

IEC QUALITY ASSESSMENT SYSTEM (IECQ)

covering Electronic Components, Assemblies, Related Materials and Processes

For rules and details of the IECQ visit www.iecq.org

Schedule of Scope to Certificate of Approval

Independent Testing Laboratory

IECQ Certificate No.: IECQ-L ULTW 16.0003
CB Certificate No.: 20001845 ITL

Schedule Number: IECQ-L ULTW 16.0003-S Rev No.: 6 Revision Date: 2023/08/15 Page 1 of 3

Appendix-1 (20001845 ITL) Schedule of Scope to Certificate of Approval

Description test	Standard
Scanning Electron Microscope (SEM)	T-SEM-3
Transmission Electron Microscope - Electron Energy Loss Spectroscopy (TEM-EELS)	T-TEM-3
Energy Dispersive Spectrometry of X-ray (EDS)	T-SEM-3, T-TEM-3
Electron Back Scatter Diffraction (EBSD)	T-TEM-3
Focused Ion Beam microscope (FIB)	T-FIB-3
Liquid Cell Electron Microscopy	T-TEM-3
Secondary Ion Mass Spectrometry (SIMS)	T-SIM-3
Atomic Force Microscope (AFM)	T-SIM-3
Spreading Resistance Probe (SRP)	T-SIM-3
Alpha-step stylus profiler	T-SIM-3
X-Ray Diffraction (XRD)	T-SIM-3
X-Ray Photoelectron Spectroscopy (XPS)	T-SIM-3
X-Ray Fluorescence Spectrometer (XRF)	T-SIM-3
X-Ray imaging	T-EFA-3
Emission Microscopy (EMMI)	T-EFA-3
Emission Microscopy (EMMI)-InGaAs	T-EFA-3
Optical Beam Induced Resistance Change (OBIRCH)	T-EFA-3
Conductive atomic force microscopy (C-AFM)	T-EFA-3

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Scanning Capacitance Microscopy (SCM)	T-SIM-3
Fourier-Transform Infrared Spectroscopy (FTIR)	T-SIM-3
Nano Probe	T-EFA-3
Scanning Acoustic Tomography (SAT)	T-EFA-3
Optical Microscope (OM)	T-OMI-3
3D Optical Microscope (3D OM)	T-LAB-3
Optical Profiler (OP)	T-SIM-3
IC Layout Imaging	T-OMI-3
Circuitry analysis	T-OMI-3
Auger Electron Spectroscopy (AES)	T-SIM-3
Thermal Emission Microscope (THEMOS)	T-EFA-3
Time Domain Reflectometry (TDR)	T-LAB-3
3D X-Ray microscopy	T-EFA-3
Latch-up test	JESD78
Human Body Mode (HBM)	ANSI/ESDA/JEDEC JS-001, ANSI/ESD STM 5.1, JESD22-A114, MIL-STD-883, AEC-Q100-002
Machine Mode (MM)	ANSI/ESD S5.2, JESD22-A115, AEC-Q100-003
Charge Device Mode (CDM)	ANSI/ESD SP5.3.2, ANSI/ESD S5.3.1, JESD22-C101, ANSI/ESDA/JEDEC JS-002, AEC-Q100-011
Electrostatic discharge immunity test	IEC 61000-4-2
Transmission Line Pulse (TLP)	ANSI/ESD STM5.5.1, ANSI/ESD SP5.5.2
Electrical Overstress (EOS)	IEC 61000-4-5
Wire Bonding	T-EFA-3
IC Package	T-EFA-3

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Pull and shear test	MIL-STD-883 method 2011.9 MIL-STD-883 method 2023.7 AEC-Q100-001, EIA/JESD22-B116, JESD22-B117
Dynamic Light Scattering (DLS)	B-LAB-3
Thermogravimetric Analyzer (TGA)	B-LAB-3
Differential Scanning Calorimeter (DSC)	B-LAB-3
Inductively Coupled Plasma Mass Spectrometry (ICP-MS)	B-LAB-3

Technical Reviewer of DQS: Michael Chou Date: 8/15/2023

