

# molex<sup>®</sup> PRODUCT SPECIFICATION

## 2.0 mm CENTER BOARD-IN CONNECTOR

### 1. SCOPE(적용범위)

This Product Specification covers the 2.0 mm pitch Center Board-In Connector series  
(이 Spec.은 2.0mm pitch Center Board-In Connector에 대하여 규정한다)

### 2. PRODUCT DESCRIPTION(제품구성)

#### 2.1 PRODUCT NAME AND SERIES NUMBER(제품명 & 제품번호)

Product Name		Parts Number
HOUSING		35023-00** (H/F VERSION) **:CKT ONLY (02~16)
Applicable Terminal	Hosing : Right Angle	35021-1201 35021-1301 35021-1310 35021-1360(Lead-Free)
	Housing : Straight	35044-9101/9110 35044-9102/9210 35044-9160/9260(Lead-Free)

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

Refer to the attached product Drawings  
(제품도 참조)

### 3. RATINGS(정격)

Item (구분)	Standard (규격)		
Rated Voltage(MAX) (최대허용전압)	125V		
Rated Current(MAX) and Applicable wires (최대허용전류 적용전선)	AWG#24	2.5 A	[AC(실효치 rms)/ DC] 피복외경: DIA. Ø 1.5 mm MAX
	AWG#26	2.0 A	
	AWG#28	1.0 A	
	AWG#30	0.5 A	
Ambient temperature Range (사용온도조건)	- 40 °C ~ + 105 °C <sup>*1</sup>		

REVISION: <b>C1</b>	ECR/ECN INFORMATION: EC No: KOR2013-0030 DATE: 2012/09/04	TITLE: <b>2.0mm B-IN CONN HOUSING PRODUCT SPECIFICATION</b>	SHEET No. <b>1 of 6</b>
DOCUMENT NUMBER: <b>PS-35023-001</b>	CREATED / REVISED BY: <b>JH.LEE / SK.CHO</b>	CHECKED BY: <b>SH.CHU</b>	APPROVED BY: <b>YSOO.KIM</b>

# molex<sup>®</sup> PRODUCT SPECIFICATION

## 4. PERFORMANCE(성능)

### 4.1 ELECTRICAL REQUIREMENTS(전기적 특성)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Contact Resistance	Mate connectors, measure by dry circuit apply a maximum voltage of 5mV and a current of 10mA	5 milliohms MAXIMUM
	접촉 저항	Connector를 결함한 상태에서 개방전압 5mV이하 단락전류 10mA에서 측정한다	5mΩ max.
2	Insulation Resistance	Mate applicable FPC and Apply a voltage of 500V DC between adjacent terminals and between terminals to ground	1000 Megohms MINIMUM
	절연 저항	Connector를 결함한 상태에서 연결하는 단자와 단자, 단자와 접지간에 DC 500V를 가하고 측정한다	1000MΩ MIN.
3	Dielectric Strength	Mate connectors, Apply a voltage of 1000V AC(rms) for 1 minute between adjacent terminals and between terminals to ground.	No breakdown Current leakage<5mA
	내 전 압	Connector를 결함한 상태에서 연결하는 단자와 단자, 단자와 접지간 AC 1000V를 1분간 가한다	절연파괴 없을것 누설전류<5mA

### 4.2 MECHANICAL REQUIREMENTS(기계적 특성)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT	
4	Insertion And Withdrawal Force	Insertion and withdraw connectors at the speed rate of 25 ± 3 mm per minute.	Insertion (삽입력)	1.0 kgf MAX
	삽입 발거력	매분 25 ± 3mm/min의 속도로 삽발거를 한다.	Withdrawal (발거력)	0.1 kgf MIN.
5	Crimping Pull Out Force	Fix the crimped ter'l, apply axial pull out force on the wire at speed rate of 25±3mm/min (JIS C5402 6.8)	AWG#24	3.0 kgf MIN
			AWG#26	2.0 kgf MIN
	단자 고착력	압착된 Ter'l을 매분 25±3mm/min의 속도로 wire를 축방향으로 당긴다.	AWG#28	1.5 kgf MIN
			AWG#30	1.0 kgf MIN

