



PRODUCT SPECIFICATION

KK 2.5 WAFER ASS'Y WITH LOCK

1. SCOPE(적용범위)

This Product Specification covers the **2.5 mm(.098 inch)** pitch Board to Board Connector. Series.
(이 Spec.은 2.5mm(.098 inch) pitch Board to Board Connector.에 대하여 규정한다)

2. PRODUCT DESCRIPTION(제품구성)

2.1 PRODUCT NAME AND SERIES NUMBER(제품명 & 제품번호)

Product Name	Parts Number
Wafer Ass'y	5045 - NA
After TUBE Packing	35300-**-50

Mated with Molex Part No.

5202 - N (Terminal :5103 SERIES)

5051 - N (Terminal :5159 SERIES)

5251 - N (Terminal :5659 SERIES)

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(정격)

3.1 VOLTAGE(전압)

250 Volts AC (RMS) {or **250** Volts DC}

3.2 CURRENT(허용전류)

3 Amps

3.3 TEMPERATURE RANGE(사용온도 범위)

Operating : - **40**°C to + **105**°C

※ Including Terminal Temperature Rise(통전에 의한 온도 상승 분 포함)

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
A	EC No: KOR2006-0082 DATE: 2006/01/05	KK 2.5 WAFER ASS'Y WITH LOCK (5045/35300)	1 of 5
DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
PS-35300-001	J.H.LEE	Y.SOO.KIM	S.H.CHOI



PRODUCT SPECIFICATION

4. PERFORMANCE(성능)

4.1 ELECTRICAL REQUIREMENTS(전기적 특성)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Contact Resistance	Mate connector and measured by dry circuit, 20mV and a current of 10mA	20 milliohms MAXIMUM [Initial]
	접촉 저항	Connector를 결합한 상태에서 개방전압 20mV이하 단락전류 10mA에서 측정한다.	20 mΩ MAXIMUM [초기]
2	Insulation Resistance	Mate connector and Apply a voltage of 500V DC between adjacent terminals and between terminals to ground	1000 Mega ohms MINIMUM
	절연 저항	Connector를 결합한 상태에서 연결하는 단자와 단자, 단자와 접지간에 DC 500V를 가하고 측정한다.	1000MΩ MINIMUM
3	Dielectric Strength	Mate connector and Apply a voltage of 1000V AC for 1 minute between adjacent terminals and between terminals to ground.	No breakdown; Current leakage < 5 mA
	내 전 압	Connector를 결합한 상태에서 연결하는 단자와 단자, 단자와 접지간 AC 250V를 1분간 가한다.	절연파괴 없을 것; 누설전류 < 5 mA

4.2 MECHANICAL REQUIREMENTS(기계적 특성)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Insertion and Withdrawal Force	Insert and withdraw connector at the speed rate of 25 ± 3 mm per minute.	Refer to Paragraph 6
	삽입력 / 발거력	Connector를 $25 \pm 3\text{mm/min}$ 의 속도로 삽입/이탈을 반복하여 1회, 6회, 30회째의 삽입력과 발거력을 측정한다.	제 6항 참조
2	Terminal/ Housing Retention Force	Apply axial pull out force at the speed rate of 25 ± 3 mm per minute on the terminal assembled in the housing.	9.8 N(1.0kgf) MINIMUM
	단자 유지력	터미널이 결합된 Housing을 고정시키고 터미널을 축방향으로 인발하여 단자의 이탈하는 힘을 측정한다.	9.8 N(1.0kgf) MINIMUM

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
A	EC No: KOR2006-0082 DATE: 2006/01/05	KK 2.5 WAFER ASS'Y WITH LOCK (5045/35300)	2 of 5
DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
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PRODUCT SPECIFICATION

4.2 MECHANICAL REQUIREMENTS (continued)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
3	Duability	Mate connectors up to {25 cycles for tin (non-noble) plating OR 250 cycles for gold (noble) plating} at a maximum rate of 10 cycles per minute prior to Environmental Tests.	10 milliohms MAXIMUM
	내구성	분당 10회의 주기로 커넥터를 인발하여 내구성을 측정한다	10 milliohms MAXIMUM
4	Terminal Strength	When applied a load of 500gw, 1minute	No Damage
	터미널 강도	500G의 하중을 1분간 가했을 경우의 강도 유지 상태를 측정한다.	No Damage

4.3 ENVIRONMENTAL REQUIREMENTS(환경적 특성)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT	
1	Heat Resistance	Mate connectors : Duration: 96 hours Temperature: 105 ± 2°C	Appearance	No Damage
			Contact Resistance	40 milliohms MAXIMUM
	내 열 성	105 ± 2°C에서 96시간 방치 후 꺼내어 측정한다	외관	변형 없을 것
			접촉저항	40 mΩ max.
2	Cold Resistance	Mate connectors : Duration: 96 hours Temperature: -40 ± 3°C	Appearance	No Damage
			Contact Resistance	40 milliohms MAXIMUM
	내 한 성	-40 ± 3°C에서 96시간 방치 후 꺼내어 측정한다.	외관	변형 없을 것
			접촉저항	40 mΩ max.
3	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 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	외관	변형 없을 것
			접촉저항	40 mΩ max.
			순간단락	1 μs max.

