National Aeronautics and Space Administration

NASA

NEPP DC/DC Converter & Hybrid Working Group

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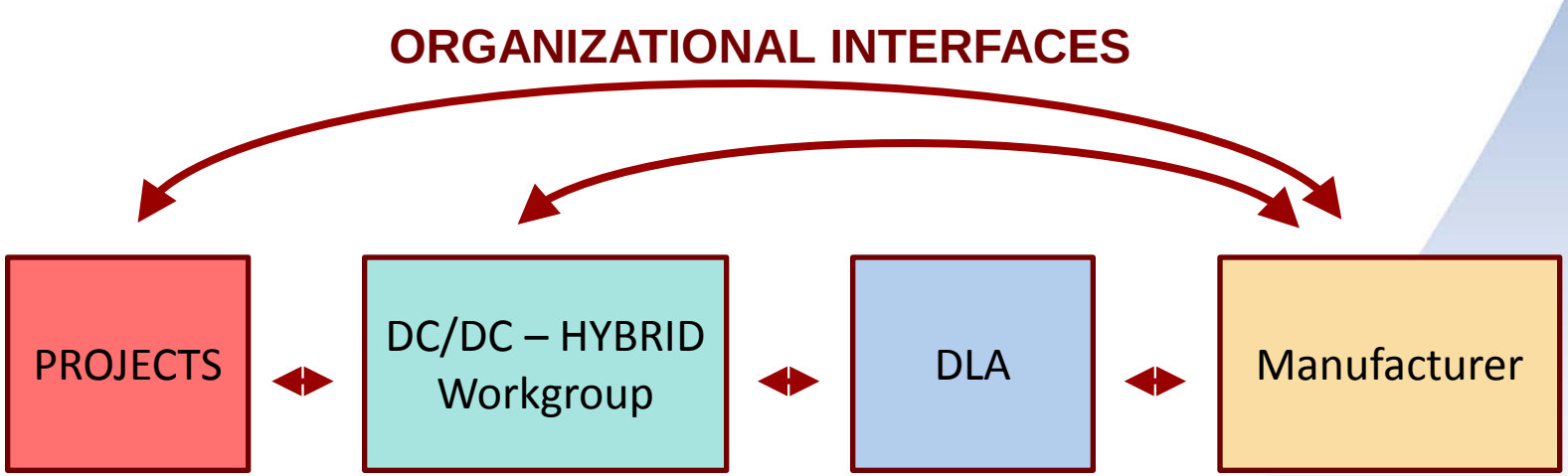
Key Points

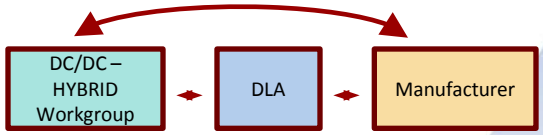
- **Mission:** To communicate information on key issues regarding the reliability of Hybrid Microcircuits & DC/DC Converters with specific emphasis on manufacturing, specifications & procurement.

- **Monthly Teleconferences**
  - First Wednesday of every month @ 1:00p.m. EST
  - Usual Attendees: NASA Centers, Aerospace Corporation, NAVSEA & DLA(L&M)



Key Points

- **General Topics**
  - Sharing of data on purchases, requirements, specifications (SMDs vs. SCDs)
    - Customizations by Centers and Product Performance Issues
    - Discussions on Failure Mechanisms, Purchase Lead time and delay issues
  - Sharing of information on failures, delays, GIDEPs, etc.
  - Updates from Defense Logistics Agency
    - Moves, Consolidations, New ownership
    - Alternate Methods



  - Attendance at JEDEC / G-12 Conferences (JC-13* Government Liaison)
    - Attend 13.5 Hybrid Working Group Meetings

* JC-13 is responsible for standardizing quality and reliability methodologies for solid state products used in military, space, and other environments requiring special-use condition capabilities beyond standard commercial practices. This includes long-term reliability and/or special screening requirements.

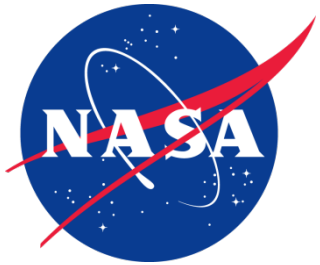
Key Points (cont'd)

- **General Topics**
  - Manufacturer Presentations – Existing & New Product Line Introductions
  - Radiation performance / Testing
  - Review of DLA Audits for certification / recertification of manufacturers and test facilities
  - Review of Specifications
    - MIL-PRF-38534, General Specification for Hybrid Microcircuits
    - MIL-STD-883, Test Method Standard for Microcircuits
    - Continuous Improvement efforts on existing Specifications
    - Enhance Quality Assurance Requirements for Space Application grades

Current & Future Actions

- **Audits**
  - 6 Class H & K Hybrid Audits since last year [NASA Representation]
    - Urgent audit of manufacturer experiencing issues
    - Under review during typical audit
      - Derating Plan / Stress Analysis
      - Failure Analysis (Customer returns)
      - Testing
    - Reports available on NASA SAS website
- **Military Specifications**
  - MIL-STD-883 TM 2017 (Internal Inspections – Hybrids)
  - Gen Spec for Hybrids (MIL-PRF-38534)
    - Draft of Rev J expected this fall
- **Boiler Plate SMD**
  - Standardize Data Testing Across Vendors

QUESTIONS / FEEDBACK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