


REV	COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE	REV	COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE					
△	1	Revised Drawing	PYB	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		1.50A Max. for each power pin (A1, A4, A9, A12, B1, B4, B9, B12) 1.25A Max. VCON(i.e. B5), 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 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	-						
5	Temperature Rise		IEC60529, EIA-364-70, method B : A current of 6.0 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	-						
Mechanical Requirements																
6	Insertion force		EIA 364-13 Measure at 12.5mm/minute min.			Initial & after test : 5N ~ 20N			O	-						
7	Extraction force		EIA 364-13 Measure at 12.5mm/minute min.			Initial : 8N ~ 20N After test : 6N ~ 20N (with virgin plug)			O	-						
8	Durability		EIA 364-09 Mated 10,000 times Mechanically operated : 500cycles/hr Mating stroke : 2.75mm Insertion, extraction force shall be measured at a maximum speed of 12.5mm/min			No physical damage.			O	-						
REMARKS					DRAFT	DESIGN	CHECK	APPROVAL	RELEASE							
					Y.B.PARK	Y.B.PARK	H.J.LEE	H.J.LEE								
					21.08.05	21.08.05	21.08.05	21.08.05								
NOTE) QT : QUALIFICATION TEST, AT : ASSURANCE TEST, O : Applicable Test																
DWG NO				CL NO				PART NO								
ELC4-633131				CL 6246-0002-0				CX90BW-16P								
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Para.	Test Description	Test Procedure	Test Requirement	QT	AT
Environmental Requirements					
9	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.	① No physical damage. ② No discontinuity of 1μs or longer duration when mated connector during test.	O	-
10	Temperature Life	EIA 364-17, Method A 105℃ without applied voltage for 120 hours.	No physical damage.	O	-
11	Cyclic Temperature and Humidity	EIA 364-31 25±3℃ at 80±3% RH for 1 hour. 65±3℃ at 50±3% RH for 1 hour. Thermal ramp : 0.5 hour Number of cycles : 24 cycles	No physical damage.	O	-
12	Thermal Shock	EIA 364-32 10 cycles -55℃ and +105℃	No physical damage.	O	-
13	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	-
14	Salt Spray	EIA 364-26 5% of NaCl in 35℃ for 48 hours.	No corrosions that affect to the connector operation.	O	-
15	High Temperature and Humidity	EIA-364-31 High-temperature 85℃/85% RH for 120 hours.	No physical damage. No change to performance.	O	-
16	Mixed Flowing Gas	EIA 364-65 Measure Environment 30℃/70%RH CL2 10±3ppb, No2 200±50ppb, H2S 10±5ppb, SO2 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	-
17	IPX4	IEC60529 No matter which direction the water splashes on the enclosure, it must be waterproof. Duration : 10minutes at least. Water volume : 10L/min Pressure : 50~150KPa	No water leakage.	O	-
18	Reflow Heat	Reflow profile [Fig.1] Peak 250℃ max for 10 sec 2 times.	① No deformation of mold ② No shape of blister and popcorn	O	-
REMARKS					
<div></div> <p>[Fig.1] REFLOW TEMPERATURE</p>					
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Qualification Test Sequence Table											
Para.	Test Description	Test Group									
		A	B	C	D	E	F	G	H	I	J
1	Examination of product	1, 6	1, 14	1, 6	1, 6	1, 7	1, 3	1, 6	1, 7	1, 6	1, 4
2	Low Level Contact Resistance	3, 5	3, 13	3, 5	3, 5	3, 6		3, 5	3, 6	3, 5	
3	Dielectric Withstanding Voltage		4, 12								
4	Insulation Resistance		5, 11								
5	Temperature Rise										3
6	Insertion force		6, 10								
7	Extraction force		7, 9								
8	Durability		8								
9	Random Vibration	4									
10	Temperature Life			4							
11	Cyclic Temperature and Humidity				4						
12	Thermal Shock					4					
13	Solderability						2				
14	Salt Spray							4			
15	High Temperature and Humidity								4		
16	Mixed Flowing Gas									4	
17	IPX4					5			5		
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											
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