



# EEE Parts Bulletin

March 2009  
Volume 1 Issue 2

ATPO, NEPAG & Section 514  
Jet Propulsion Laboratory

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## Microsemi Diode Issues

- JPL: Recently, testing of some flight boards revealed quality issues with Microsemi diode p/n JANTXV1n5531-CUR-1. Preliminary failure-analysis results indicate some parts had a mis-marked cathode end and failed a test on the curve tracer. Contact Michael Sadigursky x45573.
- MSFC: Marshall has found lead indentations on a lot of JANTXV1N6638 diodes. There are no failures to date on flight hardware. The concern is that indentations could weaken the leads causing breakage. This issue is being worked with Microsemi. Contact Shri Agarwal x45598.
- Microsemi has issued an amendment to a GIDEP problem advisory on JANS1N5806 axial lead attachment failure (WV9-P-09-01C). The amendment clarifies the latest status and includes a list of the affected lots if a customer wishes to return those devices. Contact Dorice Odell x31057.

## Xilinx Part Failure

Xilinx XQR2V3000CG717 failed during a sub-assembly vibration test. The failure was intermittent and attributed to resonance between two adjacent bond wires. Contact Ramin Roosta x47385.

## Updates - Part Issues

**Power MOSFETs:** In response to GIDEP #FV5-P-09-01 (operation in the linear area requires additional derating), slash sheets will have SOA (safe operating area) curves that include operation in the linear area. Contact Shri Agarwal x45598.

**New Technology Evaluation:** The new technology appendix for microcircuits, MIL-PRF-38535, Appendix H, has been re-written with numerous changes. It is on track for release by the end of calendar year 2009. Contact Shri Agarwal x45598.

**International Rectifier MOSFETs:** Flight parts lead times are up to 40 weeks. Order flight MOSFETs early. Contact Shri Agarwal x45598.



*Contact Us:**NEPAG:*

*Shri Agarwal*  
818-354-5598

[Shri.g.agarwal@jpl.nasa.gov](mailto:Shri.g.agarwal@jpl.nasa.gov)

*Lori Risse*

818-354-5131

[Lori.a.risse@jpl.nasa.gov](mailto:Lori.a.risse@jpl.nasa.gov)

*ATPO:*

*Chuck Barnes*  
818-354-4467

[Charles.e.barnes@jpl.nasa.gov](mailto:Charles.e.barnes@jpl.nasa.gov)

*Section 514:**Rob Menke*

818-393-7780

[Robert.j.menke@jpl.nasa.gov](mailto:Robert.j.menke@jpl.nasa.gov)

*Websites:*[ATPO](#)[514](#)

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*Previous Issues:*

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**Recent DSCC Audits supported for NASA by JPL specialists:**

**Connectors**

- Amphenol
- Deutsch

**Relays**

- Teledyne
- Leach

**PWBs**

- ISU Petasys Corp

Contact Shri Agarwal.

## Your Questions Answered

### **Can GIDEP alerts be linked to a reference in this publication?**

No, GIDEP alerts have restricted access. Contact Dorice Odell x31057.

**Can Failure Analysis reports be referenced here?** Future issues will list recent Failure Analysis reports. Contact Joan Westgate x49529.

**Can manufacturers ship life test microcircuits as flight parts without disclosure?** Yes, unless prohibited by the terms of the purchase order. MIL-PRF-38535 states that as long as the tests have proven to be non-destructive, the devices may be shipped on the contract or order provided *each* microcircuit subsequently passes final electrical tests in accordance with the applicable specification. Also, for steady-state life-test devices to be shipped, the manufacturer shall have data to support that the test is not destructive and *has not degraded* the device.

## Current NEPAG Activities

- JPL represents NASA on DSCC audits of manufacturers and their subcontractors for the following commodities: microcircuits, hybrids, passives, PWBs, and connectors. Contact Shri Agarwal x45598.
- NEPAG is working with DSCC on the next revision of the hybrid general specification, MIL-PRF-38534. Contact Shri Agarwal x45598 for status.
- NEPAG telecons are held every Wednesday. Contact Shri Agarwal x45598 if you would like any parts issues addressed on the telecon.
- For critical item shortage issues, contact Lori Risse x45131.
- Navy-Crane is leading an effort to update MIL-STD-217. Contact Shri Agarwal x45598 if you are interested.
- JPL is the responsible NASA center to review DSCC SMDs for microcircuits, hybrids and DC/DC converters. For details contact Shri Agarwal x45598.
- NESC DC/DC Converter Reliability Guideline Document was recently published. Go to <http://standards.nasa.gov> (account required). Search on DC/DC Converter in search box. Contact Linda Facto x42195.
- NEPAG DC/DC converter telecons are held on the first Wednesday of each month. For details contact Gary Bivins x31888.
- For information regarding counterfeit parts issues, contact Phil Zulueta x41566, or visit the [ATPO](#) website.