REV	COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE	REV	COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE
1	–	Revised	KYG	LHJ	21.08.23						
2	–	Revised	KYI	LHJ	21.12.15						

APPLICABLE STANDARD		Universal Serial Bus Type-C Cable and Connector Specification Release 2.1 Universal Serial Bus Type-C Connectors and Cable Assemblies Compliance Document Revision 2.1b
RATING	CURRENT	1.25A Max. for each power pin (A1, A4, A9, A12, B1, B4, B5, B9, B12) 0.25A for the other pins
	VOLTAGE	20V AC/DC
OPERATING CONDITION		-40℃ ~ +105℃ (Including Temp. rise), 95% RH Max. (Non-condensing)
STORAGE CONDITION		-10℃ ~ +60℃ (With packing), 15% ~ 70% RH

Para.	Test Description	Test Procedure	Test Requirement	QT	AT
1	Examination of product	EIA 364-18 Visual inspection	No physical damage.	O	O
Electrical Requirements					
2	Low Level Contact Resistance	EIA 364-23 Measure at 20mV max open circuit at 100mA max. (DC or 1000Hz) 4-wire measurement is required and the resistance of PCB termination shall be deducted from the reading.	Initial : 40mΩ max After test : 50mΩ max	O	–
3	Dielectric Withstanding Voltage	EIA 364-20 Measure per Method B with unmated condition. 100V AC RMS for 1 minute at sea level.	No disruptive discharge.	O	–
4	Insulation Resistance	EIA 364-21 500V DC with unmated and mated condition.	100MΩ min.	O	–
Mechanical Requirements					
5	Insertion force	EIA 364-13 Measure at 12.5mm/minute min.	Initial : 5N ~ 20N After test : 5N ~ 20N (with virgin plug)	O	–
6	Extraction force	EIA 364-13 Measure at 12.5mm/minute min.	Initial : 8N ~ 20N After test : 6N ~ 20N (with virgin plug)	O	–
7	Durability	EIA 364-09 Mated 10,000 times Mechanically operated : 200cycles/hr Mating stroke : 2.75mm Insertion, extraction force shall be measured at a maximum speed of 12.5mm/min	No physical damage.	O	–
8	Vibration	IEC 60521-4-6d Frequency10 to 55Hz, half Amplitude 0.75mm, -m/s2 for 2hr in 3 directions.	No electrical discontinuity of 1μs. No physical damage.	O	–
9	Shock	IEC 60521-4-6C 490m/s2 , Duration of pulse 11ms at 3 times in 3 directions.	No electrical discontinuity of 1μs. No physical damage.	O	–
10	Wrenching strength	After insertion of plug, measure the force until be damaged 4 directions. (up,down, left, right) Speed12.5mm/Min, apply a force at the point 15mm socket frome edge.[Fig.1]	50N Min.	O	–

REMARKS	DRAFT	DESIGN	CHECK	APPROVAL	RELEASE
	C.E.LIM 15.09.24	C.E.LIM 15.09.24	H.J.LEE 15.09.24	T.S.KANG 15.09.24	DEPT 21.12.15 ENG

NOTE) QT : QUALIFICATION TEST, AT : ASSURANCE TEST, O : Applicable Test

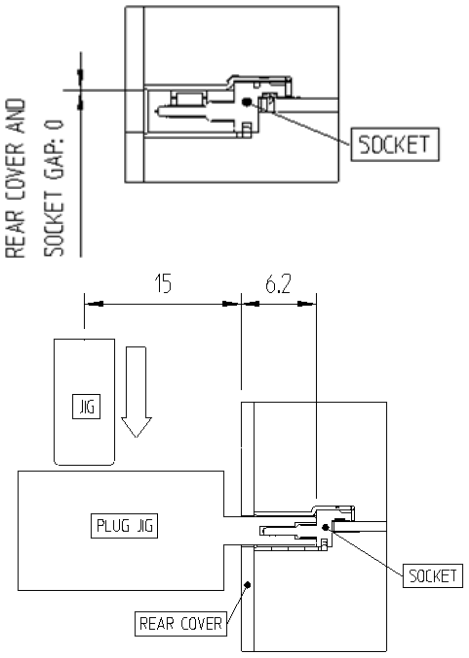
DWG NO	CL NO	PART NO
ELC4-632081	CL 6240-0003-4	CX70M-24P2

