

MIL-PRF-38534 GAP ANALYSIS AUDIT FOR ACHIEVING CERTIFICATION AND QUALIFICATION

1-3 DAY

The US military specifications for the manufacture of hybrids and RF microwave modules can be confusing and overwhelming to the inexperienced user. This course and audit is designed to explain in a logical manner the quality and manufacturing requirements for building custom hybrids for military and space applications per MIL-PRF-38534.

This audit is intended for companies interested in gaining better insight and understanding of the quality and process control requirements for high reliability space and military products. The duration of the audit is dependent on complexity of the product /process, Class H or Class K initiative, and the size and maturity of the company. A typical audit schedule is listed below

Audit and Course Outline

Day 1 (Half Day Introductory Course)

Overview of MIL-PRF-38534 Hybrid Performance Specification

Description and intent of the specification

MIL-PRF-38534 General Hybrid Specification and QML process

General requirements, e.g., product classification, marking, ESD, cleanroom, etc.

Product verification

Quality management program

Generic performance verification

Day 1 (second Half)

Audit areas and requirements are listed below:

Element evaluation

Process controls

Thick Film/Thin Film substrate Fabrication

Passive and Active Trimming

Device screening (100 %)

Kitting through Assembly –wire bond, die bonding, package sealing, marking
Rework

Day 2

Electrical testing and Burn in and Life Testing

Mil-Std-883 Test requirements (~20 Test Methods)

Conformance inspection and periodic inspection (sample basis)

Qualification procedures and when to re-qualify the M&P process baseline

Rework limitations

Day 3 Quality Management Systems (QMS)

Conversion of Customer Requirements

Design and construction requirements

42H forms

QM System

Failure Analysis

Calibration

Training

Corrective Action and Self-Audits

Standard Microcircuit Drawings and Programs

Radiation Hardness Assurance requirements and Plan for space applications
(For Class K only)

Provide a written independent assessment of the

Existing Quality system vs. MIL-PRF-38534 QML requirements.

Includes an estimate of man-hours and schedule, and any equipment or
facility cost, QML sample and QML qualification costs
to obtain QML H or K status.

Prepare a final report and management presentation