REVISION: <b>C1</b>	ECR/ECN INFORMATION: EC No: KOR2013-0030 DATE: 2012/09/04	TITLE: <b>2.0mm B-IN CONN HOUSING PRODUCT SPECIFICATION</b>	SHEET No. <b>2 of 6</b>
DOCUMENT NUMBER: <b>PS-35023-001</b>	CREATED / REVISED BY: <b>JH.LEE / SK.CHO</b>	CHECKED BY: <b>SH.CHU</b>	APPROVED BY: <b>YSOO.KIM</b>

# molex<sup>®</sup> PRODUCT SPECIFICATION

## 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 MAX
	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 MIN.
	Terminal 유지력	하우징과 Terminal을 조립한 상태에서 매분 $25 \pm 3$ mm/min의 속도로 축방향으로 잡아당겨 측정한다.	1.0 kgf MIN.

## 4.3 ENVIRONMENTAL REQUIREMENTS(환경적 특성)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT	
8	Temperature	Measure the temperature rise at the rated current.(UL498)	30 °C max	
	온도상승	최대허용 전류를 통전 후 온도 상승분을 측정한다.(UL 498)	30 °C max	
9	Heat Resistance	Mate connectors : Duration: 96 hours Temperature: $105 \pm 2^{\circ}\text{C}$	Appearance	No Damage
	내 열 성	$105 \pm 2^{\circ}\text{C}$ 에서 96시간 방치 후 꺼내어 측정한다	Contact Resistance	40 milliohms MAXIMUM
10	Cold Resistance	Mate connectors : Duration: 96 hours Temperature: $-40 \pm 3^{\circ}\text{C}$	외관	변형 없을 것
	내 한 성	$-40 \pm 3^{\circ}\text{C}$ 에서 96시간 방치 후 꺼내어	접촉저항	40mΩ max.
10	Cold Resistance	Mate connectors : Duration: 96 hours Temperature: $-40 \pm 3^{\circ}\text{C}$	Appearance	No Damage
	내 한 성	$-40 \pm 3^{\circ}\text{C}$ 에서 96시간 방치 후 꺼내어	Contact Resistance	40 milliohms MAXIMUM
			외관	변형 없을 것

REVISION: <b>C1</b>	ECR/ECN INFORMATION: EC No: KOR2013-0030 DATE: 2012/09/04	TITLE: <b>2.0mm B-IN CONN HOUSING PRODUCT SPECIFICATION</b>	SHEET No. <b>3 of 6</b>
DOCUMENT NUMBER: <b>PS-35023-001</b>	CREATED / REVISED BY: <b>JH.LEE / SK.CHO</b>	CHECKED BY: <b>SH.CHU</b>	APPROVED BY: <b>YSOO.KIM</b>

# molex<sup>®</sup> PRODUCT SPECIFICATION

## 4.3 ENVIRONMENTAL REQUIREMENTS(CONTINUED)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT	
11	Cold Resistance	Mate connectors : Duration: <b>96</b> hours Temperature: <b>-40 ± 3°C</b>	Appearance	No Damage
			Contact Resistance	<b>10</b> milliohms MAXIMUM
	내 한 성	-40 ± 3°C에서 96시간 방치 후 꺼내어 측정한다	외관	변형 없을 것
			접촉저항	<b>10mΩ</b> max.
12	Vibration	Amplitude : <b>1.5mm</b> P-P Sweep time : <b>10-55-10</b> Hz in 1 minute Duration : <b>2</b> Hours in each X,Y,Z axes	Appearance	No Damage
			Contact Resistance	<b>10</b> milliohms MAXIMUM
			Discontinuity	<b>1</b> microsecond MAXIMUM
	내 진동성	진 폭 : <b>1.5mm</b> P-P 진동수 : <b>10-55-10</b> Hz/분 진동시간 : X,Y,Z축 각 <b>2</b> 시간	외관	변형 없을 것
			접촉저항	<b>10mΩ</b> max.
			순간단락	<b>1μs</b> max.
13	Shock	<b>50g</b> , 3 strokes in each X,Y,Z axes	Appearance	No Damage
			Contact Resistance	<b>10</b> milliohms MAXIMUM
			Discontinuity	<b>1</b> microsecond MAXIMUM
	내 충격성	50g의 충격을 각 X,Y,Z축에 3회 가한다	외관	변형 없을 것
			접촉저항	<b>10mΩ</b> max.
			순간단락	<b>1μs</b> max.
14	Humidity	Temperature: <b>40 ± 2°C</b> Relative humidity: <b>90-95%</b> Duration: <b>96</b> hours.  Remove surface moisture and air dry for 1 hour prior to measurements.	Appearance	No Damage
			Contact Resistance	<b>40</b> milliohms MAXIMUM
			Insulation Resistance	<b>100</b> Megohms MINIMUM
			Dielectric Strength	No Breakdown
	내 습 성	주위온도 <b>40 ± 2°C</b> , 상대습도 <b>90-95%</b> 상에서 <b>96</b> 시간 방치후 꺼내어 측정한다 측정1시간전에 표면습기 및 대기건조 제거한다	외관	변형 없을 것
			접촉저항	<b>10mΩ</b> max.
			절연저항	<b>10MΩ</b> max..
			내전압	<b>100MΩ</b> max.

