



# PRODUCT SPECIFICATION

## 2.5 mm CENTER BOARD-IN CONNECTOR

### 1. SCOPE (적용범위)

This Product Specification covers the 2.5mm pitch Center Board-In Connector series.  
(이 제품 Spec.은 2.5mm pitch Center Board-In Connector에 대하여 규정한다.)

### 2. PRODUCT DESCRIPTION (제품구성)

#### 2.1 PRODUCT NAME AND SERIES NUMBER

Product Name (제품명)		Parts Number (제품번호)
Housing		35022- 00** (**:CKTS)
Terminal	Right Angle	35021 - 1001 35021 - 1101 35021 - 1110 35021 - 1160 (Lead-Free)
	Straight	35044 - 9103 / 9310 35044 - 9104 / 9410 35044 - 9360 / 9460(Lead-Free)

#### 2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS(치수, 재질, 도금)

Refer to the attached product Drawings  
(제품도 참조)

#### 2.3 SAFETY AGENCY APPROVALS(안전승인)

### 3. RATINGS AND APPLICABLE WIRES (정격 및 적용 전선)

ITEM (항목)	STANDARD (규격)		
RATED VOLTAGE (MAX.)	125 V		[AC(rms)/DC]
RATED CURRENT (MAX.) AND APPLICABLE WIRES  (최대 허용 전류 및 적용전선)	AWG #22	3.0A	INSULATION Diameter :  Ø1.9mm MAX.
	AWG #24	2.5A	
	AWG #26	1.5A	
	AWG #28	1.0A	
AMBIENT TEMP. RANGE (사용 온도 범위)	- <u>40</u> °C to + <u>105</u> °C ; Including Terminal Temp. Rise (통전에 의한 온도 상승분 포함)		

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DOCUMENT NUMBER: <b>PS-35022-003</b>	CREATED / REVISED BY: <b>J.H.LEE</b>	CHECKED BY: <b>K.S.KIM</b>	APPROVED BY: <b>Y.Soo.KIM</b>



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## 4. PERFORMANCE(성능)

### 4.1 ELECTRICAL REQUIREMENTS(전기적 특성)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	<b>Contact Resistance</b>	Crimp the applicable wire on to the terminal, measure by dry circuit, 20mV MAX. 10mA	5milliohms MAXIMUM
	접촉 저항	Wire와 압착된 Terminal을 개방전압 20mV이하, 단락전류 10mA에서 측정한다	5 mΩ MAX.
2	<b>Insulation Resistance</b>	Mate applicable cable & apply 500 V DC between adjacent terminal or ground. (MIL-STD-202 Method 302 COND.B)	1000 Megaohms MINIMUM
	절연 저항	결합된 Connector를 인접 Ter' l 사이 및 Ter' l 과 GND간에 DC500V를 인가하여 측정한다.(MIL-STD-202 시험법302 조건B)	1000 MΩ MIN.
3	<b>Dielectric Strength</b>	Mate Connectors, apply 1000V AC(rms) for 1 minute between adjacent terminals or ground. (MIL-STD-202 Method 301)	No breakdown; Current leakage < 5 mA
	내 전 압	결합된 Connector를 인접 Ter' l 사이 및 Ter' l 과 GND간에 AC1000V를 1분간 가한다. (MIL-STD-202 시험법 301)	절연파괴 없을 것; 누설전류 < 5 mA

### 4.2 MECHANICAL REQUIREMENTS(기계적 특성)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT	
4	<b>Insertion and Withdrawal force</b>	Insert & withdraw connectors at the speed rate of 25±3mm/minute to PCB hole. (per single circuit, initial)	<b>Insertion (삽입력)</b>	1.0 Kgf MAX
	삽입력 및 발거력	PCB Hole에 매분 25 ± 3 mm의 속도로 삽,발거를 실시한다. (1CKT기준, CKT마다 초기치로 측정)	<b>Withdrawal (발거력)</b>	0.1 Kgf MIN.
5	<b>Crimping Pull Out Force</b>	Fix the crimped ter'l, apply axial pull out force on the wire at speed rate of 25±3mm/minute. (JIS C5402 6.8)	AWG #22	3.5 Kgf MIN.
			AWG #24	3.0 Kgf MIN.
	단자 고착력	압착된 Ter'l을 매분 25±3 mm의 속도로 wire를 축방향으로 당긴다. (JIS C5402 6.8)	AWG #26	2.0 Kgf MIN.
			AWG #28	1.5 Kgf MIN.

