Ceramic Resonators Environmental Tests Specifications:

Environmental Tests:	Samples tested shall no visible damages. Resonating frequency measured shall be within ± 0.2% of original measurement. Absolute impedance shall not exceed specified maximum.
High Temperature	Measure parts in room temperature first. Place in test chamber at +85°C for 1000 hours and then return to room temperature for 1 hour. Oscillating frequency measured shall be within ± 0.2% of original measurement.
Low Temperature	Measure parts in room temperature first. Place in test chamber at -55°C for 1000 hours and then return to room temperature for 1 hour. Oscillating frequency measured shall be within ± 0.2% of original measurement.
Humidity	Measure parts in room temperature first. Place in test chamber with 90 to 95% Relative Humidity at +80 ± 2 °C for 1000 hours and then return to room environment for 1 hour. Oscillating frequency measured shall be within ± 0.2% of original measurement.
Heat Shock	Measure parts in room temperature first. Place in test chamber at -55°C for 30 minutes. Then immediately place in another test chamber already at +85°C for 30 minutes. Then return to the original test chamber at -55°C for 30 minutes. After ten (10) cycles of the above procedure, then return to room temperature for 1 hour. Oscillating frequency measured shall be within ± 0.2% of original measurement.
Salt Spray	Measure parts in room temperature first. Place in test chamber at +35 ±2 °C, density 5 ±1% salt by weight for 48 hours and then return to room environment for 1 hour. Oscillating frequency measured shall be within ± 0.2% of original measurement. Visual inspection should show no corrosion or destructive damages.
Sulfuration	Measure parts in room temperature first. Place in test chamber with 1000PPM sulfur density for 24 hours and then return to room environment for 1 hour. Oscillating frequency measured shall be within ± 0.2% of original measurement. Visual inspection should show no corrosion or breakdown.

Ceramic Resonators Physical Tests Specifications:

Physical Test:	Samples tested shall no visible damages. Resonating frequency measured shall be within ± 0.2% of original measurement. Absolute impedance shall not exceed specified maximum.
Drop Test	Measure parts first. Drop resonators from the one (1) meter height onto concrete floor. Repeat drop for 6 (six) times. Oscillating frequency measured shall be within ± 0.2% of original measurement.
Vibration	Measure parts first. Apply vibration of amplitude of 1.5mm peak-to-peak with 10 to 55 Hz band of vibration frequency to each of 3 perpendicular directions for 2 hours each. Oscillating frequency measured shall be within ± 0.2% of original measurement.
High Temperature (Soldering Bath Test)	Measure parts first. Immerse terminal leads up to 1.5mm from resonator's body in solder bath of 350 ± 10°C for 3 ± 0.5 seconds or 260 ± 10°C for 10 ± 0.5 seconds. Then return to room temperature for 1 hour. Oscillating frequency measured shall be within ± 0.2% of original measurement.
Solderability	Immerse terminal leads in resin for 5 seconds. Then immerse terminal leads in soldering bath of 230± 5°C for 3± 0.5 seconds. 95% minimum terminal leads shall be wet with solder.
Pull Test (of Terminal leads Strength)	Measure parts first. Apply 1 KG force axial direction pull to each terminal leads for 10 seconds each. Oscillating frequency measured shall be within ± 0.2% of original measurement.
Bending Test (of terminal leads)	Measure parts first. Fold terminal leads at a point 2mm away from the resonator's body, 90° upward from their axial direction and then -90° downward, at the speed of folding be 3 seconds each. Oscillating frequency measured shall be within ± 0.2% of original measurement.
Washability (Immersion)	Measure parts first. Immerse parts in fluorine organic solvent for 5 minutes. Then return to room condition for 1 hour. Oscillating frequency measured shall be within ± 0.2% of original measurement.