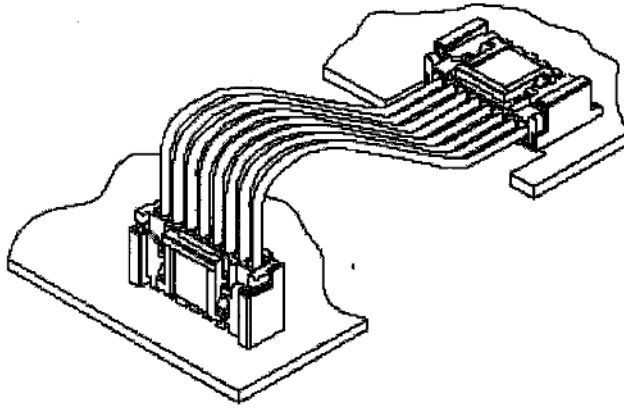


# TITLE : 2.0 PITCH W/B CONN. (P-LOCK)

## 1.0 적용범위 (SCOPE)

이 사양서는 2.0 mm pitch connector(Positive Lock) series에 대하여 규정한다.  
 This Product Specification covers the 2.0 mm pitch connector(Positive Lock) series.



## 2.0 제품사양 (PRODUCT DESCRIPTION)

### 2.1 제품명 및 제품번호 (PRODUCT NAME AND SERIES NUMBERS)

제품명 (PRODUCT NAME)	제품번호 (PART NUMBER)
HOUSING	35507-**0*
WAFER ASSY - ST	35362-****
WAFER ASSY - RA	35363-****
TERMINAL	50212-8000

### 2.2 SAFETY AGENCY APPROVALS

UL / CSA 인증 (UL/CSA APPROVALS)

## 3.0 RATINGS

항목 (ITEM))	규격 (STANDARD)	
최대허용전압 [RATED VOLTAGE (MAX.)]	125V	
최대허용전류 및 사용 전선 [RATED CURRENT(MAX.) AND APPLICABLE WIRES	AWG #24	2.0 A
	AWG #26	1.5 A
	AWG #28	1.0 A
	AWG #30	0.5 A
사용온도범위 (AMBIENT TEMP. RANGE)	-40°C ~ 105°C	

REVISION: <b>H</b>	ECR/ECN INFORMATION: EC No: KOR2003-0102 DATE: 2002 / 10 / 31	TITLE: <b>NEW 2.0 W/B CONN. (Positive Lock) (2-20P, 6Kinds of color version)</b>	SHEET No. 1 of 6
DOCUMENT NUMBER: <b>PS-35507-001</b>	CREATED / REVISED BY: JUNGHKIM	CHECKED BY: YUNSIKKIM 02/10/31	APPROVED BY: C.W.LEE

#### 4.0 성능 (PERFORMANCE)

##### 4.1 전기적 성능 (ELECTRICAL REQUIREMENTS)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
4.1.1	접촉저항	결합된 Connector를 개방전압 20mV이하, 단락전류 10mA에서 측정	20 mΩ MAX.
	Contact Resistance	Mate connectors measure by dry circuit, 20mV Max. 10mA	
4.1.2	압착상태의 접촉저항	Wire를 사용하여 터미널을 압착한 상태에서 개방전압 20mV이하, 단락전류 10mA에서 측정한다.	5 mΩ MAX.
	Contact Resistance of Wire Termination	Crimp the applicable connectors at the speed rated of 25±3mm per minute	
4.1.3	절연저항	결합된 Connector를 인접 Terminal사이 및 Terminal과 GND간에 DC500V를 인가하여 측정한다.	1000 MΩ MIN.
	Insulation Resistance	Mate connectors: apply a voltage of 500 VDC between adjacent terminals and between terminals to ground.	
4.1.4	내전압	결합된 Connector를 인접 Terminal사이 및 Terminal과 GND간에 AC500V를 1분간 인가한다.	No breakdown;
	Dielectric Withstanding Voltage	Mate connectors: apply 500VAC for 1 minute between adjacent terminals and between terminals to ground.	
4.1.5	온도상승	결합된 커넥터의 최대허용전류를 통전하고 커넥터의 온도상승분을 측정한다.	30℃ MAXIMUM
	Temperature Rise	Mate connectors: measure the temperature rise at the rated current	

##### 4.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
4.2.1	삽입력 및 발거력	매분 25±3mm의 속도로 삽·발거를 실시한다.	제 6항 참조 (REFER TO PARAGRAPH 6)
	Insertion & Withdrawal Forces	Insert and withdraw connectors at a rate of 25 ± 3 mm per minute.	

