REV	COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE	REV	COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE
△						△					
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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	48V 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 (DC OR 1000Hz). 4-wire measurement is required and the resistance of PCB termination shall be deducted from the reading.	Initial : 40mΩ max for each contact After test : 50mΩ max for each contact	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 : 500±50cycles/hr Mating stroke : 2.75mm Insertion, extraction force shall be measured at a maximum speed of 12.5mm/min	No physical damage.	O	-
8	Random Vibration	EIA 364-28 Test Condition VII, Test Letter D Mated specimens to 3.10 G's RMS between 20 to 500Hz 15 minutes in each of 3 mutually perpendicular planes.	No physical damage. No discontinuity of 1μs of longer duration when mated connector during test.	O	-

REMARKS	DRAFT	DESIGN	CHECK	APPROVAL	RELEASE
	S.K.JANG 21.09.28	S.K.JANG 21.09.28	H.J.LEE 21.09.28	H.J.LEE 21.09.28	DEPT 22.04.15 ENG

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

DWG NO	CL NO	PART NO
ELC4-633480	CL 6245-0001-0	CX80B2-24P

HRS HIROSE KOREA.CO.,LTD	PRODUCT SPECIFICATION	1 / 3

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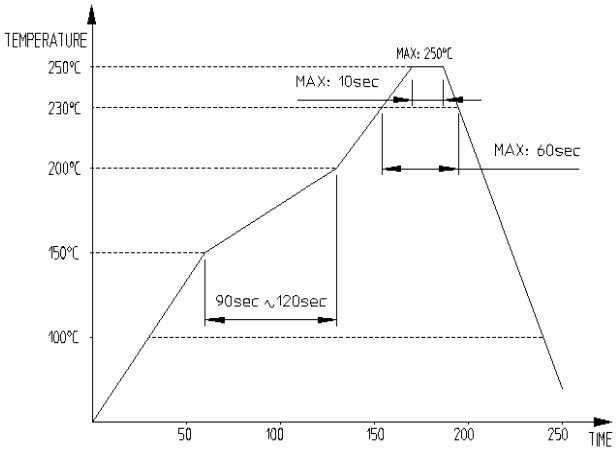
Para.	Test Description	Test Procedure	Test Requirement	QT	AT
Environmental Requirements					
9	Temperature Life	EIA 364-17, Method A 105℃ without applied voltage for 120 hours.	No physical damage.	O	-
10	Cyclic Temperature and Humidity	EIA 364-31 25±3°C at 80±3% RH for 1 hour. 65±3°C at 50±3% RH for 1 hour. Thermal ramp : 0.5 hour Number of cycles : 24 cycles	No physical damage.	O	-
11	Thermal Shock	EIA 364-32, Test Condition I 10 cycles -55°C and +105°C	No physical damage.	O	-
12	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	-
13	Salt Spray	EIA 364-26 Sample Condition : Reflow Soldered on PCB 5% of NaCl in 35℃ for 48 hours.	No corrosions that affect to the connector operation.	O	-
14	Mixed Flowing Gas	EIA 364-65 Measure Environment 30℃/70%RH CL_2 10±3ppb, No_2 200±50ppb, H_2S 10±5ppb, SO_2 100±20ppb Expose half of sample mated for 1/3 days and then unmated for 2/3 days .The others are exposed mated for full 7 days test period.	No corrosions that affect to the connector operation.	O	-
15	Temperature Rise	EIA-364-70, method B A current of 5.0 A shall be applied collectively to VBUS pins (i.e., pins A4, A9, B4, and B9) and 1.25 A applied to the Vconn pin (i.e., B5 of the plug connector) with the return path through the corresponding GND pins (i.e., pins A1, A12, B1,and B12). A minimum current of 0.25 A shall also be applied individually to all the other contacts.	Temperature rise shall not exceed 30℃	O	-
16	Reflow heat	Reflow profile [Fig.1] Peak 250°C max for 10 sec 2 times.	No deformation of mold No blister and popcorn	O	-

REMARKS



[Fig.1] REFLOW TEMPERATURE

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ELC4-633480	CL 6245-0001-0	CX80B2-24P

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Qualification Test Sequence Table

Para.	Test Description	Test Group							
		A	B	C	D	E	F	G	H
1	Examination of product	1, 6	1, 8	1, 7	1, 7	1, 14	1, 3	1, 6	1, 6
2	Low Level Contact Resistance	3, 5	3, 5, 7	3, 4, 6	3, 4, 6	5, 13		3, 5	3, 5
3	Dielectric Withstanding Voltage					4, 12			
4	Insulation Resistance					3, 11			
5	Insertion force					6, 10			
6	Extraction force					7, 9			
7	Durability					8			
8	Random Vibration			5					
9	Temperature Life	4							
10	Cyclic Temperature and Humidity		6						
11	Thermal Shock		4						
12	Solderability						2		
13	Salt Spray							4	
14	Mixed Flowing Gas				5				
15	Temperature Rise								4
16	Reflow Heat	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
ELC4-633480	CL 6245-0001-0	CX80B2-24P

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