

Fall

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DLS News & Views

To help keep you better informed

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Save MoneyShorten your compliance testing time
by learning how to design for EMC

We just wanted to let you know that we are finding a big difference in compliance testing costs between designers who understand EMC principles and those who don't. Learning how to design your product so that it complies with EMC regulations can save you from having a product that fails during its regulatory compliance testing. Re-designing or adding fixes to a failed product can be expensive and time consuming. (See Don's blog post about helping Fred overcome his compliance testing difficulties at dlsemc.com/cost-savings). By taking an *EMC by Your Design Seminar*, you will learn the fundamentals of electromagnetic compatibility, including understanding the many EMC regulatory requirements such as FCC, CE, US Military, RTCA-DO-160 and those of most foreign countries. You will learn the methodology of how to minimize EMC problems, starting with the design process through final testing and approval, all of which will be brought to life through hands-on practical application to real life products.

This newly updated curriculum was developed by Donald L. Sweeney and his associates. It includes how an electronic circuit becomes a radio transmitter, how the physics of even the simplest devices such as capacitors, inductors and shielding can help or hinder compliance and how to control the design to minimize emissions. Students will be led step-by-step through sample calculations, be introduced to take-home proprietary software and be led through trouble shooting a product that does not meet the requirements. Additionally, attendees will be offered an exclusive, hands-on personal consultation with the instructor or a member of his technical staff to apply what has been learned to their specific product, possibly saving tens or hundreds of thousands of dollars in reduced testing, reduced time to market and reduced final product cost. Also included will be a guided tour of the largest independent EMC and Product Safety facility in North America.

EMC by Your Design
An EMC Practical Applications Seminar and Workshop

Tues. Oct. 23 – Thurs. Oct 25, 2012
Hilton Hotel, Northbrook, IL

847-537-6400

www.dlsemc.com/emcseminar

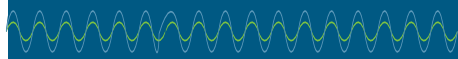
\$300 discount if register by October 2
Free 45-min Design Evaluation of your product Oct. 26

Sand & Dust Testing



Today's global deployment of electric and electronic equipment used to support military and avionics related activities has resulted in expanded environmental testing requirements for blowing sand and dust compliance. To support these requirements, D.L.S. has upgraded their environmental testing capabilities for MIL-STD-810 G, Method 510 and RTCA DO-160 G, Sec 12 for Sand and Dust Exposure. Large products can be accommodated by D.L.S.'s state of the art equipment.

RTCA DO-160 G testing capabilities include Category D and Category S. MIL-STD-810 G, Method 510.5 capabilities include both procedure 1 and procedure 2. For more details on all D.L.S. environmental testing, contact Barbara Inguagiato, at barbi@dlsemc.com.



Medical Device 3rd Edition Transitional Analysis

D.L.S. is offering a new transitional analysis program with respect to the new 3rd edition update of the IEC 60601 requirements for compliance. This program provides a detailed review of testing previously performed to determine if it shows compliance to the new update. This comprehensive review involves not only previous test results, but the methodology and monitoring requirements when compared to a current ISO 14971 risk assessment. This program involves any previous testing, regardless of the performing testing laboratory or the dates when the tests were performed. Ensure your medical devices meet all the conditions for compliance to these new updated standards. Also see the RoHS medical requirements on page 3.

Page 2

regulatory requirements **UPDATE**

ITE Canadian ICES-003 Update *by Bill Stumpf*

We recently received a draft for comment of a proposed revision to ICES-003 Issue 5. This anticipated version would replace ICES-003 Issue 4 on December 12, 2012, until which time either Issue 4 or Issue 5 compliance would be accepted. The changes proposed in the draft version of the standard are extensive and there are too many to include here, but I will summarize those that would be sure to affect almost everyone marketing Information Technology Equipment in Canada. Keep in mind, however, that if you meet the FCC requirements for ITE you also meet the IC Canadian Requirements.

First, the name of the standard would change from ICES-003 Digital Apparatus to ICES-003 Information Technology Equipment (ITE). Also, the EMCAB-3 guidance document has been merged into ICES-003, which effectively would make the standard more comprehensive.

