



PRODUCT SPECIFICATION

PRODUCT FAMILY SPECIFICATION FOR  
1.00 mm PITCH FLAT FLEX CABLE (FFC)  
(105°C, Au PLATING)

Revision List

REVISION	MODIFICATION	DATE
A	First release	2010/03/17
B	Corrected insulation resistance	2019/09/18
C	New format	2022/08/23
D	Number of circuits updated	2022/12/07
E	Flex life cycles update	2023/12/06

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
E	STATUS: RELEASED DATE: 2023/12/06	PRODUCT FAMILY SPECIFICATION FOR 1.00 mm PITCH FLAT FLEX CABLE (FFC) (105°C, Au PLATING)	1 of 5
DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
PS-15039-001	D. GOMEZ	M. IMIG	J.SMITH

TEMPLATE FILENAME: PRODUCT\_SPEC[SIZE\_A4](V.2).DOC

## 1 SCOPE

This specification covers the 1.00mm center FFC (Flat Flexible Cable) jumper cable, 105°C, using gold plated copper conductor.

## 2 PRODUCT DESCRIPTION

### 2.1 Product name and series number

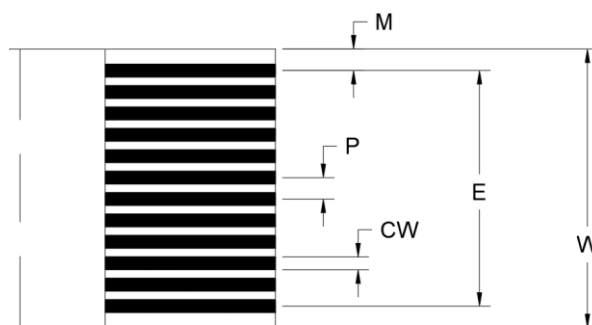
Product name: 1.00MM PITCH FFC JUMPER CABLE (105°C, Au PLATING)

Product material no: 15039-XXXX

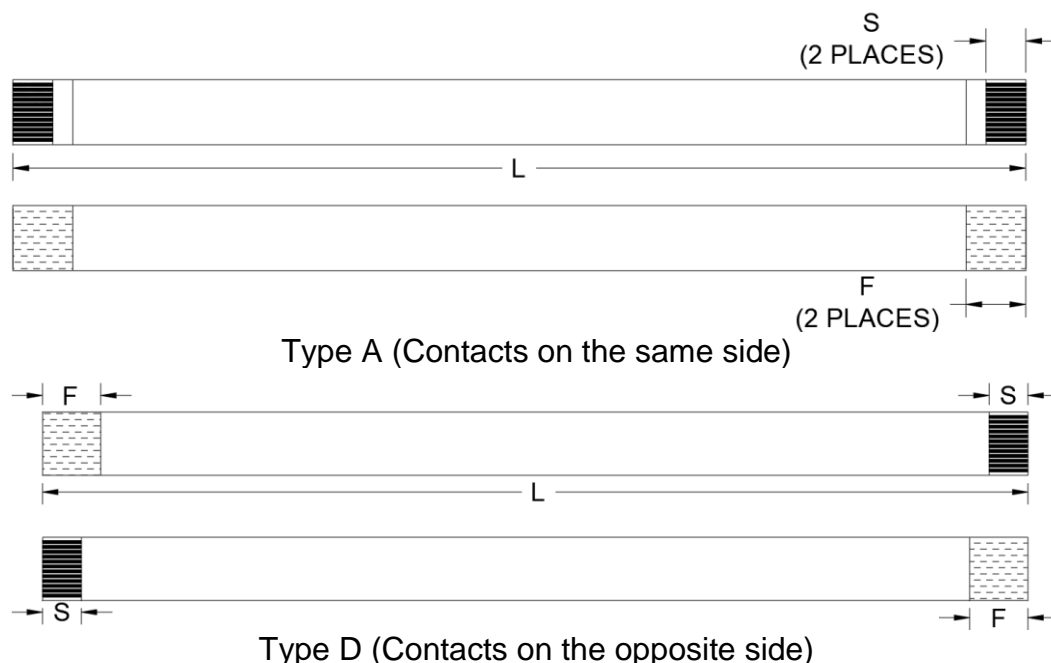
### 2.2 Dimensions, materials, and markings

Product dimensions (in mm) according to SD-15039-001.

Number of conductors	N	Refer to sales drawing
Pitch	P	1.00 ± 0.08
Span	E	1.00 (N-1) ± 0.15
Total width	W	1.00 (N+1) ± 0.10
Conductor width	CW	0.70 ± 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	0.27 ± 0.05
Insulated length	L	20 to 60 ± 2.00 61 to 100 ± 3.00 101 to 200 ± 4.00 201 to 3999 ± 5.00 4000 to 5999 ± 10.00 6000 to 9999 ± 15.00
Reinforcement length	F	8.00 ± 2.00
End squareness	s-s'	0.40 max.

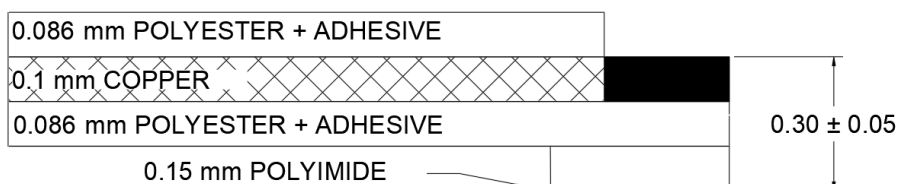


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## 2.3 COMPOSITION

- Conductor: Material: Copper  
Thickness: 0.10 mm nominal  
Plating: 0.3  $\mu$ m Ni min & 0.05 $\mu$ m Au min.
- Insulation tape: Material: Polyester + Flame retardant adhesive  
Thickness: 0.086 mm typical  
Color: White
- Reinforcement tape: Material: Polyester + Adhesive  
Thickness: 0.155 mm nominal



## 2.4 Current and applicable conductors

Conductor Width	Conductor Thickness	Cross section	Current
0.7 mm	0.1 mm	0.07mm <sup>2</sup>	1.25 A


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## 3 ELECTRICAL AND PHYSICAL SPECIFICATION

### 3.1 Electrical requirements

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Conductor resistance	ASTM B 193	300 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	1.25 A (all conductors under load) at 23°C	40°C heat rise MAX
7	Impedance cond/cond balanced method	FFC at 1 MHz	120 $\Omega$ TYP
8	Capacitance cond/cond balanced method	FFC at 1 KHz	50 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 R: 10 mm Temp: 23°C 	50,000 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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