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## 4.2 MECHANICAL REQUIREMENTS(Continued)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
6	Terminal/Housing Insertion Force	Insert the crimped terminal into the housing.	1.0 Kgf MAXIMUM
	Terminal 삽입력	하우징에 압착된 Terminal을 삽입하여 측정한다	1.0 Kgf MAX.
7	Terminal/Housing Retention Force	Apply axial pull out force at the speed rate of $25 \pm 3$ mm/min. on terminal assembled in the housing.	1.0 Kgf MINIMUM.
	Terminal 유지력	하우징과 Terminal을 조립한 상태에서 매분 $25 \pm 3$ mm/min.의 속도로 축방향으로 잡아당겨 측정한다.	1.0 Kgf MIN.

## 4.3 ENVIRONMENTAL REQUIREMENTS (환경적 특성)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT	
8	Temperature Rise	Measure the temperature rise at the rated current. (UL498)	30°C MAXIMUM	
	온도 상승	최대허용 전류를 통전 후 온도 상승분을 측정한다. (UL498)	30°C MAX.	
9	Heat Resistance	Mate connectors : Duration: 96 hours Temperature: $105 \pm 2^\circ\text{C}$	Appearance	No Damage
			Contact Resistance	10 milliohms MAXIMUM
	내 열 성	$105 \pm 2^\circ\text{C}$ 에서 96시간 방치 후 꺼내어 측정한다	외 관	변형 없을 것
10	Cold Resistance	Mate connectors : Duration: 96 hours Temperature: $-40 \pm 3^\circ\text{C}$	Appearance	No Damage
			Contact Resistance	10 milliohms MAXIMUM
	내 한 성	$-40 \pm 3^\circ\text{C}$ 에서 96시간 방치 후 꺼내어 측정한다.	외 관	변형 없을 것
11	Vibration	Amplitude : 1.5mm P-P Sweep time : 10-55-10 Hz in 1 minute Duration : 2 Hours in each X,Y,Z axes	Appearance	No Damage
			Contact Resistance	10 milliohms MAXIMUM
			Discontinuity	1 microsecond MAXIMUM
	내 진동성	진폭 : 1.5mm P-P 진동수 : 10-55-10 Hz/분 진동시간 : X,Y,Z축 각 2시간	외 관	변형 없을 것
			접촉 저항	10mΩ max.
			순간 단락	1 μs max.

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## 4.3 ENVIRONMENTAL REQUIREMENTS(continued)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT	
12	Shock	50g, 3 strokes in each X,Y,Z axes	Appearance	No Damage
			Contact Resistance	10 milliohms MAXIMUM
			Discontinuity	1 microsecond MAXIMUM
	내 충격성	50g의 충격을 각 X,Y,Z축에 3회 가한다	외관	변형 없을 것
			접촉 저항	10 mΩ max.
			순간 단락	1 μs max.
13	Humidity	Temperature: 40 ± 2°C Relative humidity: 90-95% Duration: 96 hours. Remove surface moisture and air dry for 1 hour prior to measurements. (JIS C0022/MIL-STD-202 Method 103B COND.B)	Appearance	No Damage
			Contact Resistance	10 milliohms MAXIMUM
			Insulation Resistance	10 MΩ MAXIMUM
			Dielectric Strength	100MegaΩ MINIMUM
14	내 습성	주위 온도 40 ± 2°C, 상대습도 90-95%상에서 96시간 방치 후 꺼내어 측정한다. 측정 1시간 전에 표면습기 및 대기건조 제거한다 (JIS C0022/MIL-STD-202 Method 103B COND.B)	외관	No Breakdown
			접촉 저항	10 mΩ max.
			절연 저항	10 MΩ MAX.
			내 전압	100MΩ MIN.
15	Salt Spray	Temperature : 35 ± 2°C Solution : 5± 1% Time : 48± 4Hrs measurement must be taken after water rinse	Appearance	No Damage
			Contact Resistance	10 milliohms MAXIMUM
	염수 분무	주위 온도 35 ± 2°C에서 5± 1% 중량비의 염수를 48± 4시간 분무하고 시험 후 상온에서 물로 씻은 후 실온에서 건조시킨다	외관	이상없을것
			접촉저항	10 mΩ Max.
16	Corrosive Atmosphere: Sulfur Dioxide Gas (SO <sub>2</sub> )	24 hours exposure to 50± 5 ppm SO <sub>2</sub> gas at 40 ± 2°C	Appearance	No Damage
			Contact Resistance	10 milliohms MAXIMUM
	내 아황산성	주위온도 40 ± 2°C에서 50± 5ppm의 아황산가스에 24시간 방치한 후 꺼내어 측정한다	외관	이상없을것
			접촉저항	10 mΩ Max.

