PRODUCT SPECIFICATION

1.0 SCOPE

This specification covers the low and high profile vertical mount connector system 71412-**** and 71850-****.

2.0 PRODUCT DESCRIPTION

2.1 Connectors available in two profiles, each fully stackable end to end side to side on .100 centers.

2.1.1 Connectors with .250 high profile.
2.1.1.1 Connector 71412-****, with .100 x .150 P.C. tail grid.

2.1.2 Connectors with .340 high profile.
2.1.2.1 Connector 71850-****, with .100 x .100 P.C. tail grid.

2.2 The dual row vertical mount connector series is a flexible range of products designed to connect:
2.2.1 P.C. board to P.C. board – perpendicular.
2.2.2 P.C. board to P.C. board - parallel.
2.2.3 P.C. board to harness.
2.2.4 P.C. board to chassis.

2.3 This connector series utilizes a double wipe female box contact and is designed for use with .025 square or .025 diameter pins.

.250 high profile connectors:
Minimum mating length of pin is .200
Maximum mating length of pin is .240
.340 high profile connectors:
Minimum mating length of pin is .200
Maximum mating length of pin is .330

2.4 This connector series has P.C. tails for solder termination to a .054/.071 thick P.C. board thru a .032 minimum diameter hole. The P.C. tail has tapered lead for ease-of-insertion into the P.C. board.

2.5 All terminals are firmly locked into the housing with a locking lance. Minimum retention to the housing is 4 lbs. per terminal.

2.6 This connector series is available in a range of sizes from dual 2 (4 circuit) thru dual 40 (80 circuit) in single (2 circuit) increments.

2.7 This connector series will mate with a straight or right angle dual-row wafer (header) using .025 square (.025 diameter) pins on .100 centers or with individual pins inserted in a P.C. board on .100 grid centers.

Note: Sides of square pins must be parallel with axis of the row within 10°.

3.0 RECOGNIZED AGENCY APPROVAL

3.1 Underwriters' Laboratories, Inc.: UL E29179 CARD B2

3.2 Canadian Standards Association: 019980X0000
Class 6233-01

4.0 MECHANICAL SPECIFICATIONS:

4.1 Materials

4.1.1 Housing (71412): Glass filled polyester (Black) 94 V-0 U.L. rated
Housing (71850): Glass filled LCP (Liquid Crystal Polymer) 94 V-0 U.L. rated

4.1.2 Terminal: Phosphor Bronze

4.2 Insertion/Withdrawal Forces

4.2.1 Steel Gage Pins:
Insertion gage pin: .0260±.0000--.0001
Withdrawal gage pin: .0240±.0001--.0000

4.2.2 Contact System: .000200 minimum tin over .000100 minimum copper

4.2.2.1 Average insertion force per circuit
After 1 cycle = .32 lbs.
After 10 cycles = .23 lbs.
After 25 cycles = .24 lbs.

4.2.2.2 Average withdrawal force per circuit
After 1 cycle = .26 lbs.
After 10 cycles = .27 lbs.
After 25 cycles = .25 lbs.

4.2.3 Contact System: .000300 minimum gold over .000050 minimum nickel

4.2.3.1 Average insertion force per circuit
After 1 cycle = .34 lbs.
After 10 cycles = .27 lbs.
After 25 cycles = .25 lbs.

4.2.3.2 Average withdrawal force per circuit
After 1 cycle = .18 lbs.
After 10 cycles = .15 lbs.
After 25 cycles = .14 lbs.

4.3 Durability: 50 mating cycles in gold plating
25 mating cycles in tin plating

4.4 Temperature:
4.4.1 Operating Temperature:
Gold Plated Contacts: -40ºC to +125ºC
Tin Plated Contacts: -40ºC to +105ºC
4.4.2 Non-Operating:
-40ºC to +105ºC

5.0 ELECTRICAL SPECIFICATIONS:

5.1 Current rating: 2.5 amperes maximum full connectors @ 30°C temperature rise. (3.0 amperes limited circuits).

5.2 Contact resistance: 15 milliohms maximum after 6.1 below.

5.3 Operating voltage: 500 VAC-RMS

5.4 Insulation resistance: 100K megaohms minimum @ 75°F & 35% R.H.

5.5 High voltage dielectric: 1500 V RMS

6.0 ENVIRONMENTAL SPECIFICATIONS:

6.1 The following tests will be performed in sequence:
6.1.1 Thermal Shock: 10 Cycles
30 minutes @ -40°C, then
30 minutes @ +105°C

6.1.2 Thermal Aging: +105°C for 10 days

6.1.3 Steady State Humidity: +40°C at 96% R.H. for 10 days

6.1.4 Salt Spray: 48 hours at 95°F, 5% salt solution @ 95% R.H.

6.2 Shock: to be tested.

6.3 Vibration: to be tested.