



## Schedule of Scope to Certificate of Approval Independent Testing Laboratory

IECQ Certificate No.: IECQ-L JQAJP 13.0002-02

CB Certificate No.: JQAQ0002-003-T

Schedule Number: IECQ-L JQAJP 13.0002-02-S Rev No.: 6 Revision Date: 2021/01/06 Page 1 of 4

### TESTD PARTS

Fixed capacitor, Fixed resistor, Potentiometer, Varistor, Thermistor, Connector, Relay, Switch, Printed circuit board, Semiconductor Devices, Semiconductor Integrated Circuit and Optical Component

### ENVIRONMENTAL TEST

IEC 60068-2-1:2007	Cold
IEC 60068-2-2:2007	Dry heat
IEC 60068-2-11:1981	Salt mist
IEC 60068-2-13:1983	Low air pressure
IEC 60068-2-14:2009	Change of temperature
JIS C 60068-2-18:2007	Test R and guidance: Water
IEC 60068-2-20:2008	Test methods for solderability and resistance to soldering heat of devices with leads
IEC 60068-2-30:2005	Damp heat, cyclic (12+12-hour cycle)
IEC 60068-2-38:2009	Composite temperature/humidity cyclic test
IEC 60068-2-40:1976	Combined cold/low air pressure tests
IEC 60068-2-41:1976	Combined dry heat/low air pressure tests
JIS C 60068-2-42:1993	Sulphur dioxide test for contacts and connections
JIS C 60068-2-43:1993	Hydrogen sulphide test for contacts and connections
JIS C 60068-2-52:2000	Salt mist, cyclic (sodium chloride solution)
IEC 60068-2-54:2006	Soldering. Solderability testing by the wetting balance method
JIS C 60068-2-58:2016	Test methods for solderability, resistance to dissolution of metallization and to soldering heat of SMD
IEC 60068-2-60:2015	Flowing mixed gas corrosion test
IEC 60068-2-66:1994	Damp heat, steady state (unsaturated pressurized vapour)
JIS C 60068-2-69:2009	Solderability testing of electronic components for surface mounting devices (SMD) by the wetting balance method
IEC 60068-2-78:2012	Damp heat, steady state

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Japan Quality Assurance Organization (JQA)  
4-4-4, Minamiosawa, Hachioji-shi, Tokyo 192-0364 Japan



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IEC 60068-2-83:2011	Solderability testing of electronic components for surface mounting devices (SMD) by the wetting balance method using solder paste
EIAJ ET-7404:1997	Solderability testing of electronic components for surface mount technology by the wetting balance method with solder paste
JIS D 0205:1987	Test method of weatherability for automotive parts
MIL STD 202H	Test method standard electronic and electrical component parts
MIL STD 883K	Test method standard microcircuits

### MECHANICAL TEST

IEC 60068-2-6:2007	Vibration (sinusoidal)
IEC 60068-2-7:1983	Acceleration, steady state
IEC 60068-2-27:2008	Shock
IEC 60068-2-31:2008	Rough handling shocks, primarily for equipment-type specimens
IEC 60068-2-64:2008	Vibration, broadband random and guidance
JIS C 60068-2-75:2004	Hammer tests

### FIRE HAZARD TEST

IEC 60695-2-10:2013	Glowing/hot-wire based test methods – Glow-wire apparatus and common test procedure
IEC 60695-2-11:2014	Glow-wire flammability test method for end-products
IEC 60695-2-12:2010	Glowing/hot-wire based test methods – Glow-wire flammability index (GWFI) test method for materials
IEC 60695-2-13:2010	Glowing/hot-wire based test methods – Glow-wire ignition temperature (GWIT) test method for materials
IEC 60695-11-5:2016	Test flames - Needle-flame test method – Apparatus, confirmatory test arrangement and guidance

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### MEASUREMENT RANGE

Passive component

Type / Part name	Measurable property value	: Measuring range
Fixed resistor	(1)Resistance value	: 1Ω~100MΩ
	(2)Resistance temperature properties and gap of the resistance level.	: Temperature range -55℃~+150℃
	(3)Insulation resistance	: 5×10 <sup>5</sup> Ω~2×10 <sup>14</sup> Ω
	(4)Voltage endurance	: AC,DC 0~5KV
Variable resistor [potentiometer]	(1)Resistance value	: 1Ω~120MΩ
	(2)Mutual deviations	: ±3%
	(3)Resistance temperature properties and gap of the resistance level.	: Temperature range -40℃~+150℃
	(4)Insulation resistance	: 5×10 <sup>5</sup> Ω~10 <sup>14</sup> Ω
	(5)Voltage endurance	: AC,DC 0~5KV
	(6)Rotational noise	: Noise voltage 1mV
	(7)Intensive contact resistance	: 1mΩ
Variable resistor	Voltage at reference current	: 1500V(1mA min)

Mechanical device

Type / Part name	Measurable property value	: Measuring range
Connector (Electronic equipment use)	(1)Insulation resistance	: 5×10 <sup>5</sup> Ω~2×10 <sup>14</sup> Ω
	(2)Withstand voltage	: AC,DC 0~5KV
	(3)Contact resistance under low voltage, the low electric current.	: 1mΩ~100Ω
	(4)Chattering of the contact.	: 1μsec max
Relay (Small form for control)	(1)Withstand voltage	: AC,DC 0~5KV
	(2)Insulation resistance	: 5×10 <sup>5</sup> Ω~2×10 <sup>14</sup> Ω
	(3)Direct current resistance of the coil	: 1Ω~10KΩ
	(4)Contact resistance	: 1mΩ~100Ω
	(5)Operating voltage	: 1V max
	(6)Must-release voltage	: 1V max
	(7)Operation time	: 1msec max
	(8)Recovery time	: 1msec max
	(9)Bounces of the point of contact	: 1μsec max
	(10)Chattering of the point of contact	: 1μsec max
Switch (Electronic equipment use)	(1)Contact resistance	: 1mΩ~100Ω
	(2)Insulation resistance	: 5×10 <sup>5</sup> Ω~2×10 <sup>14</sup> Ω
	(3)Withstand voltage	: AC,DC 0~5KV
	(4)Change of the contact resistance	: 1mΩ max

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### MEASUREMENT RANGE

Printed circuit board

Type / Part name	Measurable property value	: Measuring range
Printed circuit board	(1)Resistance of the plating part of the conductor and through hall part.	: 1mΩ~1000Ω
	(2)Withstand voltage	: AC,DC 0~5KV
	(3)Insulation resistance	: 5×10 <sup>5</sup> Ω~10 <sup>14</sup> Ω

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