



Schedule of Scope to Certificate of Approval Independent Testing Laboratory

IECQ Certificate No.: IECQ-L DEKRA 16.0002

CB Certificate No.: DEKRA-T5-001

Schedule Number: IECQ-L DEKRA 16.0002-S Rev No.: 1.1 Revision Date: 2016/08/16 Page 1 of 2

1. **Consumer / Commercial / Industrial (JESD 47) and Automotive / Military**
 - accelerated environment reliability stress tests
 - accelerated lifetime simulation tests
 - electromagnetic compatibility and electrostatic discharge test
 - 2nd level integration platform service**of Electronic Components, Assemblies, and Related Materials**

2. **Failure and material analysis of semiconductor IC, electronic components and PCB/PCBA**

Description test	Standard	Remarks
Consumer / Commercial / Industrial (JESD 47) and Automotive / Military accelerated environment reliability stress tests (Including: Pre-condition / MSL / Accelerated Temperature-Humidity test / Temperature-Humidity with bias test / Temperature Cycling test / Power and temperature cycling / Temperature storage test / IOL / Salt)	J-STD-020, JESD22-A101/A102/ A106/A107/A110/A113/A118/A119; IEC-60068-2-1/2/3/14/ 38/52, MIL-STD-202/750/810/883, JESD JP001; EIA-364-32C, EIAJ ED-4701, AEC-Q200-001 /004; AEC-Q005/Q006,	Or customer specified test
Consumer/ Commercial / Industrial (JESD 47) and Automotive / Military accelerated lifetime simulation tests. (Including : Temperature, Bias, and Operating Life test / early life failure rate / Endurance and Data retention test / Electro-Migration / Short circuit / Miscellaneous test / Gate Leakage test)	JESD22-A108/A117, JESD61, MIL-STD-202/750/810/883, AEC-Q100-005/006/008/012, AEC-Q101-004/006, Customer standards	Or customer specified test
Consumer / Commercial / Industrial (JESD 47) and Automotive / Military electromagnetic compatibility and electrostatic discharge test. (Including : IC EMI / IC EMS / HBM / MM / CDM / Latch Up / ESD Gun / Surge Test)	SAE J1752/1-3, IEC 61967/1-3, JEDEC22-A114/A115/C101, EIA/JESD78, ANSI JEDEC ESDA JS001/JS002; ISO-10605, AEC-Q100-002/003/004/011, AEC-Q101-001/002/005, AEC-Q200-002/007, JEITA ED4701; IEC61000-4-2, MIL-STD-202/750/810/883	Or customer specified test

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DEKRA Certification B.V. Meander 1051, Arnhem. Netherlands



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Description test	Standard	Remarks
Consumer / Commercial / Industrial (JESD 47) and Automotive / Military 2nd level integration platform service. (Including : Pre-SMT/SMT / Temperature Cycling test / Temperature-Humidity test / Drop / Shock / Bending / Pull and Push test / Solderability / Press / Shear / Hardness / RCA / Durability / Peeling / Terminal Strength / Resistance to Solvents / Resistance to Solder Heat / Hermeticity)	IPC-7525/9701/9702/9708/A-610, JESD22-A101/A104/A106/A109/ A111/B100/B102/B103/B105/B106/B 107/B108/B110/B111/B113/B115/B1 16/B117; EIAJ ED-4702, EIA-364-09/13; AEC-Q100-001/010; AEC-Q101-003, AEC-Q200-003/005/ 006; MIL-STD-202/750/810/883, J-STD-002/003; ASTM D3363, ASTM F2357; SEMI G86-0303, IEC 60068-2-21; IPC-TM-650,	Or customer specified test
Failure and material analysis of semiconductor IC, electronic components and PCB/PCBA, including FIB (Focused Ion Beam), Electrical Analysis, Sample Preparation (Decap, X-section, etc), NDE (Non-destructive Engineering), Physical & Chemical Analysis (Including Hazardous Substances) and IC package.	IEC62321, IPC-TM-650, IPC-610, J-STD-020, JEDEC-C201, EIA-469, EN14582.	Or customer specified test

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