

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

REVISION: F	ECR/ECN INFORMATION: EC No: 716688 DATE: 2022/08/22	TITLE: PRODUCT FAMILY SPECIFICATION FOR 0.50mm CENTER FLAT FLEX CABLE (FFC) (105°C, Sn PLATED)	SHEET No. 1 of 4
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

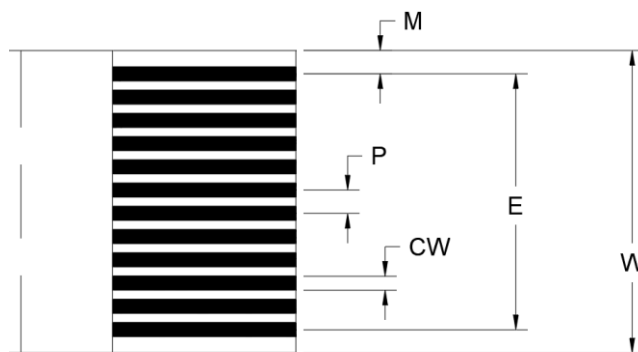
2.1 Product name and series number

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

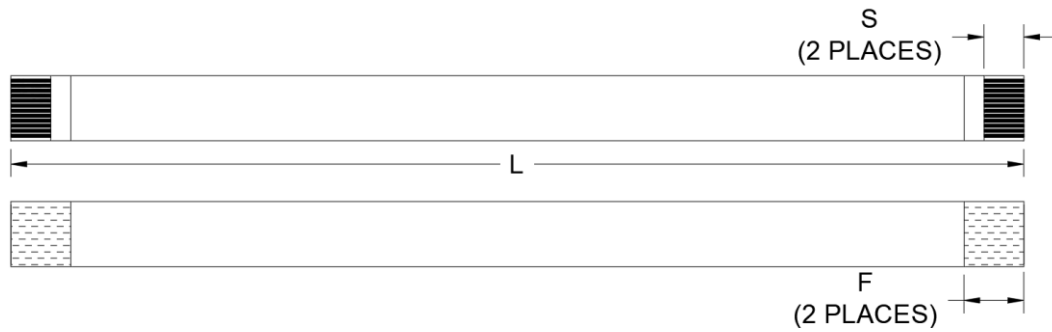
2.2 Dimensions, materials, and markings

Product dimensions according to SD-98266-001.

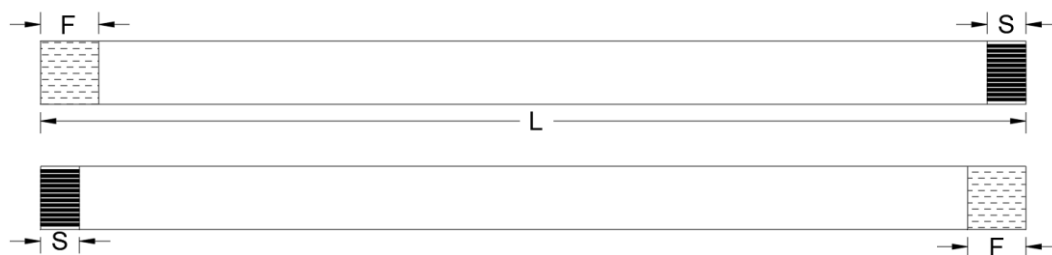
Number of conductors	N	6 to 50
Pitch	P	$0.50 \pm 0.05\text{mm}$
Span	E	$0.50 (N-1) \pm 0.07\text{mm}$
Total width	W	$0.50 (N+1) \pm 0.10\text{mm}$
Conductor width	CW	$0.30 \pm 0.02 \text{ mm}$
Margin width	M	$0.50 \pm 0.12\text{mm}$
Strip length	S	$4.00 \pm 1.00\text{mm}$
End thickness of the connection area	Tc	$0.30 \pm 0.05\text{mm}$
Thickness of the insulated area	Ti	$0.22 \pm 0.05\text{mm}$
Insulated length	L	30 to 60mm $\pm 2.00\text{mm}$ 61 to 100mm $\pm 3.00\text{mm}$ 101 to 200mm $\pm 4.00\text{mm}$ 201 to 999mm $\pm 5.00\text{mm}$
Reinforcement length	F	$8.00 \pm 2.00\text{mm}$
End scariness	s-s'	0.30mm max.



REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
F	EC No: 716688 DATE: 2022/08/22	PRODUCT FAMILY SPECIFICATION FOR 0.50mm CENTER FLAT FLEX CABLE (FFC) (105°C, Sn PLATED)	2 of 4
DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
PS-98266-001	D. GOMEZ	M. IMIG	J. SMITH



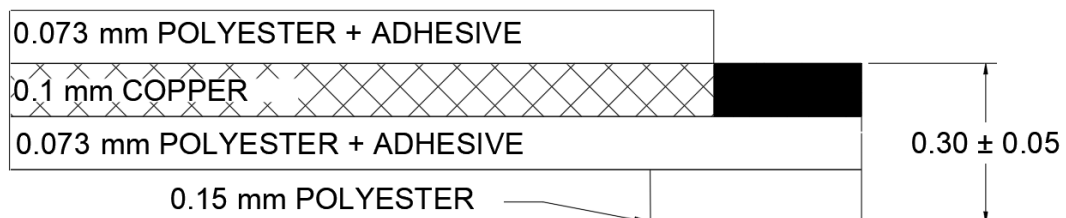
Type A (Contacts on the same side)



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

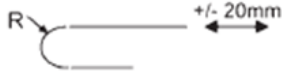
REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
F	EC No: 716688 DATE: 2022/08/22	PRODUCT FAMILY SPECIFICATION FOR 0.50mm CENTER FLAT FLEX CABLE (FFC) (105°C, Sn PLATED)	3 of 4
DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
PS-98266-001	D. GOMEZ	M. IMIG	J. SMITH

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 M Ω .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	at 23°C increase in 10°C at the surface (all conductors under load)	0.55 A MINIMUM
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	10000 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 MIN
16	Moisture resistance	96 hours at 60°C, 95% RH	Insulation resistance

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
F	EC No: 716688 DATE: 2022/08/22	PRODUCT FAMILY SPECIFICATION FOR 0.50mm CENTER FLAT FLEX CABLE (FFC) (105°C, Sn PLATED)	4 of 4
DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
PS-98266-001	D. GOMEZ	M. IMIG	J. SMITH

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.

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
F	EC No: 716688 DATE: 2022/08/22	PRODUCT FAMILY SPECIFICATION FOR 0.50mm CENTER FLAT FLEX CABLE (FFC) (105°C, Sn PLATED)	5 of 4
DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
PS-98266-001	D. GOMEZ	M. IMIG	J. SMITH