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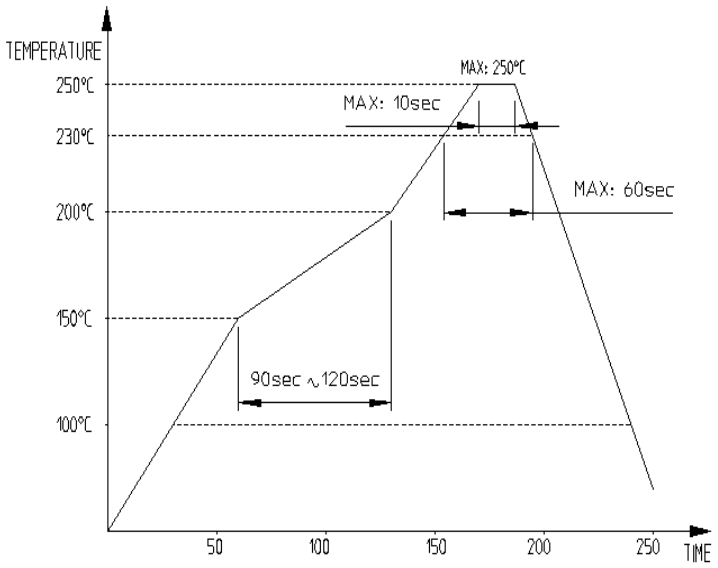
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Para.	Test Description	Test Procedure	Test Requirement	QT	AT
Environmental Requirements					
11	Temperature Life	EIA 364-17, Method A 105℃ without applied voltage for 120 hours.	No physical damage.	O	-
12	Damp heat (Steady state)	IEC 60512-6-11C Exposed at +85℃ , 85%RH for 120 hr. (Mating applicable connector)	No physical damage.	O	-
13	Cold	IEC60512-6-11j Exposed at -40±2 ℃ for 96±4 Hr. (Mating applicable connector)	No physical damage.	O	-
14	Thermal Shock	EIA 364-32 10 cycles -55°C and +105°C	No physical damage.	O	-
15	Solderability	EIA 364-52 Dwell in 245±5℃ of the solder bath for 5 sec.	Solder coverage shall be 95% min. of the immersed surfaces.	O	-
16	Salt Spray	EIA 364-26 5% of NaCl in 35℃ for 48 hours.	No corrosions that affect to the connector operation.	O	-
17	Co-Planarity	Measure Co-planarity of each contact lead.	0.08 Max before reflow. 0.08 Max after reflow 2times.	O	-
18	Reflow Heat	Reflow profile [Fig.2] Peak 250°C max for 10 sec 2 times.	No deformation of mold No shape of blister and popcorn	O	-

REMARKS



[Fig.1] Wrenching strength
(Using USB Type-C Standard reference test fixture)



[Fig.2] REFLOW TEMPERATURE

NOTE) QT : QUALIFICATION TEST, AT : ASSURANCE TEST, O : Applicable Test

DWG NO	CL NO	PART NO
ELC4-632081	CL 6240-0003-4	CX70M-24P2

Qualification Test Sequence Table

Para.	Test Description	Test Group									
		A	B	C	D	E	F	G	H	I	J
1	Examination of product	1, 7	1, 14	1, 6	1, 6	1, 6	1, 6	1, 6	1, 3	1, 6	1, 4
2	Low Level Contact Resistance	3, 6	3, 13	3, 5	3, 5	3, 5	3, 5	3, 5		3, 5	
3	Dielectric Withstanding Voltage		4, 12								
4	Insulation Resistance		5, 11								
5	Insertion force		6, 10								
6	Extraction force		7, 9								
7	Durability		8								
8	Vibration	4									
9	Shock	5									
10	Wrenching strength			4							
11	Temperature Life				4						
12	Damp heat					4					
13	Cold						4				
14	Thermal Shock							4			
15	Solderability								2		
16	Salt Spray									4	
17	Co-planarity										3
18	Reflow Heat	2	2	2	2	2	2	2		2	2

REMARKS
1) Numbers in the table above indicate the sequence corresponding to each test group.

NOTE) QT : QUALIFICATION TEST, AT : ASSURANCE TEST, O : Applicable Test

DWG NO	CL NO	PART NO
ELC4-632081	CL 6240-0003-4	CX70M-24P2

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