KEL CORPORATION	86□□-□□□□-□ SPECIFICATION	No.	SP-2818
		DATE	Jun. 07. 2005

1. SCOPE

1.1 SPECIFICATION for 86□□-□□□□-□

2. CODING RULES for PART NUMBER

86□□ − □□□ □ − □

- P : with Pick up cover
- Terminal style
  - S : SMT Straight
  - L : SMT Right angle
- Number of contacts
  - 052 : 52 pins　120 : 120 pins
  - 140 : 140 pins　160 : 160 pins
  - ⚠ 060 : 60 pins　⚠080 : 80 pins
  - (Only 8611-S)　⚠(Only 8601-L)
- Series
  - 8601 : Female Receptacle
  - 8611 : Male Plug

3. MECHANICAL DETAILS

3.1 REFER to the DRAWINGS as LISTED BELOW.

PART NUMBER	DWG. No.	PART NUMBER	DWG. No.
8601-□□□L	P39859		
8611-□□□S	P39860		
8611-□□□S-P	P39861		

3.2 MATERIAL and FINISH

INSULATOR	:	Glass-filled L.C.P. UL94V-0 Black
CONTACT	:	Copper alloy
CONTACT FINISH	:	Under plating Nickel (1～3μm)
		Contact area Au 0.05μm or more
		Tails Au 0.03μm or more
SMT RETENTION CLIP	:	Copper alloy
SMT RETENTION CLIP FINISH	:	Under plating Nickel (1～3μm)
		Gold plating 0.03μm or more
Pick up cover	:	Glass-filled Modified PA6T
		UL94V-0 Natural(White)

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4. ELECTRICAL SPECIFICATION

4.1 CURRENT RATING

0.5 A/pin

4.2 CONTACT RESISTANCE

50 mΩ or less (Excluding conductor resistance)

4.3 WITHSTANDING VOLTAGE

AC 200 V for 1 minute

4.4 INSULATION RESISTANCE

100 MΩ or more at 250 V DC.

5. MECHANICAL SPECIFICATION

5.1 INSERTION and WITHDRAWAL FORCE

No. of contacts	Insertion force(MAX.)	Withdrawal force(MIN.)
52	27 N (2.76 kgf)	2.3 N (0.23 kgf)
120	62 N (6.33 kgf)	5.0 N (0.51 kgf)
140	72 N (7.35 kgf)	6.0 N (0.61 kgf)
160	82 N (8.37 kgf)	7.0 N (0.71 kgf)
⚠ 60	32 N (3.27 kgf)	3.0 N (0.31 kgf)
⚠ 80	42 N (4.28 kgf)	3.5 N (0.36 kgf)

5.2 DURABILITY

No damage shall be observed on appearance and contact resistance shall be 50 mΩ or less after repeating insertion and extraction 500 times at 400 ～ 600 times / h.

5.3 VIBRATION TEST (MIL-STD-202F METHOD-201A)

No damage shall be observed on mated connectors after the test mentioned below ; No intermittence more than 1μs shall be detected during the test.

AMPLITUDE	: 1.52 mm
FREQUENCY SWEEP RANGE	: 10 to 55 Hz
DIRECTION	: Three perpendicular axes
DURATION	: 2 hours
APPLIED CURRENT	: DC 100mA

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6. OTHER SPECIFICATION

6.1 THERMAL SHOCK TEST (MIL-STD-202F METHOD-107G CONDITION A)

No damage shall be observed on insertion/withdrawal and contact resistance shall be 50 mΩ or less after the test mentioned below ;

THERMAL SHOCK : -55℃ 30 min.
: +25℃ 5 min.
: +85℃ 30 min.
: +25℃ 5 min.

TESTING CYCLE : repeat 5 cycles

6.2 SALT SPRAY TEST (MIL-STD-202F METHOD-101D CONDITION A)

Contact resistance shall be 50 mΩ or less , after the test mentioned below ;
The test shall be done to mated connectors ;

SALT CONCENTRATION : 5 %
TEMPERATURE : 35 ℃
DURATION : 96 hours

6.3 HUMIDITY TEST (MIL-STD-202F METHOD-103B CONDITION B)

Contact resistance shall be 50 mΩ or less , after the test mentioned below ;
The test shall be done to mated connectors ;

HUMIDITY : 90 to 95 %
TEMPERATURE : 40 ℃
DURATION : 96 hours

6.4 HEAT RESISTANCE DURING SOLDER REFLOW

No damage shall be found after exposure to 250℃ peak, 200℃ 60sec reflow enviroment.

7. OTHERS

7.1 TEMPERATURE RANGE

-40℃ to +85℃

7.2 This specification is prior to other catalogue.

MADE BY	N. Sugita, Jun. 7, 2005	REV. DATE	APPROVED	MADE	DESCRIPTION
CHECKED BY	N. Saito, Jun. 7, 2005	① Jun. 9, 2008	A. Shimada	A. Yajima	Added a connector with 60 pin contacts.
APPROVED BY	A. Shimada, Jun. 7, 2005	② Aug. 8, 2008	A. Shimada	K. Ishida	Added a connector with 80 pin contacts.
REVISION No.	1	③ Sep. 10, 2014	N. Sugita	T. Ohta	Deleted a 8611-080S connector.