REVISION: <b>H</b>	ECR/ECN INFORMATION: EC No: KOR2003-0102 DATE: 2002 / 10 / 31	TITLE: <b>NEW 2.0 W/B CONN. (Positive Lock) (2-20P, 6Kinds of color version)</b>	SHEET No. <b>2 of 6</b>
DOCUMENT NUMBER: <b>PS-35507-001</b>	CREATED / REVISED BY: <b>JUNGHKIM</b>	CHECKED BY: <b>YUNSIKKIM</b>	APPROVED BY: <b>C.W.LEE</b>

**4.2 MECHANICAL REQUIREMENTS (continued)**

4.2.2	단자 고착력	압착된 터미널을 매분 25±3mm의 속도로 WIRE를 축방향으로 당긴다.	AWG#24	3.0Kgf/MIN
			AWG#26	.2.0Kgf/MIN.
	Crimping Fullout Forces	Fix the crimped terminal, apply axial pullout force on the wire at a rate of 25 ± 3 mm per minute.	AWG#28	1.0Kgf/MIN.
			AWG#30	0.5Kgf/MIN.
4.2.3	터미널 삽입력	하우징에 터미널을 조립한 상태에서 매분 25±3mm의 속도로 축방향으로	1.0 kgf MAXIMUM	
	Terminal Insertion Force (into Housing)	Apply an axial insertion force on the terminal at a rate of 25 ± 3 mm per minute		
4.2.4	터미널 유지력	하우징과 터미널을 조립한 상태에서 매분 25±3mm의 속도로 축방향으로 당긴다.	1.5 kgf MINIMUM	
	Terminal Retention Force (in Housing)	Apply axial pullout force on the terminal in the housing at a rate of 25 ± 3 mm per minute.		
4.2.5	PIN 유지력	하우징과 터미널을 조립한 상태에서 매분 25±3mm의 속도로 축방향으로 당긴다.	1.0 kgf MINIMUM	
	Pin Retention Force	Apply an axial push force on the pin at a rate of 25 ± 3 mm per minute		
4.2.6	Connector 결합력	단자간 결합이 제외된 결합된 커넥터를 매분 25±3mm의 속도로 축방향으로 당긴다.	2~3ckts	2 kgf MINIMUM
	Lock Strength	Mated connector (Only mold part), apply axial pullout force at the speed rate of 25±3mm per minute	4~20ckts	3 kgf MINIMUM
4.2.7	반복 삽-발거	1분간 10회의 속도로 삽·발거를 30회 반복한다.	접촉저항	40 mΩ MAX.
	REPEATED INSERTION/WITHDRAWAL	When mated up to 30 cycles repeatedly by the mate 10 cycle per minute.	Contact Resistance	

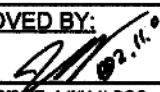
REVISION: <b>H</b>	ECR/ECN INFORMATION: EC No: KOR2003- 010Z DATE: 2002 / 10 / 31	TITLE: <b>NEW 2.0 W/B CONN. (Positive Lock) (2-20P, 6Kinds of color version)</b>	SHEET No. <b>3 of 6</b>
DOCUMENT NUMBER: <b>PS-35507-001</b>	CREATED / REVISED BY: <b>JUNGHKIM</b>	CHECKED BY: <b>YUNSIKKIM</b>	APPROVED BY: <b>C.W.LEE</b> <i>(Signature)</i>

#### 4.2 MECHANICAL REQUIREMENTS (continued)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT	
4.2.8	내진동성	진 폭 : 1.5mm P-P 진 동 수 : 10-55-10Hz/min. 진동시간: X, Y, Z 축 각 2시간	외관	이상 없을 것
			접촉저항	40 mΩ MAX.
			순간단락	1μs MAX.
	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	40 mΩ MAX.
			Discontinuity	1μs MAX.
4.2.9	내충격성	50g의 충격을 각 X,Y,Z 축에 3회 가한다.	외관	이상 없을 것
			접촉저항	40 mΩ MAX.
			순간단락	1μs MAX.
	SHOCK	50G, 3 Stroke in each axes.	Appearance	No Damage
			Contact Resistance	40 mΩ MAX.
			Discontinuity	1μs MAX.