ICES-003 now would include its own limit tables for radiated and AC Power Line conducted emissions. Additional changes to the technical requirements include allowance to use either compliance to the limits in CAN/CSA-CISPR 22-10 using the test methods of CAN/CSA-CISPR 22-10, or to the limits in ICES-003 Issue 5 using the test methods of ANSI C63.4. No intermixing of the limits or test methods is allowed. Of note is that the reference to C63.4 is to the "latest published edition", which would allow for updates to applicable test methods following future ANSI C63.4 publications. Limits and test methods are added for measurement of emissions above 1GHz.

Test sites would now have to comply with the requirements in CISPR 16-1-4:2007 referenced in CAN/CSA-CISPR 22-10 or with ANSI C63.4 depending on which test method was followed. Most importantly this requirement includes test site conditions for measurements made at frequencies above 1GHz.



Testing ITE Equipment for ICES-003

Also of significance is that the labeling requirements for ITE would change with the implementation of this standard.

Stay tuned or write to bstumpf@dlsemc.com for any updates or for more information regarding this standard and how it may affect your marketing of ITE in Canada.

Canadian IC Receiver Standards Updated

In January 2012 the Industry Canada regulatory standards regarding stand-alone receivers operating in the 30 to 960 MHz band was changed. A 30 to 960 MHz receiver not housed together with a transmitter to form a transceiver had been subject to the Industry Canada certification procedure and was required to have its own IC ID number on the label. This is no longer the case. Stand-alone receivers in this operating range will still need to operate within the limits for receiver spurious emissions set out in RSS-Gen Issue 3. However, they are no longer required to apply for an IC certificate. Please note that the labeling requirement for these devices has been changed.

Also, similar to the regulations enforced by the FCC, Industry Canada now excludes stand-alone receivers operating outside the 30 to 960 MHz band from the IC certification, testing, labeling and reporting requirements. Please reference Industry Canada Notice 2012-DRS0126.

Call 847-537-6400 or contact Bill Stumpf at bstumpf@dlsemc.com for questions regarding this or other Industry Canada standards.

Qi Compliance (Wireless Charging) Testing Combina- tion Discount Program

D.L.S. is offering, for a limited time, a 10% discount for compliance testing of Qi devices when combined with other compliance certification programs, such as FCC, UL, and CE Mark.

D.L.S. offers a comprehensive compliance program for wireless charging devices, including
Continued on next page

Qi Testing Continued

Qi Standard Testing, as established by the Wireless Power Consortium (WPC). The Qi Mark is the only testing program that guarantees 100% compliance with all WPC requirements. As a member of the Wireless Power Consortium, D.L.S. Conformity Assessment complies with the WPC regulations for testing and certification, and is intimately involved with the development of wireless power and charging standards.

In addition to Qi approval, D.L.S. also offers global device certifications, including FCC, IC, CE, UL, cUL and other global compliance requirements. This makes it a true one stop shop for the most efficient and streamlined compliance package for wireless charging and power equipment requirements.

In addition to being a formally certified Qi testing laboratory, D.L.S. is a UL certified testing laboratory, as well as FCC and IC recognized, and an EU notified body.

For more information about the Qi program, and the ability to combine other global certifications into a seamless package, and to receive your 10% discount, please contact Jack Black, Qi Market Development Manager, at 1-847-537-6400.

How the New RoHS 2 Directive affects you and your company

by Donald L. Sweeney

Saying that RoHS affects you and your company seems to be a rather bold statement, but while preparing the following article on RoHS and studying the wording of the RoHS 2 Directive, I have come to the conclusion there is something in it for just about everyone involved in marketing products in the European Union (EU).

First, what is the RoHS 2 Directive? In the EU, the RoHS Directive restricts the use of hazardous substances in products, specifically lead, cadmium, mercury, hexavalent chromium, PBB and PBDE.

The RoHS 2 Directive also expands the required information manufacturers must





DLS
CONFORMITY ASSESSMENT, INC.