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
A	EC No: KOR2006-0082 DATE: 2006/01/05	KK 2.5 WAFER ASS'Y WITH LOCK (5045/35300)	3 of 5
DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
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PRODUCT SPECIFICATION

4.3 ENVIRONMENTAL REQUIREMENTS (continued)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT	
4	Shock	50g, 3 strokes in each X,Y,Z axes	Appearance	No Damage
			Contact Resistance	40 milliohms MAXIMUM
			Discontinuity	1 microsecond MAXIMUM
	내 충격성	50g의 충격을 각 X,Y,Z축에 3회 가한다.	외관	변형 없을 것
			접촉저항	40 mΩ max.
			순간단락	1 μs max.
5	Humidity	Temperature: 40 ± 2℃ Relative humidity: 90-95% Duration: 96 hours. Remove surface moisture and air dry for 1 hour prior to measurements.	Appearance	No Damage
			Contact Resistance	40 milliohms MAXIMUM
			Insulation Resistance	100Mega ohms MINIMUM
			Dielectric Strength	No Breakdown at 250V AC
	내 습성	주위온도 40 ± 2℃, 상대습도 90-95%상에서 96시간 방치 후 꺼내어 측정한다. 측정1시간 전에 표면습기 및 대기건조 제거한다.	외관	변형 없을 것
			접촉저항	40mΩ max.
			절연저항	100 MΩ min.
			내전압	절연파괴 없을것
6	Temperature Cycling	5 cycles of : a) -55℃ ± 3℃ 30minutes b) +85℃ ± 2℃ 30minutes	Appearance	No Damage
			Contact Resistance	40 milliohms MAXIMUM
	온도 싸이클	5 싸이클 : a) -55℃ ± 3℃ 30분 b) +85℃ ± 2℃ 30분	외관	변형 없을 것
			접촉저항	40mΩ max.
7	Salt Spray	Duration: 48±4 hours exposure; Atmosphere: salt spray from the 5% solution; Temperature: 35 ± 2℃	Appearance	No Damage
			Contact Resistance	40 milliohms MAXIMUM
	염수분무	주위온도 : 35 ± 2℃ Solution : 5% 시간 : 48±4시간 방치	외관	변형 없을 것
			접촉저항	40 mΩ max.
			Contact Resistance	40 milliohms MAXIMUM
	내 아황산성	주위온도 : 40 ± 2℃ 환경 : 50ppm SO ₂ gas 시간 : 24시간 방치	외관	변형 없을 것
			접촉저항	40 mΩ max.

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
A	EC No: KOR2006-0082 DATE: 2006/01/05	KK 2.5 WAFER ASS'Y WITH LOCK (5045/35300)	4 of 5
DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
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PRODUCT SPECIFICATION

4.3 ENVIRONMENTAL REQUIREMENTS (continued)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT	
8	Ammonia Gas (NH ₃)	Duration: 40 minutes exposure; Atmosphere: NH ₃ gas evaporating from a 28% Ammonia solution	Appearance	No Damage
			Contact Resistance	40 milliohms MAXIMUM
	내 암모니아성	주위 온도 : 25 ± 2℃ 환경 : 28% NH ₃ gas 시간 : 40분 방치	외관	변형 없을 것
			접촉저항	40 mΩ max.
9	Solderability	Solder Duration : 3 ± 0.5 seconds Solder Temperature : 230 ± 5℃	Solder coverage: 95% MINIMUM	
	납 땜 성	납 땜 시간 : 3 ± 0.5 seconds 납 땜 온도 : 230 ± 5℃	95% min. 침적	
10	Resistance to Soldering Heat	Soldering Iron Method - Solder Duration: 5 ± 0.5 seconds; - Solder Temperature: 260 ± 5℃	No Damage to insulator material	
	납땜 내열성	수동 Solder 방식 - 납땜 시간 : 5 ± 0.5 seconds; - 납땜 온도 : 260 ± 5℃	변형 없을 것	

5. INSERTION/WITHDRAWAL FORCE(삽입력/ 발거력)

[Unit : Kgf]

No of Ckt.	Insertion Force(MAX)			Extraction Force(MIN)		
	1st	6th	30th	1st	6th	30th
2	3.6	3.4	3.4	0.65	0.55	0.55
3	4.4	4.1	4.1	0.70	0.60	0.60
4	5.2	4.8	4.8	0.75	0.65	0.65
5	6.0	5.5	5.5	0.80	0.70	0.70
6	6.6	6.0	6.0	0.90	0.80	0.80
7	7.2	6.5	6.5	1.00	0.90	0.90
8	7.8	7.0	7.0	1.15	1.00	1.00
9	8.4	7.5	7.5	1.30	1.15	1.15
10	9.0	8.0	8.0	1.45	1.30	1.30
11	9.6	8.5	8.5	1.60	1.45	1.45
12	10.2	9.0	9.0	1.85	1.60	1.60
13	10.8	9.5	9.5	2.00	1.75	1.75
14	11.4	10.0	10.0	2.15	1.90	1.90
15	12.0	10.5	10.5	2.30	2.05	2.05

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.	
A	EC No: KOR2006-0082	KK 2.5 WAFER ASS'Y WITH LOCK (5045/35300)	5 of 5	
	DATE: 2006/01/05			
DOCUMENT NUMBER:		CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
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