#### 4.3 ENVIRONMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT	
4.3.1	내열성	결합된 커넥터를 105 ± 2°C에서 96시간 방치	외관	No Damage.
			접촉저항변화	40mΩ MAX
	Heat Resistance	Mate connectors; Duration: 96 hours; Temperature: 105 ± 2°C	Appearance	No Damage
			Contact Resistance	40mΩ MAX
4.3.2	내한성	결합된 커넥터를 -40 ± 3°C 에서 96시간 방치	외관	No Damage.
			접촉저항변화	40mΩ MAX
	Cold Resistance	Mate connectors; Duration: 96 hours; Temperature: -40 ± 3°C	Appearance	No Damage
			Contact Resistance	40mΩ MAX

REVISION: <b>H</b>	ECR/ECN INFORMATION: EC No: KOR2003- 0102 DATE: 2002 / 10 / 31	TITLE: <b>NEW 2.0 W/B CONN. (Positive Lock) (2-20P, 6Kinds of color version)</b>	SHEET No. <b>4 of 6</b>
DOCUMENT NUMBER: <b>PS-35507-001</b>	CREATED / REVISED BY: <b>JUNGHKIM</b>	CHECKED BY: <b>YUNSIKKIM</b>	APPROVED BY: <b>C.W.LEE</b> 

**4.3 ENVIRONMENTAL REQUIREMENTS (continued)**

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT	
4.3.3	온도사이클	커넥터를 결합하고, 아래의 방법으로 5Cycle 적용 온도 °C                      시간(분) -40 +0/-3                      30 +25 ±10                          5 MAXIMUM +105 +3/-0                      30 +25 ±10                          5 MAXIMUM	외관	이상없을것
			접촉저항	40mΩ MAX
	Thermal Shock	Mate connectors; expose to 5 cycles of: Temperature °C              Duration (Minutes) -40 +0/-3                      30 +25 ±10                          5 MAXIMUM +105 +3/-0                      30 +25 ±10                          5 MAXIMUM	Appearance	No Damage
			Contact Resistance	40mΩ MAX
4.3.4	내습성	커넥터를 결합하고, 아래의 방법적용 온도 : 60 ± 2°C 상대습도 : 90-95% 지속시간 : 96 시간	외관	이상없을것
			접촉저항	40mΩ MAX
			내전압	4.1.4항 만족
			절연저항	100MΩ MAX
4.3.4	Humidity (Steady State)	Mate connectors: expose to a temperature of 60 ± 2°C with a relative humidity of 90-95% for 96 hours.  Note: Remove surface moisture and air dry for 1 hour prior to measurements.	Appearance	No Damage
			Contact Resistance	40mΩ MAX
			Dielectric Strength	Must meet 4.1.4
			Insulation Resistance	100MΩ MAX
4.3.5	염수분무	결합된 커넥터를 35 ± 2°C에서 5± 1% 중량비의 염수를 48시간 분무하고 시험후 상온에서 물로 씻은후 실온에서 건조시킨다.	외관	이상없을것
			접촉저항	40mΩ MAX
	Salt Spray	48hours exposure to a salt spray from 5± 1% solution at 35 ± 2°C	Appearance	No Damage
			Contact Resistance	40mΩ MAX
4.3.6	아황산가스	결합된 커넥터를 40 ± 2°C의 온도에서 50 ± 2 ppm의 아황산가스에 24시간 방치한다.	외관	이상없을것
			접촉저항	40mΩ MAX
	Corrosive Atmosphere: Sulfur Dioxide Gas (SO <sub>2</sub> )	Mate connectors: Duration: 24 hours exposure; Atmosphere: 50 parts per million (ppm) SO <sub>2</sub> gas; Temperature: 40 ± 2°C	Appearance	No Damage
			Contact Resistance	40mΩ MAX

