

朝貴電子股份有限公司 CKM ELECTRONICS CO., LTD.

PRODUCT SPECIFICATION

CKM 2015 SERIES

WIRE TO BOARD 2.00mm PITCH CONNECTOR

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REVISION HISTORY:

REV	REVISION DESCRIPTION	DATE	CREATED/REVISED
A	INTERIM EDITION	2015/3/16	Jimmy Wang
В	UPDATE (8.18)	2016/11/7	Jimmy Wang
С	UPDATE APPLICABLE WIRE	2018/01/16	Jimmy Wang
D	UPDATE Temperature rise(8.11)	2019/06/03	LZQ

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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

MIL - STD - 202Methods for test of connectors for electronic equipmentMIL - STD - 1344Test methods for electrical connectorsJIS C0020, C0021, C0025JIS C5028JIS C5402UL 1977

3. APPLICABLE SERIES NO: 2015 SERIES

Product Name	Part No.
Housing	2015H-XX-X-XX-HF
Terminal	2008T0X-XX
	2008T2X-XX
Wafer Assembly ST.	2015WV-XX-XX-XX-HF
	2015WVBS-XX-XX-XX-HF
	2015WVS-XX-XX-XX-HF
Wafer Assembly RA.	2015WR-XX-XX-XX-HF
	2015WRBS-XX-XX-XX-HF
	2015WRS-XX-XX-HK-XX-HF
	Note: 1. X or (-HF): Refer to the drawing

2. 2008T0P-XX for AWG #30

4. PRODUCT SHAPE, DIMENSIONS AND MATERIALS *See attached drawings.

5. ACCOMMODATED P.C. BOARD

5.1 Thickness: 0.6 mm (.024 ")~1.2mm (.047 "), 1.6 mm (.063 ") 5.2 P.C. Board Layout: See attached drawings

6. RATINGS

6.1 Current rating: 3.0A (AWG #22) 2.0A (AWG #24) 1.0A (AWG #26~#28) 0.8A (AWG #30)

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6.2 Voltage rating: 250V AC, DC

6.3 Temperature range:-40°C to +105°C

6.4 Applicable wire: AWG #22 to #30, Insulation O.D.: 0.90~1.60mm Max.

7. PERFORMANCE REQUIREMENTS AND TEST DESCRIPTIONS

The product is designed to meet the electrical, mechanical and environmental performance Requirements as specifics in **8**. **REQUIREMENTS**.

