswell](#) will be presenting this webinar on solar life issues. For more information or to register please contact [Cheryl Tulkoff](#).

SMTAI Conference (Orlando, FL: October 14)

[Cheryl Tulkoff](#) will be teaching two courses at SMTAI this year. Pad Cratering-Prevention, Mitigation and Detection Strategies will be presented on the morning of Monday, October 15. A New and Better Approach to Tin Whisker Mitigation will be presented the afternoon of Monday, October 15. In addition, [Randy Schueller](#) will be making a presentation entitled "Reliability of Copper Wire Bonding." For more information, please contact [Cheryl Tulkoff](#) or [Randy Schueller](#).

DfR in Central Florida (October 15-18)

[Cheryl Tulkoff](#) and [Randy Schueller](#) will be visiting companies and clients in the Tampa, Orlando, and Space Coast areas and will be available to discuss pretty much everything. For more information or to arrange a visit to your facility, please contact [June Caswell](#).

Webinar – What Can Sherlock Do for You? CAF (October 22)

[Craig Hillman](#) will be presenting this enlightening webinar on how DfR's Sherlock software can help reduce the potential for CAF failures in your circuit board designs. For more information please contact [Craig Hillman](#).

NDIA Conference (San Diego, CA: October 22-25)

[Walt Tomczykowski](#) will be attending the NDIA event. If you would like to arrange a meeting with Walt at the conference, contact [June Caswell](#).

DfR Solutions in Detroit (Detroit, MI: October 22-26)

[Ed Dodd](#) will be visiting companies in the Detroit area. If you would like to arrange a visit to your facility contact [June Caswell](#).

NEBS Conference (Las Vegas, NV: October 23-24)

DfR will be attending this critical conference on qualifying product for the Verizon supply chain. If you would like to meet with us during the conference, please contact [June Caswell](#).

Automotive Test Expo (Detroit, MI: October 23-25)

[Jim McLeish](#) and [Tom O'Connor](#) will be manning the DfR booth at this event. Please stop by and see what DfR is up to with respect to automotive reliability. For more information or to arrange a meeting with Jim and Tom please contact [June Caswell](#).

DfR in New England (November 5-9)

[Craig Hillman](#) will be visiting companies and clients throughout the New England area and will be available to discuss a wide range of topics, including failure analysis, simulation and modeling, and component selection. For more information or to arrange a visit to your facility, please contact [June Caswell](#).

IPC Medical Sector Conference (Andover, MA: November 6-8)

At this ground-breaking conference, [Craig Hillman](#) will speak on the upcoming challenges of RoHS and Medical Devices. For more information, please contact [Craig Hillman](#).

Webinar - What Can Sherlock Do For You/DFMEA (November 8)

[Jim McLeish](#) will be presenting this webinar on how DfR's Sherlock software can now help to significantly reduce the time it takes to perform

a formal DFMEA. For more information on this webinar please contact [Jim McLeish](#).

International Symposium for Testing and Failure

Analysis (Phoenix, AZ: November 11-15)

[Greg Caswell](#) will be making a presentation entitled "Counterfeit Detection: When to do it? How to do It?" at the ISTFA conference. For more information or to meet with Greg at the Conference please contact [Greg Caswell](#).

DfR in Arizona (November 11-15)

[Greg Caswell](#) will be visiting companies and clients in the Phoenix and Tuscon areas and will be available to discuss a wide range of topics, including through silicon vias, MEMS technology and best practices in MCM and electronic assembly manufacturing. For more information or to arrange a visit to your facility, please contact [June Caswell](#).

DfR in Chicago (November 12-16)

[Craig Hillman](#) will be visiting companies and clients throughout the Chicago area and will be available to discuss a wide range of topics, including failure analysis, simulation and modeling, and component selection. For more information or to arrange a visit to your facility, please contact [June Caswell](#).

IPC SMTA Cleaning and Conformal Coating Conference (Chicago, IL: November 13-15)

Don't miss a technical session for the ages. DfR Solutions has put together all the heavyweights of nanocoating technology into one room, including Ross Technology, Semblant, P2I, GVD, and HzO. Watch in awe as they throw down the gauntlet to see whose technology deserves to be called 'Best of the Best.' Who will come out the winner? You decide, but only if you are there! For more information, contact [Craig Hillman](#).

DfR Solutions in The Netherlands (November 20-23)

[Greg Caswell](#) will be making customer visits while in the Netherlands. If you would like for Greg to visit your facility please contact [June Caswell](#).

European Center for Power Electronics Workshop (ECPE) (The Netherlands: November 21-22)

[Greg Caswell](#) will be making a presentation entitled "Automating Lifetime Simulation of Power PCBs." For more information or to meet with Greg at the workshop, please contact [Greg Caswell](#).

Defense Manufacturing Conference (Orlando, FL: November 26-

29)

[Walt Tomczykowski](#) will be attending this conference. If you would like to arrange a meeting with Walt or have him visit your nearby facility please contact [June Caswell](#).

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