QI CERTIFICATE

DLS-XXXXXXXX

Herewith declares **D.L.S. Conformity Assessment, Inc.**, appointed as Qi Compliance Test Laboratory by the Wireless Power Consortium, located at:
1250 Peterson Drive, Wheeling, Illinois, United States of America

Wireless Power Transmitter
Model xyz

Member Name
Address
Postal and City
Country

Compliance Test Specifications:
System Description Wireless Power Transfer
Volume 1: Low power
Part 3: Compliance Testing
Version 1.0.3 (*addenda)
September 2011

Compliance Report:

Interoperability Test Specifications:
Qi Interoperability Test Specification
Version: v1.01
December 2012

Interoperability Report:

Remarks:

Alex Mishinger
Product Safety Engineer
Wheeling, Illinois

supply with their products. I was first involved with this when in the early 90's I attended a meeting on the EMC Directive in Brussels. We discussed in length what kind of information should be required to accompany a product to market. Unfortunately, the promised summary and minutes of this meeting never appeared and I was never able to find out why. From the time I returned to the States, I began recommending that manufacturers supply information with their products describing what they did to comply, who is responsible, etc.

When the 2008 EMC directive was published, I was glad to see it stated what I had been advocating for years. Now with the 2011 RoHS 2 Directive, I am seeing the information requirements being expanded further to what has always made sense to me and what I always believed to be necessary.

Following are a few excerpts from the 2011 directive that need to be pointed out, as some were never required before:

Your finished product must display the CE mark as well as the manufacturer's name, trademark, and type/batch/serial number (to facilitate recalls). Remember, putting the CE marking on a product implies you have met every directive/requirement covering

your product. One should always remember to combine all requirements from all directives in an "AND" statement with the more stringent requirements superseding any less stringent ones.

The EC declaration of conformity is more rigorous. It must accompany the finished product, must contain elements listed in Annex VI, and must be in the language of the local market if required by the member state. I recommend having the DoC in each language where your product might be sold.

The importer and/or distributor is also considered a manufacturer (Article 11). From this I would expect the manufacturer, the distributor, and the importer to be legally responsible for compliance and all three would therefore sign the declaration(s) of conformity.

Manufacturers must demonstrate compliance per Decision 768/2008/EC, Annex II by maintaining technical documentation, citing relevant harmonized standards, implementing internal production controls, and keeping a register of non-conforming products. This is found under Module A.

The following products were not formerly covered by the original RoHS: Continued on next page

D.L.S. Electronic Systems, Inc
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Wheeling, IL 60090
847-537-6400 www.dlsemc.com

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INSIDE

Ways to save on
compliance testing

10% discount on
Qi Compliance Testing

\$300 discount for EMC
Design Seminar

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RoHS Continued from page 3

Medical devices (Category 8 equipment) effective July 22, 2014. Please keep this in mind as you work toward meeting the 60601-1 third edition of the medical directive. You would not want to repeat the third edition work later when you are ready to do RoHS!

Monitoring & control instruments (Category 9 equipment) effective July 22, 2014.

Industrial monitoring & control instruments (Category 9 equipment) effective July 22, 2017.

Other electrical and electronic equipment not covered by any other categories (Category 11) effective July 22, 2019.

To meet the RoHS requirement you will need to:

1. Determine if your products contain any forbidden materials by checking: components, circuit boards, flame-retardants in plastics, solder (lead), metal treatments such as platings, etc.
2. Replace restricted materials found with substitutes.

3. Determine if any of the above changes have an effect on your product's EMC and Safety Compliance or any other requirements.

When meeting RoHS be aware that the following changes can affect both emissions and immunity:

1. Power Supplies – removing lead from the PCB's and components as well as possibly changing capacitors
2. Logic PCBs – Removing lead and PCBs
3. Changing your plating or coating on your metal cabinet
4. Relay Changes – Replacing mercury wetted relays with solid-state components

Please understand that each product is different and the specific legal requirements for your product must be decided by the manufacture, the importer and the distributor who sign the declaration of conformity.

Also, remember to include any precautions for the use of equipment in the language in which your product is sold.

Call D.L.S. at 847-537-6400 for more information or to have a PDF copy of the RoHS 2 Directive emailed to you.