



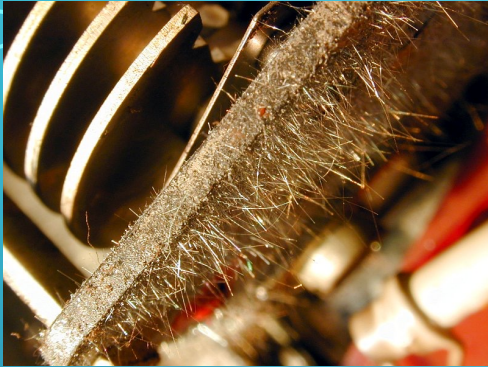
STRIKING A BALANCE BETWEEN COMPLIANCE AND RISK

26TH ANNUAL COMPONENTS FOR MILITARY & SPACE ELECTRONICS CONFERENCE & EXHIBITION

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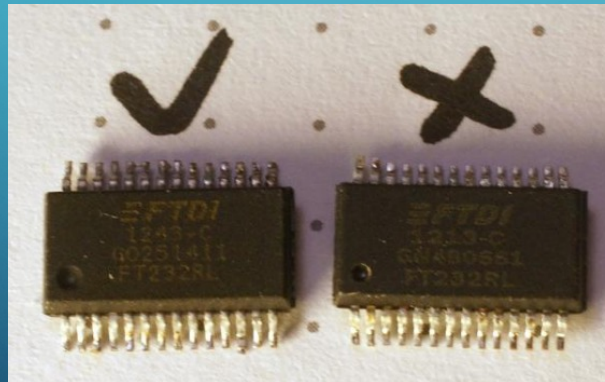
RECENT EVENTS IN THE ELECTRONICS WORLD



Tin Whiskers (WW2, then solved until 1990's => present)



Connector GIDEPs (2010's)



Counterfeit Parts (2000's => present)

NDA 889
Part B

NDA 889
Part A

Chinese Telecom Ban
(2017 => present)

SPEED VS COMPLIANCE

- The “Push” for Rapid Deployment
 - Innovation
 - Shorten development time, cut thru the bureaucracy
 - Take the RISK (Something in the operators hands is better than perfection in the lab)
- The “Pull” for Compliance
 - Prevent the things we did in the past that turned out bad
 - Consistency of systems being developed/deployed
 - Prevent the RISK (What is the RISK?)

A solution, or “Balance”, may lie in the RISK discussion and Mission Assurance/Quality

TWO EXTREME EXAMPLES OF COMPLIANCE-RISK BALANCE

- Post-Columbia – Keep the crew on ISS or unman until Shuttle returns to flight?
 - Focused discussion on RISK, not compliance
- Satellite Phone on Soyuz Flights
 - Focused discussion on control of the RISK





MISSION ASSURANCE/QUALITY CULTURE

Level 5 – Proactive

- Improvement driven by risks from “bottoms-up” (eg FMEA) and “top-down” (eg Hazard Analysis)
- Controls for risks result in Quality Verification
- QMS meets SMS

Level 4 – Predictive

- Improvements driven by risk areas, leveraging defect data, and audit findings
- Cross-function effort - “Quality” is not sole responsibility of the Quality function”

Level 3 – Managed

- QMS certification
- Compliance driven internally, or by customers

Level 2 – Defined

- Defined and documented processes
- QMS certification
- Capability proven thru 3rd party audits

Level 1 – Ad Hoc

- Ad Hoc processes

MISSION
ASSURANCE

QUALITY

SUMMARY

- Consider incorporating a systems-perspective of risk, not solely piece-part compliance
- Risk-risk discussions (HA, FMEA => critical items, critical operations, critical suppliers)
- Prioritize work (e.g. Crit 1, Crit 2, etc) – If everything is critical, then nothing is
- Bonus – blending of QMS and SMS – not competing/duplicating efforts (CAS, risks, verification of controls, etc)

QUESTIONS?

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