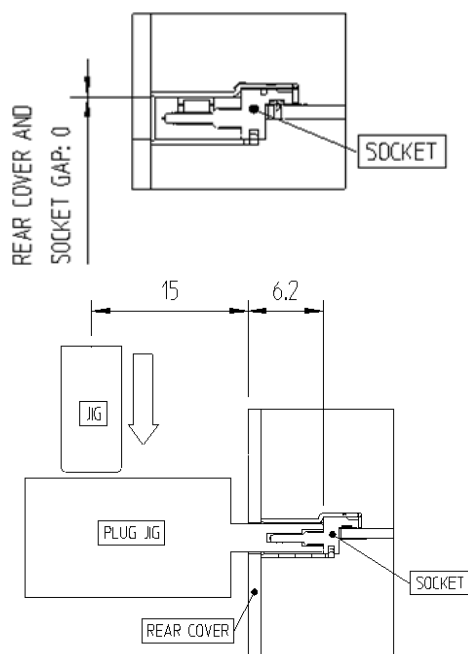


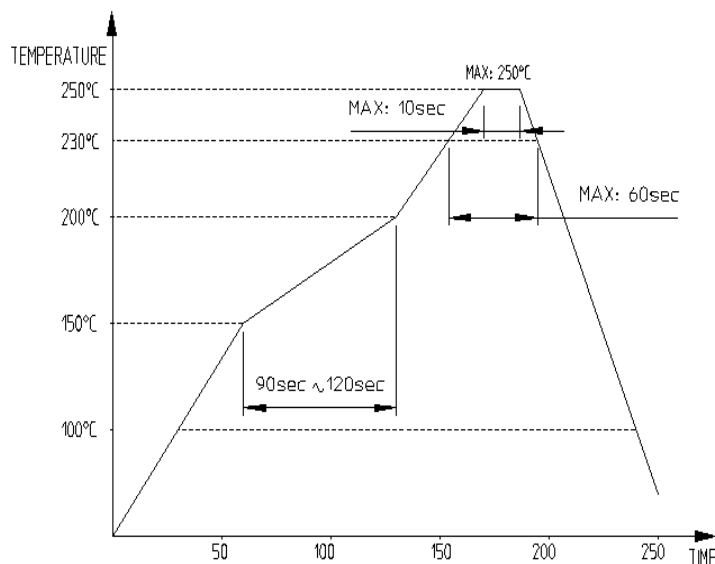
REV	COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE	REV	COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE		
1	-	Revised	KYG	LHJ	21.08.23	1							
2	-	Revised	KYI	LHJ	21.12.15	2							
APPLICABLE STANDARD			Universal Serial Bus Type-C Cable and Connector Specification Release 2.1 Universal Serial Bus Type-C Connectors 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 Frequency 10 to 55Hz, half Amplitude 0.75mm, -m/s ² for 2hr in 3 directions.		No electrical discontinuity of 1μs. No physical damage.			O	-				
9	Shock		IEC 60521-4-6C 490m/s ² , 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) Speed 12.5mm/Min, apply a force at the point 15mm socket from edge.[Fig.1]		50N Min.			O	-				
REMARKS					DRAFT	DESIGN	CHECK	APPROVAL	RELEASE				
					C.E.LIM	C.E.LIM	H.J.LEE	T.S.KANG	DEPT 21.12.15 ENG				
					15.09.24	15.09.24	15.09.24	15.09.24					
(NOTE) QT : QUALIFICATION TEST, AT : ASSURANCE TEST, O : Applicable Test													
DWG NO			CL NO			PART NO							
ELC4-632081			CL 6240-0003-4			CX70M-24P2							
HRS HIROSE KOREA.CO.,LTD					PRODUCT SPECIFICATION					1/3			

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℃ and +105℃	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 corrossions 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℃ 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

May.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.
In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

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				
HRS HIROSE KOREA.CO.,LTD			PRODUCT SPECIFICATION							3 / 3	