朝貴電子股份有限公司
CKM ELECTRONICS CO., LTD.

PRODUCT SPECIFICATION

CKM 2022 SERIES

2.00mm PITCH CONNECTOR

INDEX

REVISION HISTORY:

REV	REVISION DESCRIPTION	DATE	CREATED/REVISED
1	INTERIM EDITION	2022/02/22	Ryan.Huang

1. SCOPE

This specification contains the test requirement of subject connectors when tested under the condition and procedure with terminals crimped on the specified maximum size wire.

2. APPLICABLE STANDARDS

EIA-364 Methods for test of connectors for electronic equipment
JIS C5402 Test methods for electrical connectors
MIL-STD-202

3. 2022 SERIES

Product Name	Part No.
Housing	2022H-XP-X-XX-HF
Terminal	2022T0X-X
Wafer Assembly WV. (VERTICAL)	2022WV-XP-XX-XX-HF
Wafer Assembly WVS. (RIGHT ANGLE)	2022WVS-XP-XX-XX-HF

4. PRODUCT SHAPE, DIMENSIONS AND MATERIALS

*See attached drawings.

5. ACCOMMODATED P.C. BOARD

5.1 Thickness: 1.6 mm (.063 ")
5.2 P.C. Board Layout: See attached drawings

6. RATINGS

6.1 Current rating: 3.0A (AWG #22)

6.2 Voltage rating: 250V AC, DC

6.3 Temperature range:-25℃ to +85℃

6.4 Applicable wire: AWG #22 to #28, Insulation O.D.: 0.80~1.50mm .

7. PERFORMANCE REQUIREMENTS AND TEST DESCRIPTIONS

The product is designed to meet the electrical, mechanical and environmental performance Requirements as specifics See Item 8.

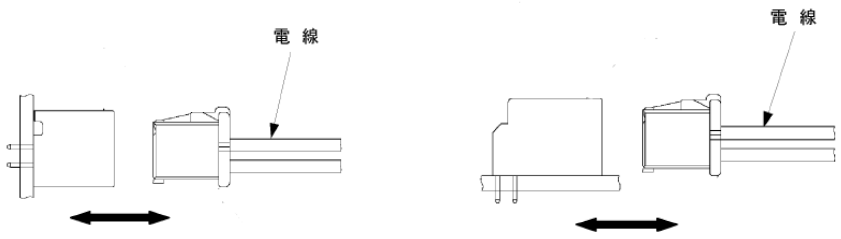
8. TEST REQUIREMENTS AND PROCEDURES SUMMARY

TEST ITEM		REQUIREMENT	PROCEDURE
8.1	Examination of Product	Meets requirements of product drawing. No physical damage.	Per **EIA-364-18** Visual inspection
ELECTRICAL REQUIREMENT			
8.2	Contact Resistance	10mΩ Max (Initial) 20mΩ Max (Final)	Dry circuit of DC 20 mV max. , 10 mA max.AWG#22 (JIS C5402 5.4)
8.3	Insulation Resistance	1000M Ω Min	When applied DC 500 V between adjacent terminal or ground (JIS C5402 5.2/MIL-STD 202 method 301)
8.4	Dielectric Withstanding Voltage	No Breakdown and Flashover.	When applied AC 800V 1 minute between adjacent terminal (JIS C5402 5.2/MIL-STD 202 method 302 Cond. B)
MECHANICAL REQUIREMENT			
8.5	Terminal crimp Tensile strength	AWG # 22: 40N Min. AWG # 24: 30N Min. AWG # 26: 20N Min. AWG # 28: 10N Min.	Fix the crimped terminal, apply axial pull out force on the wire at speed rate of 25±3 mm/minute (Basedupon JIS C5402 6.22)
8.6	Terminal / Housing Retention Force (For Plug)	10N Min.	Retention speed 25±3 mm per minute from housing
8.7	Insertion and Withdrawal Force	See Item 9	Insert and withdraw connector at speed of 25 ±3 mm per minute
8.8	Durability	Contact Resistance : 20 mΩ Max	Connector shall be subjected to 30 cycles of insertion and withdrawal (repeatedly by the rate of 10 cycles per minute)
8.9	Pin retention force	10N Min.	Push pin from insulator base at speed 25±3 mm per minute
8.10	Locking force	8~18P : 20N Min 20~28P: 25N Min 30~40P: 30N Min	While withdrawing plug & receptacle without terminal at speed 25±3 mm per minute

ENVIRONMENTAL REQUIREMENTS			
8.11	Vibration	Appearance: No damage Contact Resistance :20 mΩ Max Discontinuity: 1 micro second max.	1.52 mm 10-55-10 HZ / minute each 2 hours for X , Y and Z directions (MIL-STD-202,method 201A)
8.12	Heat Resistance	Appearance :No Damage. Contact Resistance: 20 mΩ Max.	85± 2℃ , 240hours JIS C60068-2-2/MIL-STD-202 Method 108)
8.13	Humidity	Contact resistance: 20mΩ Max Insulation resistance: 500M Ω Max	Temperature:40±2℃ Relative Humidity : 90~95% Duration: 240 hours
8.14	Temperature cycling	Appearance: No Damage Contact Resistance: 20 mΩ Max. Dielectric Strength: No Breakdown Insulation Resistance: 500 MΩ Min	25 cycle consists of :(JIS C0025) (1)-55°C±3°C, ~ 30 minutes. (2) 85°C±2°C, ~ 30 minutes.
8.15	Salt spray	Appearance: No damage Contact resistance: 20mΩ Max	Temperature: 35±2°C solution: 5±1% time: 48±4Hours Measurement must be taken after water Rinse (JIS C5402 7.1/MIL-STD-202, method 101 D, condition B)
8.16	Solder ability	Minimum: 95% of immersed area	Soldering time: 3±0.5 second Soldering pot: 245±5°C
8.17	Resistance to soldering heat	No damage	Apply solder iron in solder tail Temperature: 260±5℃, 5±0.5 sec.
8.18	Ammonia (NH_3)	Appearance: No Damage	concentration: 3% (Weight ratio) volume:25ml/l (Volume ratio) time: 1Hours
8.19	Sulfuration (SO_2)	Appearance: No Damage Contact Resistance: 20 mΩ MAX.	concentration: 3±1 ppm Temperature:40±2℃ relative humidity:80±5% time: 96Hours

9. Mating and Un-mating Force(Remove Latch):

PIN No.	At Initial		At 30th
	Mating (N Max.)	Un-mating (N Min.)	Un-mating (N Min.)
8	25	1	1
10	28	3	2
12	31	4	2
14	34	6	3
16	37	7	3
18	40	9	4
20	43	10	4
22	46	12	5
24	49	13	5
26	52	15	6
28	55	16	6
30	58	18	7
32	61	19	7
34	64	21	8
36	67	22	8
38	70	24	9
40	73	25	9



10. Recommended IR Reflow Temperature Profile:

Using Lead-Free Solder Paste