Rev.	Count	Description of rev.	BY	CHKD	Date	Rev.	Count	Description of rev.	BY	CHKD	Date
0	-	Released(RE-2-2883)	KYG	LHJ	25.08.21						

Applicable standard		-
Rating	Voltage	48V AC/DC
	Current	1.25A max. for each power pin (i.e., A1, A4, A9, A12, B1, B4, B5, B9, B12) 0.25A max. for the others.
Operating condition		-40℃～+105℃(Including temp. rise), 95% R.H. max.(Non-condensing)
Storage condition		-10℃～+60℃(With packing), 15%～70% R.H.

SPECIFICATIONS

No	TEST ITEM	TEST METHOD	TEST REQUIREMENT	QT	AT
CONSTRUCTION					
1	General examination	EIA 364-18 Visual inspection	No physical damage.	O	O
ELECTRICAL CHARACTERISTICS					
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, Method B Measure 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	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℃ above the ambient temperature.	O	-

Remarks	Drawn	Designed	Checked	Approved	Release
	Y.G.KIM 25.08.21	Y.G.KIM 25.08.21	H.J.LEE 25.08.21	H.J.LEE 25.08.21	DEPT 25.08.21 ENG

[Note] QT : Qualification test, AT : Assurance test, O : Applicable, - : Not applicable

Drawing No.	CL No.	Part No.
ELC4-633754-02	CL 6249-0012-2-002	CX90MW9-24P1(002)

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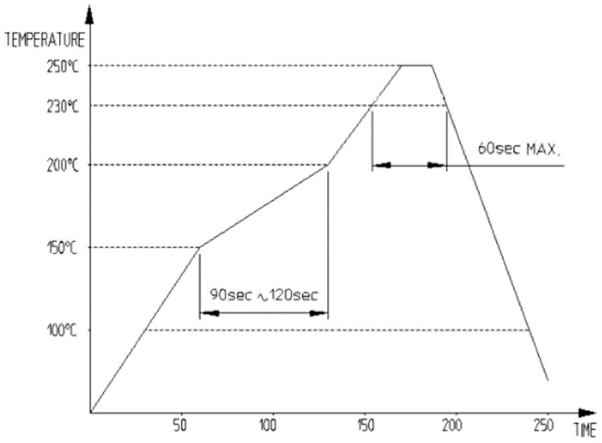
No	TEST ITEM	TEST METHOD	TEST REQUIREMENT	QT	AT
MECHANICAL CHARACTERISTICS					
6	Insertion force	EIA 364-13 Measure at 12.5mm/minute min.	Initial & after test : 5N～20N	O	-
7	Extraction force	EIA 364-13 Measure at 12.5mm/minute min.	Initial : 8N～20N After test : 6N～20N (with virgin plug)	O	-
8	Durability	EIA 364-09 Mated 10,000 times Mechanically operated : 500±50 cycles/hr Mating stroke : 2.75mm Insertion, extraction force shall be measured at a maximum speed of 12.5mm/min	No physical damage.	O	-
ENVIRONMENTAL CHARACTERISTICS					
9	Random vibration	EIA 364-28 Test condition VII, Test condition letter D Grms : 3.10g Frequency : 20～500Hz 15 minutes in each of 3 mutually perpendicular planes.	No physical damage. No discontinuity of over than 1μs.	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˚C/80±3% R.H. for 1 hour. 65±3˚C/50±3% R.H. for 1 hour. Ramp time : 0.5 hour Number of cycles : 24 cycles	No physical damage.	O	-
12	Thermal shock	EIA 364-32 10 cycles -55˚C and +105˚C	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. Test with soldered condition on the PCB.	No corrosions that affect to the connector operation.	O	-
15	High temperature and humidity	EIA-364-31 High-temperature 85℃/85% R.H. for 120 hours.	No physical damage. No change to performance.	O	-
16	Mixed flowing gas	EIA 364-65 Measure Environment 30℃/70% R.H. 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	-

[Note] QT : Qualification test, AT : Assurance test, O : Applicable, - : Not applicable

No	TEST ITEM	TEST METHOD	TEST REQUIREMENT	QT	AT
17	IPX8	IEC60529 Immersion in the water at the depth of 1.5m for 30 minute	No water leakage to cause functional problems.	O	-
18	IP6X	IEC60529 Duration : 8 hours at least. Amount of talcum powder of the test chamber : 2kg/m^3 Dust type : Talcum Powder (less than 75μm) Depression : 2kPa max	No ingress of dust to cause functional problems.	O	-
19	Reflow heat	Reflow profile Fig.1 Peak 250˚C max for 2 times.	No deformation of mold. No shape of blister and popcorn.	O	-

REMARKS



[Fig.1] Reflow profile

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Test Sequence Table

No	Test item	Test Group										
		A	B	C	D	E	F	G	H	I	J	K
1	General examination	1, 7	1, 15	1, 7	1, 7	1, 7	1, 3	1, 7	1, 7	1, 7	1, 4	1, 9
2	Low level contact resistance	3, 6	3, 14	3, 6	3, 6	3, 6		3, 6	3, 6	3, 6		3, 8
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									4
9	Random vibration	4										
10	Temperature life			4								
11	Cyclic temperature and humidity				4							
12	Thermal shock					4						5
13	Solderability						2					
14	Salt spray							4				
15	High temperature and humidity								4			6
16	Mixed flowing gas									4		
17	IPX8	5	13	5	5	5		5	5	5		
18	IP6X											7
19	Reflow heat	2	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, - : Not applicable

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