

Capacitor Reliability Testing

Typical Compex commercial testing includes 100% visual, capacitance, dissipation factor, insulation resistance, and dielectric withstanding voltage. In addition, our parts exceed MIL-STD-883 requirements for bond and shear strength (Methods 2011 and 2019, respectively). Further screening per military performance specifications is available to meet the most stringent customer specification. The tables below outline the specific testing performed in accordance with MIL-PRF-38534 and MIL-PRF-49464, and identify the appropriate Compex test code. The test code, if required, will be added to the Compex PN. Please consult the factory for your exact testing requirements.

Test Code	Testing Performed
T100	Class H Element Evaluation per MIL-PRF-38534
	100% Capacitance Subgroup 1
	100% Visual inspection Subgroup 2
	Visual Inspection Subgroup 3*
	Element Electrical**
	Wire Bond Evaluation Subgroup 4

Test Code	Testing Performed
T200	Class K Element Evaluation per MIL-PRF-38534
	100% Capacitance Subgroup 1
	100% Visual inspection Subgroup 2
	Temperature Cycle Subgroup 3*
	Constant Acceleration
	Voltage Conditioning
	Visual Inspection
	Element Electrical**
	Wire Bond Evaluation Subgroup 4

Test Code	Testing Performed
T300	Group A Inspection per MIL-PRF-49464
	Thermal Shock Subgroup 1
	Voltage Conditioning
	100% Capacitance
	100% Dissipation factor
	100% Insulation Resistance
	100% Dielectric Withstanding Voltage
	Physical Dimensions Subgroup 2
	Workmanship
	Bond Strength Subgroup 3
	Die Shear Strength
	Temperature Coefficient Limits Subgroup 4

Test Code	Testing Performed
T400	Group B Inspection per MIL-PRF-49464
	Group A Inspection Subgroup 1
	Temperature Coefficient Limits
	Immersion
	Low Voltage Humidity Subgroup 2
	Life Subgroup 3

*Test samples taken from parts passing Subgroups 1 & 2.

**Element Electrical testing includes Capacitance, Dissipation Factor, Insulation Resistance, and Dielectric Withstanding Voltage.

MIL-STD-883: Test Method Standard, Microcircuits

MIL-PRF-38534: Performance Specification, General Specification for Hybrid Microcircuits

MIL-PRF-49464: Performance Specification, General Specification Capacitors, Chip, Single Layer, Fixed, Parallel Plate, Ceramic Dielectric, Established Reliability