PRODUCT SPECIFICATION

PRODUCT SPECIFICATION OF THE 0.50MM CENTER FFC JUMPER CABLE (HIGH TEMPERATURE, AU PLATING)

Revision List

REVISION	MODIFICATION	SHEETS	DATE
A	First Release	1 - 5	2010/09/27
B	Updated Specification	1 - 5	2011/09/29

1 SCOPE

This specification covers the 0.50mm center FFC (Flat Flexible Cable) jumper cable, high temperature style, using gold plated copper conductor.

2 PRODUCT DESCRIPTION

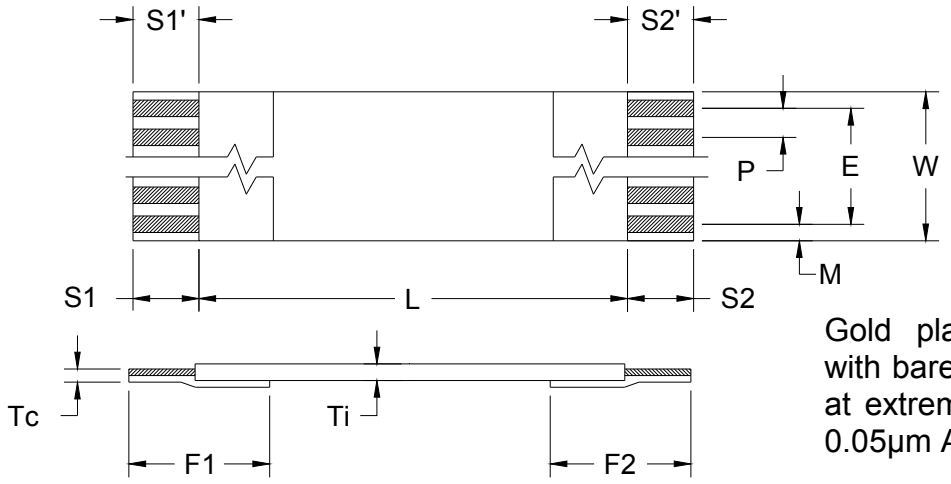
2.1 Product name and series number

Product name: 0.50MM CENTER FFC JUMPER CABLE (HIGH TEMPERATURE, AU PLATING)
Product material no: 15020-XXXX

2.2 Dimensions, materials and markings

Product dimensions according SD-15020-001.

Number of conductors ····· N: 6 to 80
Pitch ····· P: 0.50 ± 0.05mm
Span ····· E: 0.50 (N-I) ± 0.10mm
Total width ····· W: 0.50 (N+I) ± 0.06mm
Margin width ····· M: 0.5 + 0.15/ - 0.096mm
Strip length ····· S: 2.00 to 10.00 ± 0.80mm
End thickness of the connection area ·· Tc: 0.30 ± 0.05mm
Thickness of the insulated area ····· Ti: 0.27 ± 0.05mm
Insulated length ····· L: 20 to 60mm ± 2.00mm
61 to 100mm ± 3.00mm
101 to 200mm ± 4.00mm
201 to 3999mm ± 5.00mm
Reinforcement length ····· F: 6.00 to 20.00 ± 2.00mm
End squareness ····· s-s': 0.30mm max.



Gold plated conductor is made with bare copper with flash of gold at extremities: 0.3 µm Ni min and 0.05µm AU min.

2.3 COMPOSITION

- Conductor: Material: Gold plated copper conductor
  Thickness: 0.10mm nominal (Standard)
- Insulation tape: Material: Polyester + Flame retardant adhesive
  Thickness: 0.086mm nomimal
  Color: white
- Reinforcement tape: Material: Polyester + Adhesive
  Thickness: 0.15 nominal
  Color: Blue

2.4 Safety agency approvals

Not applicable.

3 RATINGS

3.1 Current and applicable conductors

Cross section	Amps
0.03mm²	0.5

3.2 Temperature

Operating temperature: -40°C to +105°C

4 PERFORMANCE

4.1 Electrical requirements

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	**Conductor resistance**	ASTM B 193	730 ohms/km MAXIMUM
2	**Insulation resistance cond. to cond.**	500 V DC	10 Mohms/km MINIMUM
3	**Dielectric test**	200 V AC for 1 minute	No disruptive discharge
4	**Continuity test**	3.0 V DC at 0.1mA	passed
5	**Voltage rating**		60 V AC MAXIMUM
6	**Current rating**	at 23°C increase in 10°C at the surface (all conductors under load)	0.5 A MINIMUM

4.2 Physical requirements

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
7	**Temperature rating**		-40°C to +105°C
8	**Heat resistance**	168 hours at 136°C	Insulation resistance Dielelectric test
9	**Thermal shock**	30 minutes at –55°C 5 minutes at +25°C 30 minutes at +85°C 5 minutes at +25°C	Insulation resistance after 25 cycles
10	**Cold coiling**	96 hours at –40°C / The sample will be wound on a 3mm dia. Mandrel	Insulation resistance Dielectric test Visual inspection
11	**Wear by abrasion**	Test following EN3475-503 Weight: 500g Speed: 60 cycles/min Abrasion tool: 0.13mm dia.	10000 cycles (standard) 1000 cycles (shielded) MINIMUM
12	**Folding**	The specimen shall be folded manually (Bending angle: 180° / Radius: 4mm)	20 times MINIMUM
13	**Moisture resistance**	96 hours at 60°C, 95% RH	Insulation resistance Dielectric test
14	**Flame resistance**	UL 758 VW-1	Passed
15	**Solderability**	Immersion of the area which is intended for soldering into a tin bath at 250 ± 10°C During 30 seconds	No delamination Solder reflow below 1 mm

5 PACKAGING

According to MOLEX packaging specification: PK-15020-001

6 UL APPROVAL

These products are UL compliant under:
UL style 20706
Temperature rating: 105°C
Voltage rating: 60 V AC

7 ROHS COMPLIANCE

Cable construction is RoHS compliant. This includes base FFC, shielded FFC and painted shielded FFC.