REVISION: <b>C1</b>	ECR/ECN INFORMATION: EC No: <b>KOR2013-0030</b> DATE: <b>2012/09/04</b>	TITLE: <b>2.0mm B-IN CONN HOUSING PRODUCT SPECIFICATION</b>	SHEET No. <b>4 of 6</b>
DOCUMENT NUMBER: <b>PS-35023-001</b>	CREATED / REVISED BY: <b>JH.LEE / SK.CHO</b>	CHECKED BY: <b>SH.CHU</b>	APPROVED BY: <b>YSOO.KIM</b>

# molex<sup>®</sup> PRODUCT SPECIFICATION

## 4.3 ENVIRONMENTAL REQUIREMENTS (CONTINUED)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT	
15	Salt Spray	Duration: <b>48±4</b> hours exposure; Atmosphere: salt spray from the <b>5%</b> solution; Temperature: <b>35 ± 2°C</b>	Appearance	No Damage
			Contact Resistance	<b>10</b> milliohms MAXIMUM
	염수분무	주위온도 : <b>35 ± 2°C</b> Solution : <b>5%</b> 시간 : <b>48±4</b> 시간 방치	외관	변형 없을 것
			접촉저항	<b>10mΩ</b> max.
16	Sulfur Dioxide Gas (SO <sub>2</sub> )	Duration: <b>24</b> hours exposure; Atmosphere: <b>50</b> ppm SO <sub>2</sub> gas; Temperature: <b>40 ± 2°C</b>	Appearance	No Damage
			Contact Resistance	<b>10</b> milliohms MAXIMUM
	내 아황산성	주위온도 : <b>40 ± 2°C</b> 환경 : <b>50</b> ppm SO <sub>2</sub> gas 시간 : <b>24</b> 시간 방치	외관	변형 없을 것
			접촉저항	<b>10mΩ</b> max.
17	Ammonia Gas (NH <sub>3</sub> )	Duration: <b>40</b> minutes exposure; Atmosphere: NH <sub>3</sub> gas evaporating from a <b>28%</b> Ammonia solution	Appearance	No Damage
			Contact Resistance	<b>10</b> milliohms MAXIMUM
	내 암모니아성	주위온도 : <b>40 ± 2°C</b> 환경 : <b>28%</b> NH <sub>3</sub> gas 시간 : <b>40</b> 분 방치	외관	변형 없을 것
			접촉저항	<b>10mΩ</b> max.
19	Solderability	Solder Duration : <b>3 ± 0.5</b> seconds Solder Temperature : <b>245 ± 3°C</b>	Solder coverage: <b>95%</b> MINIMUM	
	납 땜 성	납땜시간 : <b>3 ± 0.5</b> sec 납땜온도 : <b>245 ± 3°C</b>	<b>95%</b> min. 침적	

REVISION: <b>C1</b>	ECR/ECN INFORMATION: EC No: <b>KOR2013-0030</b> DATE: <b>2012/09/04</b>	TITLE: <b>2.0mm B-IN CONN HOUSING PRODUCT SPECIFICATION</b>	SHEET No. <b>5 of 6</b>
DOCUMENT NUMBER: <b>PS-35023-001</b>	CREATED / REVISED BY: <b>JH.LEE / SK.CHO</b>	CHECKED BY: <b>SH.CHU</b>	APPROVED BY: <b>YSOO.KIM</b>