### **PRODUCT SPECIFICATION**

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

#### **Revision List**

REVISION	MODIFICATION	DATE
Α	First release	2011/01/31
В	Format update	2022/08/27
С	Number of conductors updated	2022/12/08

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DOCUMENT NUMBER: PS-15167-001		CREATED / REVISED BY: <b>D. GOMEZ</b>	D BY: CHECKED BY: APPROVED B  M. IMIG J. SMITH		

### PRODUCT SPECIFICATION

#### 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,

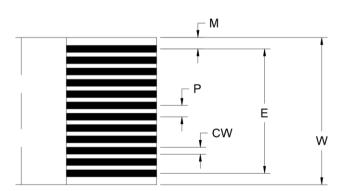
105°C, Sn PLATED)

Product material no: 15167-XXXX

#### 2.2 Dimensions, materials, and markings

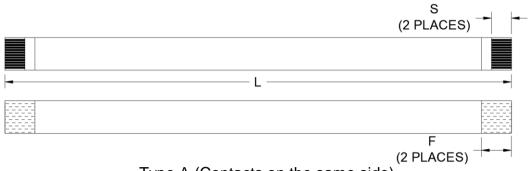
Product dimensions (in mm) according to SD-15167-001.

Number of conductors	N	4 to 99
Pitch	Р	$1.00 \pm 0.08$
Span	Е	1.00 (N-I) ± 0.15
Total width	W	1.00 (N+I) ± 0.10
Conductor width	CW	$0.7 \pm 0.03$
Margin width	М	1.0 ± 0.20
Strip length	S	$4.00 \pm 0.80$
End thickness of the Connection area	Тс	$0.30 \pm 0.05$
End thickness of the insulated area	Ti	0.12 ± 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.

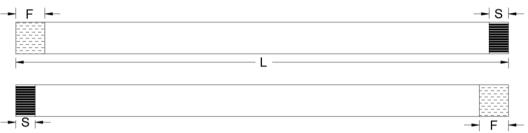


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### PRODUCT SPECIFICATION



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.

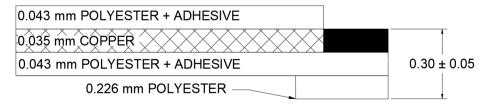
Insulation tape: Material: Polyester + Flame retardant adhesive

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 <sup>2</sup>	0.8 A

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## PRODUCT SPECIFICATION

#### 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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### PRODUCT SPECIFICATION

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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