

**PRODUCT FAMILY SPECIFICATION FOR
0.50mm CENTER FLAT FLEX CABLE (FFC)
(105°C, Sn PLATED)*****Revision List***

| REVISION | MODIFICATION | DATE |
|-----------------|---|-------------|
| A | First release | 2004/07/05 |
| B | Updated specification | 2011/09/29 |
| C | Updated specification | 2014/02/17 |
| D | Margin updated from 0.50 + 0.15/-0.096mm to 0.50 +/- 0.12mm Span updated from 0.50 (N-1) +/- 0.10mm to 0.50 (N-1) +/- 0.07mm | 2019/04/04 |
| E | Corrected insulation resistance unit of measure | 2020/03/12 |
| F | New format | 2022/08/22 |
| G | Total width tolerance corrected. | 2022/12/08 |

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| REVISION: G | ECR/ECN INFORMATION: EC No: 731362 DATE: 2022/12/08 | TITLE: PRODUCT FAMILY SPECIFICATION FOR 0.50mm CENTER FLAT FLEX CABLE (FFC) (105°C, Sn PLATED) | SHEET No. 1 of 5 |
| DOCUMENT NUMBER: PS-98266-001 | CREATED / REVISED BY: D. GOMEZ | CHECKED BY: M. IMIG | APPROVED BY: J. SMITH |

1 SCOPE

This specification covers the 0.50mm center FFC (Flat Flexible Cable) jumper cable, 105°C using tin plated copper conductor.

2 PRODUCT DESCRIPTION

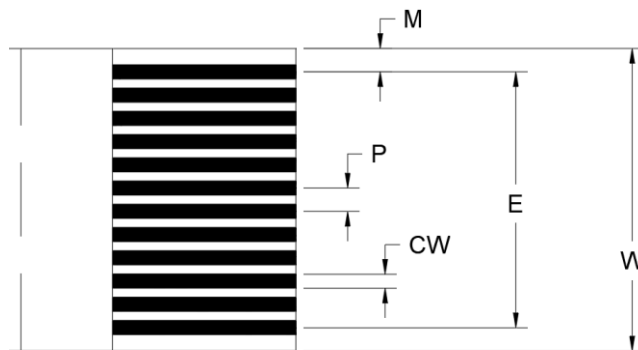
2.1 Product name and series number

Product name: 0.50MM CENTER FFC JUMPER CABLE (105°C, Sn PLATED)
 Product material no: 98266-XXXX

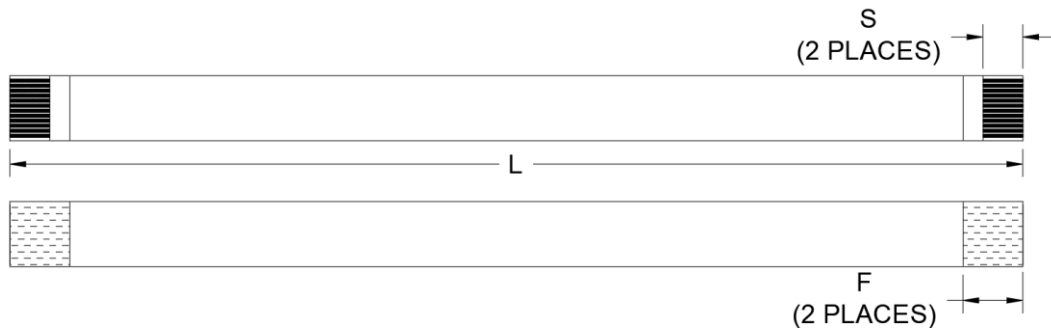
2.2 Dimensions, materials, and markings

Product dimensions (in mm) according to SD-98266-001.

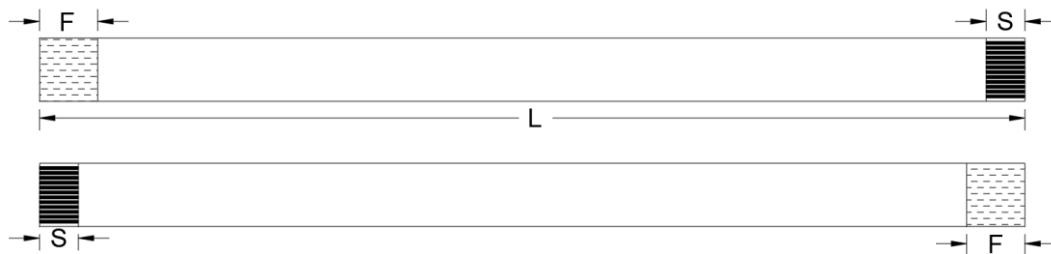
| | | |
|--------------------------------------|------|---|
| Number of conductors | N | Refer to sales drawing |
| Pitch | P | 0.50 ± 0.05 |
| Span | E | 0.50 (N-1) ± 0.07 |
| Total width | W | 0.50 (N+1) ± 0.06 |
| Conductor width | CW | 0.30 ± 0.02 |
| Margin width | M | 0.50 ± 0.12 |
| Strip length | S | 4.00 ± 0.80 |
| End thickness of the connection area | Tc | 0.30 ± 0.05 |
| Thickness of the insulated area | Ti | 0.22 ± 0.05 |
| Insulated length | L | 30 to 60 ± 2.00 61 to 100 ± 3.00 101 to 200 ± 4.00 201 to 999 ± 5.00 |
| Reinforcement length | F | 8.00 ± 2.00 |
| End scariness | s-s' | 0.30 max. |



