

**PRODUCT FAMILY SPECIFICATION FOR
1.00 mm PITCH FLAT FLEX CABLE (FFC)
(EXTRA FLEXIBLE, 105°C, Sn PLATED)**

Revision List

REVISION	MODIFICATION	DATE
A	First release	2011/01/31
B	Format update	2022/08/27
C	Number of conductors updated	2022/12/08

REVISION: C	ECR/ECN INFORMATION: EC No: 731362 DATE: 2022/12/08	TITLE: PRODUCT FAMILY SPECIFICATION FOR 1.00 mm PITCH FLAT FLEX CABLE (FFC) (EXTRA FLEXIBLE, 105°C, Sn PLATED)	SHEET No. 1 of 5
DOCUMENT NUMBER: PS-15167-001	CREATED / REVISED BY: D. GOMEZ	CHECKED BY: M. IMIG	APPROVED BY: J. SMITH

1 SCOPE

This specification covers the 1.00mm center FFC (Flat Flexible Cable) jumper cable, high temperature style, using tin plated copper conductor.

2 PRODUCT DESCRIPTION

2.1 Product name and series number

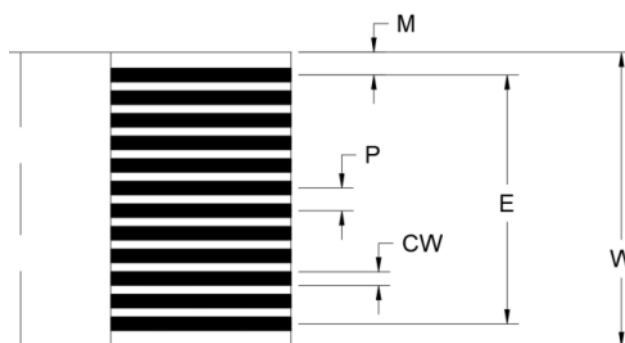
Product name: 1.00MM PITCH FFC JUMPER CABLE (EXTRA FLEXIBLE, 105°C, Sn PLATED)

Product material no: 15167-XXXX

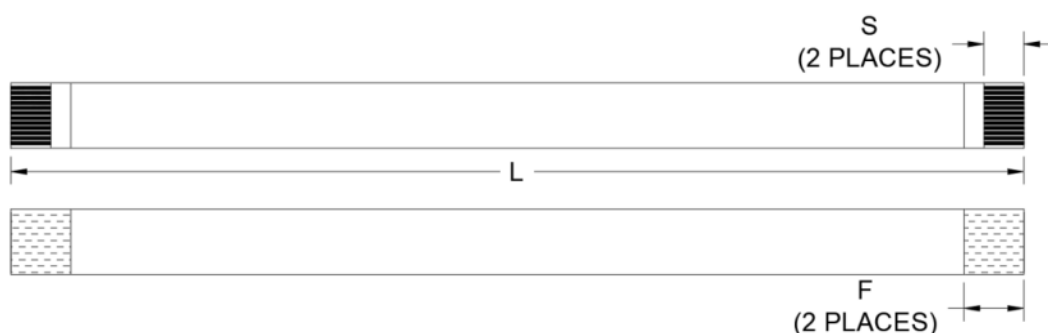
2.2 Dimensions, materials, and markings

Product dimensions (in mm) according to SD-15167-001.