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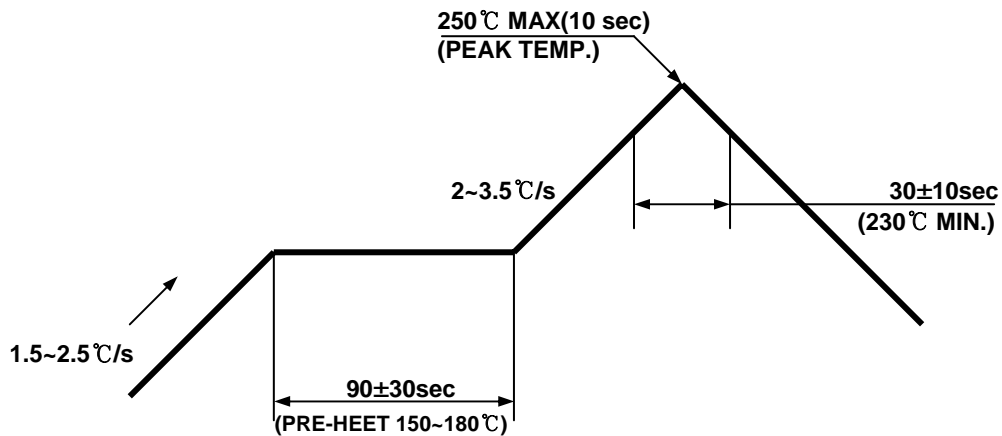


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## 4.3 ENVIRONMENTAL REQUIREMENTS(continued)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT	
17	Corrosive Atmosphere Ammonia Gas (NH <sub>3</sub> )	40 minutes in saturated NH <sub>3</sub> by 28% liquid ammonia at 40 ± 2°C	Appearance	No Damage
			Contact Resistance	10 milliohms MAXIMUM
	내 암모니아성	주위온도 40 ± 2°C에서 28% NH <sub>3</sub> 용액에 40분 방치 후 꺼내어 측정한다	외 관	변형 없을 것
			접촉 저항	10 mΩ MAX.
18	Solderability	Solder Duration : 3 ± 0.5 seconds Solder Temperature : 245 ± 5°C	95% of immeased area must be no voids, pin holes.	
	납 땀 성	납땀시간 : 3 ± 0.5 seconds 납땀온도 : 245 ± 5°C	침적 면적 95% 이상	
19	Resistance to Soldering Heat	Reflow Soldering Method (see para. 5)	No Damage	
		Soldering Iron Method - Solder Duration: 3 ± 0.5 seconds; - Solder Temperature: 260 ± 5°C		
	납땀 내열성	Reflow Soldering 방식(제5항 참조)	변형 없을 것	
		수동 Solder 방식 - 납땀시간 : 3 ± 0.5 seconds; - 납땀온도 : 260 ± 5°C		

## 5. INFRARED REFLOW CONDITION(적외선 REFLOW 조건)



Temperature Condition Graph(온도조건 그래프)

(Temperature on board pattern side)

**Note : Please check the reflow soldering condition by your own devices beforehand.  
Because the condition changes by the soldering devices, P.C.Board, and so on.**  
(본 Reflow조건은 Reflow 장치 및 기판조건 등에 의해서 다를 수가 있으므로,  
사전에 Reflow조건을 확인하여 주십시오)

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