REVISION: <b>H</b>	ECR/ECN INFORMATION: EC No: KOR2003-010Z DATE: 2002 / 10 / 31	TITLE: <b>NEW 2.0 W/B CONN. (Positive Lock) (2-20P, 6Kinds of color version)</b>	SHEET No. <b>5 of 6</b>
DOCUMENT NUMBER: <b>PS-35507-001</b>	CREATED / REVISED BY: <b>JUNGHKIM</b>	CHECKED BY: <b>YUNSIKKIM</b>	APPROVED BY: <b>C.W.LEE</b> <i>(Signature)</i>

**4.3 ENVIRONMENTAL REQUIREMENTS (continued)**

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
4.3.7	납땜성	납땜시간 : $3 \pm 0.5$ sec 납땜온도 : $240 \pm 5$ °C	침적면적 95%이상
	Solderability	Soldering time : $3 \pm 0.5$ sec Solder temperature : $240 \pm 5$ °C	Solder coverage: 95% MIN. (Must be no voids, pin holes)
4.3.8	납땜내열성	납땜시간 : $5 \pm 0.5$ sec 납땜온도 : $260 \pm 5$ °C	이상없을것
	Solder Resistance	Dip connector terminal tails in solder: Solder Duration: $5 \pm 0.5$ seconds; Solder Temperature: $260 \pm 5$ °C	Visual: No Damage to insulator material

**5.0 외관, 형상, 치수 및 재질 (PRODUCT SHAPE, DIMENSION & MATERIAL)**

→ 도면참조 (Refer to the drawing)

**6.0 삽입력 및 발거력 (INSERTION / WITHDRAWAL FORCE)**

극 수 (Ckt size)	삽입력[최대] INSERTION[MAX.]			발거력[최소] WITHDRAWAL[MIN.]		
	1회 (INITIAL)	6회 (6 <sup>th</sup> )	30회 (30 <sup>th</sup> )	1회 (INITIAL)	6회 (6 <sup>th</sup> )	30회 (30 <sup>th</sup> )
2	3.6	3.4	3.4	0.1	0.07	0.07
3	4.4	4.1	4.1	0.1	0.07	0.07
4	5.2	4.8	4.8	0.1	0.07	0.07
5	6.0	5.5	5.5	0.25	0.15	0.15
6	6.6	6.0	6.0	0.25	0.15	0.15
7	7.2	6.5	6.5	0.25	0.15	0.15
8	7.8	7.0	7.0	0.25	0.15	0.15
9	8.4	7.5	7.5	0.45	0.30	0.30
10	9.0	8.0	8.0	0.45	0.30	0.30
11	9.6	8.5	8.5	0.45	0.30	0.30
12	10.2	9.0	9.0	0.45	0.30	0.30
13	10.8	9.5	9.5	0.65	0.45	0.45
14	11.4	10.0	10.0	0.65	0.45	0.45
15	12.0	10.5	10.5	0.65	0.45	0.45
16	12.6	11.0	11.0	0.65	0.45	0.45
17	13.2	11.5	11.5	0.85	0.60	0.60
18	13.8	12.0	12.0	0.85	0.60	0.60
19	14.4	12.5	12.5	0.85	0.60	0.60
20	15.0	13.0	13.0	0.85	0.60	0.60

REVISION: <b>H</b>	ECR/ECN INFORMATION: EC No: KOR2003-010Z DATE: 2002 / 10 / 31	TITLE: <b>NEW 2.0 W/B CONN. (Positive Lock) (2-20P, 6Kinds of color version)</b>	SHEET No. <b>6 of 6</b>
DOCUMENT NUMBER: <b>PS-35507-001</b>	CREATED / REVISED BY: <b>JUNGHKIM</b>	CHECKED BY: <b>YUNSIKKIM</b>	APPROVED BY: <b>C.W.LEE</b>