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OBJECTIVE

My objective is to offer my extensive expertise and experience to empower manufacturers and end-users in making informed decisions regarding electronic components designed for space flight applications and other challenging environments.

EXPERIENCE

Jet Propulsion Laboratory 2001-2023 Sr. Project Lead EEEE Parts Engineer

As Senior EEEE Parts Engineer responsible for leading all EEEE components activities on NASA/JPL projects from proposal (pre-phase A) through launch (Phase D). Served as the primary interface between the project and components engineering.

Supported JPL/NASA mission classes A, B and technical demonstration projects. Responsible for the development, implementation, and management of Project EEE (Electrical, Electronic, Electromechanical and Electro-optical) Parts Requirements (PPR) plans based on mission class, environments, mission life, project, NASA (National Aeronautics and Space Administration) and institutional requirements.

Responsible for assuring that all EEEE components used in space flight hardware met mission, project, and institutional require-ments. Responsible for the review and disposition of As-Designed Parts Lists (approval to buy) and As-Built Parts Lists (approval to fly). Responsible for assuring that all added value tests and inspections are successfully completed and approved.

Served as Cost Account Manager (for parts engineering) with responsibilities including budget, schedule and work agreements. Tracked and reported financial status monthly to project and line management.

Involved in identifying potential risks and implementing mitigation strategies from part selection to the delivery of end-item flight hardware. Supported anomaly investigations and resolution teams.

Developed procurement strategy and led procurement efforts for JPL hardware and selected subcontractors. Developed relationships with the supplier community. Provided technical support for issue identification and resolution. Served as Contract Technical Manager for critical procurements.

Supported project at key decision points (PDR, CDR, MMR, final hardware certification).

Served as the primary interface between the project and the components engineering group. Regularly interacted with: Mission Assurance Manager, Project Management, Flight system management, Payload Management, Circuit designers for part(s) selection, Radiation effects engineering, Reliability Engineering, Quality Assurance, Laboratory personnel, Subcontractors, and external Instrument providers.

Subject Matter Expert for crystal oscillators focusing on devices of hybrid microcircuit construction. Generated JPL specifications for hybrid crystal oscillators, plastic encapsulated microcircuits/semiconductors. Knowledge of military specifications and standards for electronic components. Good general knowledge of other EEEE components.

Missions supported as Lead Project EEE Components Engineer: Mars Reconnaissance Orbiter, Juno (Jupiter Polar Orbiter), Diviner Lunar Radiometer, Moon Minerology Mapper, Deep Space Atomic Clock, InSight (Mars lander), Europa Clipper. Varying levels of support to Mars Exploration Rovers and Mars Science Laboratory.





Q-Tech Corporation 1985-2001 Space Program Manager | VP of Sales and Marketing

I joined Q-Tech Corporation In 1985, a producer of high-reliability hybrid crystal oscillators for the aerospace/defense industry, to launch the space products program office. Q-Tech had received an order from TRW for hybrid crystal oscillators to support the MILSTAR military telecommunications satellite network. Over the next 16 years I played a pivotal role in developing a worldwide customer base for our space products.

In 1985, Q-Tech was a small company, and many of us had to multitask. Since the space products office was a new venture, I managed a variety of tasks beyond typical project management. Apart from accounting, I was involved in all stages from proposal development to the shipment of the final product.

My responsibilities included:

- Support development of oscillators that would survive space environments and 15-year mission durations
- Drafting product specifications
- Projecting costs, preparing proposals, and negotiating with customers
- Coordinating technical requirements with engineering and quality assurance
- Generating manufacturing and test documentation
- Working directly with suppliers to ensure quality and reliability objectives were met
- Developing and managing schedules
- Conducting failure analysis and corrective action

I was engaged in all activities the entire time of my employment. I was responsible for component engineering, producing specification and source control drawings for active and passive elements, and working with suppliers to ensure that quality, reliability, and delivery objectives were met.

I served as the Quality Assurance Manager of a MIL-PRF-55310, MIL-STD-790 qualified manufacturer during my 16 years of employment. I managed over twenty quality assurance personnel.

I have experience in hybrid microcircuit and discrete electronics manufacturing processes and an extensive background with military standards and specifications (MIL-PRF-38534, MIL-STD-883, MIL-PRF-55310).

One of my technical achievements was a test method I developed to use the crystal resonator performance to detect excessive internal water vapor. In 1994, I developed the hybrid crystal oscillator specification that has been adopted worldwide for space flight hybrid crystal oscillators.