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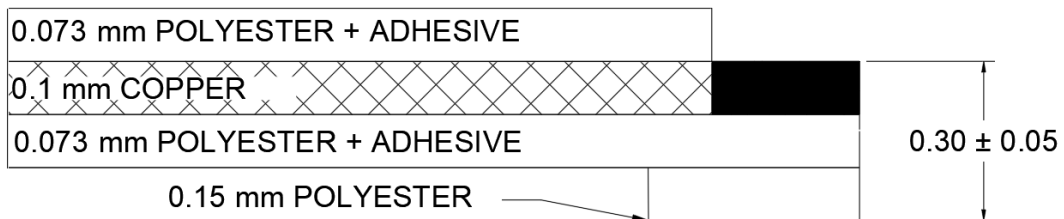
Type A (Contacts on the same side)



Type D (Contacts on the opposite side)

2.3 Composition

- FFC conductor: Material: Copper
Thickness: 0.10mm
Plating: 0.4 μ m Sn min.
- FFC tape: Material: Polyester + Flame retardant adhesive
Thickness: 0.073mm nominal
Color: White
- Reinforcement tape: Material: Polyester + Adhesive
Thickness: 0.15mm nominal



2.4 Current and applicable conductors

| Conductor Width | Conductor Thickness | Cross section | Current |
|-----------------|---------------------|---------------------|---------|
| 0.3 mm | 0.1 mm | 0.03mm ² | 0.55 A |

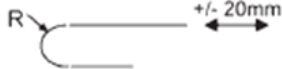
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3 ELECTRICAL AND PHYSICAL SPECIFICATIONS

3.1 Electrical requirements

| ITEM | DESCRIPTION | TEST CONDITION | REQUIREMENT |
|------|---------------------------------------|--|-------------------------|
| 1 | Conductor resistance | ASTM B 193 | 730 Ω/km MAXIMUM |
| 2 | Insulation resistance cond. to cond. | 200 V DC | 10 MΩ.m 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 | 0.55 A (all conductors under load) at 23°C | Maximum 40°C heat rise |
| 7 | Impedance cond/cond balanced method | FFC at 1 MHz | 130 Ω TYP |
| 8 | Capacitance cond/cond balanced method | FFC at 1 KHz | 62 pF/m |

3.2 Physical requirements

| ITEM | DESCRIPTION | TEST CONDITION | REQUIREMENT |
|------|---------------------|---|---|
| 9 | Temperature rating | | -40°C to +105°C |
| 10 | Heat resistance | 168 hours at 135°C | Insulation resistance Dielectric test |
| 11 | Thermal shock | 30 minutes at -55°C 5 minutes at +25°C 30 minutes at +105°C 5 minutes at +25°C | Insulation resistance after 25 cycles |
| 12 | Cold coiling | 96 hours at -40°C / The sample will be wound on a 3mm dia. Mandrel | Visual inspection Insulation resistance dielectric test |
| 13 | Wear by abrasion | Test following EN3475-503 Weight: 500g Speed: 60 cycles/min Abrasion tool: 0,50mm | 10,000 cycles MINIMUM |
| 14 | Folding | The specimen shall be folded manually at 180° | Continuity after 20 times |
| 15 | Flex Lifecycles | Speed: 100 cycles/min R: 10 mm Temp: 23°C  | 100,000 cycles MINIMUM |
| 16 | Moisture resistance | 96 hours at 60°C, 95% RH | Insulation resistance |

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| DOCUMENT NUMBER: | CREATED / REVISED BY: | CHECKED BY: | APPROVED BY: |
| PS-98266-001 | D. GOMEZ | M. IMIG | J. SMITH |

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|----|------------------------------|------------|---------------------------------|
| 17 | Insulation elongation | JIS C 2318 | 60 % MINIMUM |
| 18 | Tensile strength | JIS C 2318 | 32 N/mm ² MINIMUM |

4 UL APPROVAL

These products are UL compliant under:

UL style 20706

Temperature rating: 105°C

Voltage rating: 60 V AC

5 ROHS COMPLIANCE

This Flat Flexible Cable product family is compliant to RoHS Directive (EU) 2015/863.

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