8. TEST REQUIREMENTS AND PROCEDURES SUMMARY

Τ	EST IT	EM	REQUI	REMENT		PROCEDUR	RE	
8.1	Examinat Product	ion of	Meets require drawing. No p	nents of product bhysical damage.	Per Vis	EIA-364-18 sual inspection		
			ELEC	TRICAL REQU	IRE	MENT		
8.2	Contact Resistanc	e	10mΩ Max (Initi 20mΩ Max (Fina	al) l)	Dry max	circuit of DC 20 mV i (JIS C5402 5.4)	max. , 1() mA
8.3	Insulatior Resistanc	n ve	1000MΩ Min		Whe adja (JIS 301)	en applied DC 500 V b cent terminal or groun C5402 5.2/MIL-STD	between Id 202 met	hod
8.4	Dielectric Withstand Voltage	ding	No Breakdown a	nd Flashover.	Whe betv (JIS 302	en applied AC 800 V 1 veen adjacent terminal C5402 5.2/MIL-STD Cond. B)	minute 202 met	hod
	1		MECH	IANICAL REQU	JIRE	CMENT		
8.5	Termina Tensile strength	l crimp	AWG # 22: 4.0 AWG # 24: 3.0 AWG # 26: 1.3 AWG # 28: 1. AWG # 30: 0.3	Okgf Min. Okgf Min. 8kgf Min. 1kgf Min. 8kgf Min.	Fix t pull of 2: C54 *Cri	the crimped terminal, app out force on the wire at a 5±3 mm/minute (Basedu 02 6.22) mping specification refe	ply axial speed rate pon JIS er to Figur	e re 1
8.6	Termina Housing Retentio Force (For Plug	l / n g)	1.5kgf Min.		Rete fron	ention speed 25±3 mm n housing	per min	ute
EVISI	<u>ON:</u> <u>E</u>	CR/ECN	INFORMATION:	TITLE:				SHEET N
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8.7	Mating & Un-mating force	See Item 10		Inser 25 ±	rt and withdraw conne 3 mm per minute	ctor at sp	beed of
8.8	Durability	Contact resistar Less than twice Dielectric Withst To pass Para 8.	nce: of initial anding Voltage: 4	Com of in by th	nector shall be subject sertion and withdrawa ne rate of 10 cycles pe	ted to 30 al (repea r minute	cycles tedly
8.9	Pin retention force (For Header)	1.0 kgf Min.		Push 25±3	n pin from insulator ba 3 mm per minute	ise at spe	eed
8.10	Locking force	3.0 kgf Min.		Whi with min	le withdrawing plug & out terminal at speed 2 ute	ż recepta 25±3 mr	icle n per
		ENVIRO	NMENTAL RE(UIR	EMENTS		
8.11	Temperature rise	Temp 30°C Ma	aximum.	All te serie and char temp therr EIA-3	erminals shall be connected es, and then applied the current. Until the temper aged, (about 6 hours), m perature of the terminal s nocouple. 364-70 A	cted in a c rated vol rature be neasure th surface u	lirected tage not ne sing
8.12	Vibration	Appearance: No Discontinuity: 2 1 micro second	o damage 20mΩ Max (Final) max.	1.5 r 2 ho (MII	nm 10-55-10 HZ / min urs for X , Y and Z din L-STD-202,method 20	nute each rections,)1A)	h
8.13	Heat aging	No damage Contact resistar Less than twice 20mΩ Max (Fina	nce: of initial al)	105 MIL cond	±2°C , 96 hours(JIS C -STD-202,method 108 lition A)	C0021/ 8A,	
8.14	Humidity	Appearance: No Contact resistar 20mΩ Max (Fina Insulation resist To pass Para 8.	o damage nce: nl) tance: 3	40±2 meas 30 r after meth	2°C, 90~95% RH, 96 surement must be take nin. tested (JIS C0020/M) nod 103 B, condition F	hours en withir IL-STD- 3)	1 202,
<u>evisi</u> D	ON: ECR/ECN EC No.: DATE:	<u>1 INFORMATION:</u> 2019/06/03	<u>тітіе:</u> СКМ 20	15 5	SERIES		SHEET 4 of
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Five cycle consists of :(JIS C0025) (1)-40°C+0 / -03°C, ~ 30 min. Appearance: No damage Temperature 8.15 (2) 25°C, $\sim 3 \text{ min.}$ Contact resistance: cycling (3) $105^{\circ}C+3 / -0^{\circ}C$, ~30 min. $20m\Omega$ Max (Final) (4) 25°C. \sim 3 min. Temperature: 35±2°C Solution: $5\pm1\%$ Appearance: No damage Spray time: 48 ± 4 Hours 8.16 Salt spray Contact resistance: Measurement must be taken after water $20m\Omega$ Max (Final) rinse(JIS C5402 7.1/MIL-STD-202. method 101 D, condition B) Lead-Free Process for SMT Type: Minimum: Soldering time: 3±0.5 second 8.17 Solder ability 95% of immersed area Soldering pot: 245±5°C Resistance to Subject product mounted on printed circuit 8.18 Wave Soldering No physical damage shall occur board to solder bath at $260\pm5^{\circ}$ C for $5s\pm0.5s$ Heat Resistance to 8.19 Reflow heat Refer Reflow temperature profile No damage (SMT) Resistance to Apply solder iron in solder tail 8.20 soldering No damage Temperature: $380\pm5^{\circ}$ C, ±5 sec. heat

2008TXX-XX Wire Size(AWG) #22 #24 #26 #28 #30 CRIMP WIDTH 1.3±0.1 1. CONDUCTOR (mm) 0.90~0.80 0.85~0.76 0.75~0.65 0.65~0.54 0.54~0.45 CRIMP HEIGHT 1.50~1.55 CRIMP WIDTH 2. INSULATION (mm) CRIMP HEIGHT 1.75 1.75 1.60 1.45 1.29 4.0Kgf 3.0Kgf 1.8Kgf 1.1Kgf 0.8Kgf CRIMP STRENGTH (MIN) (MIN) (MIN) (MIN) (MIN) Figure 1

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

[2008TXX-XX]

DIN No	At	Initial	At 30th
T IIN INU.	Mating (kgf Max.)	Un-mating (kgf Min.)	Un-mating (kgf Min.)
2	0.80	0.20	0.16
3	1.20	0.30	0.24
4	1.60	0.40	0.32
5	2.00	0.50	0.40
6	2.40	0.60	0.48
7	2.80	0.70	0.56
8	3.20	0.80	0.64
9	3.60	0.90	0.72
10	4.00	1.00	0.80
11	4.40	1.10	0.88
12	4.80	1.20	0.96
13	5.20	1.30	1.04
14	5.60	1.40	1.12
15	6.00	1.50	1.20
16	6.40	1.60	1.28

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11. PRODUCT QUALIFICATION AND REQUALIFICATION TEST SEQUENCE

						Те	st Gro	up				
Test (or Examination	А	В	C	D	Е	F	G	Н	Ι	J	K
			Test Sequence (a)									
Examinati	on of Product	1,8	1,7	1	1	1,3	1	1,5	1,5	1,5	1,3	1,3
Contact R	lesistance	2,7	2,6					2,4	2,4	2,4		
nsulation	Resitance		3,5									
Dielectric Voltage	withstanding	3,6										
Cerminal (crimp Tensile	1		2								
Ferminal / nsertion 1	' Housing Force (For Plug)				2							
Mating &	Un-mating force	4										
Durability		5										
Femperati	ure Rise						2					
Vibration						2						
Heat aging	Ş							3				
Humidity			4									
Temperati	ure cycling								3			
alt spray										3		
Solder abi	lity										2	
Resistance SMT)	to IR reflow heat											2
Sample Siz	ze	5	5	-	-	~	5	-	5	5	5	5