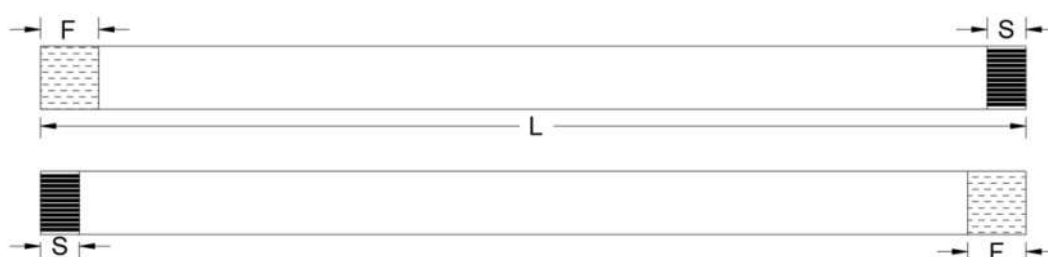
Number of conductors	N	4 to 99
Pitch	P	1.00 ± 0.08
Span	E	$1.00 (N-1) \pm 0.15$
Total width	W	$1.00 (N+1) \pm 0.10$
Conductor width	CW	0.7 ± 0.03
Margin width	M	1.0 ± 0.20
Strip length	S	4.00 ± 0.80
End thickness of the Connection area	Tc	0.30 ± 0.05
End thickness of the insulated area	Ti	0.12 ± 0.05
Insulated length	L	$20 \text{ to } 60 \pm 2.00$ $61 \text{ to } 100 \pm 3.00$ $101 \text{ to } 200 \pm 4.00$ $201 \text{ to } 3999 \pm 5.00$ $4000 \text{ to } 5999 \pm 10.00$ $6000 \text{ to } 9999 \pm 15.00$
Reinforcement length	F	8.00 ± 2.00
End squareness	s-s'	0.40 max.



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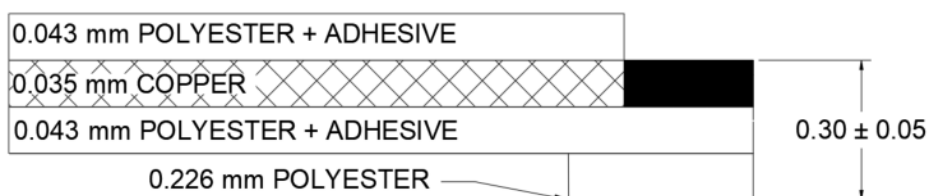
Type A (Contacts on the same side)



Type D (Contacts on the opposite side)

2.3 Composition

- Conductor:**
 - Material: Copper
 - Thickness: 0.035mm nominal
 - Plating: 0.4µm Sn min.
- Insulation tape:**
 - Material: Polyester + Flame retardant adhesive
 - Thickness: 0.043mm nominal
 - Color: White
- Reinforcement tape:**
 - Material: Polyester + Adhesive
 - Thickness: 0.226mm nominal



2.4 Current and applicable conductors

Conductor Width	Conductor Thickness	Cross section	Current
0.7 mm	0.035	0.025mm ²	0.8 A

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3 ELECTRICAL AND PHYSICAL SPECIFICATION

3.1 Electrical requirements

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Conductor resistance	---	790 ohms/km MAXIMUM
2	Insulation resistance cond. to cond.	400 V DC	10 Mohms.m MINIMUM
3	Dielectric test	400 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	0.80 A (all conductors under load) at 23°C	Maximum 40°C heat rise
7	Impedance cond/cond balanced method	FFC at 1 MHz	150 Ω TYP
8	Capacitance cond/cond balanced method	FFC at 1 KHz	40 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 136°C	Insulation resistance Dielectric test
11	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
12	Cold coiling	96 hours at -40°C / The sample will be wound on a 3mm dia. Mandrel	Insulation resistance Dielectric test Visual inspection
13	Wear by abrasion	Test following EN3475-503 Weight: 500g Speed: 60 cycles/min Abrasion tool: 0.13mm dia.	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 R1: 5 mm R2: 10 mm Temp: 23°C 	For R1: 500,000 cycles MIN For R2: 5,000,000 cycles MIN
16	Moisture resistance	96 hours at 60°C, 95% RH	Insulation resistance Dielectric test
17	Flame resistance	UL 758 VW-1	Passed

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18	Solderability	Immersion of the area which is intended for soldering into a tin bath at 250 ± 10°C for 30 seconds	No delamination Solder reflow below 1 mm
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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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