



PRODUCT SPECIFICATION

PRODUCT SPECIFICATION OF THE 0.50MM CENTER FFC JUMPER CABLE (LOW TEMPERATURE)

Revision List

REVISION	MODIFICATION	SHEETS	DATE
A	First Release	1 - 5	2011/09/29

REVISION: A	ECR/ECN INFORMATION: EC No: USW2012-0078 DATE: 2011/09/29	TITLE: PRODUCT SPECIFICATION 0.50MM CENTER FFC JUMPER CABLE (LOW TEMPERATURE)	SHEET No. 1 of 5
DOCUMENT NUMBER: PS-21020-001	CREATED / REVISED BY: M.IMIG	CHECKED BY: D.ENGLISH	APPROVED BY: S.FULTON



PRODUCT SPECIFICATION

1 SCOPE

This specification covers the 0.50mm center FFC (Flat Flexible Cable) jumper cable, low temperature style, using tin plated copper conductor.

2 PRODUCT DESCRIPTION

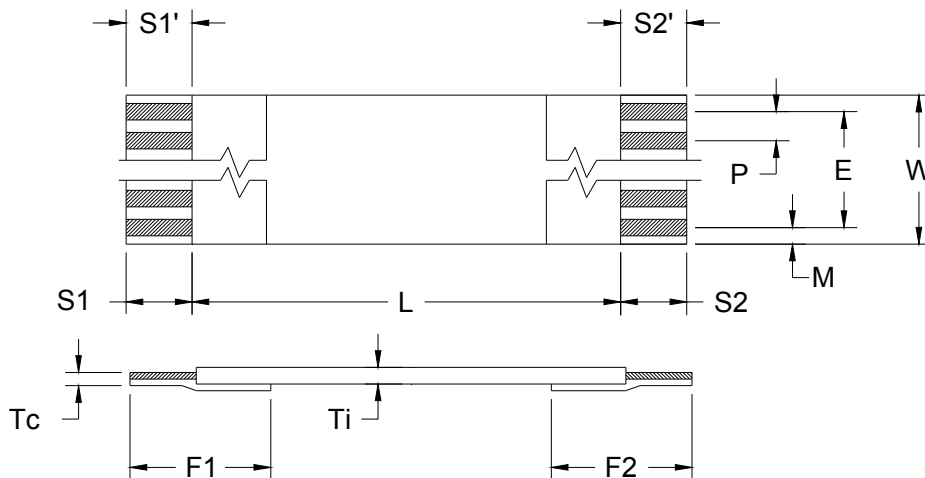
2.1 Product name and series number

Product name: 0.50MM CENTER FFC JUMPER CABLE (LOW TEMP)
 Product material no: 21020-XXXX

2.2 Dimensions, materials and markings

Product dimensions according SD-21020-001.

- Number of conductors N: 6 to 80
- Pitch P: $0.50 \pm 0.05\text{mm}$
- Span E: $0.50 (N-1) \pm 0.10\text{mm}$
- Total width W: $0.50 (N+1) \pm 0.06\text{mm}$
- Margin width M: $0.5 + 0.15/ - 0.096\text{mm}$
- Strip length S: $2.00 \text{ to } 10.00 \pm 0.80\text{mm}$
- End thickness of the connection area .. Tc: $0.30 \pm 0.05\text{mm}$
- Thickness of the insulated area Ti: $0.32 \pm 0.05\text{mm}$
- Insulated length L: $20 \text{ to } 60\text{mm} \pm 2.00\text{mm}$
 $61 \text{ to } 100\text{mm} \pm 3.00\text{mm}$
 $101 \text{ to } 200\text{mm} \pm 4.00\text{mm}$
 $201 \text{ to } 3999\text{mm} \pm 5.00\text{mm}$
 $4000 \text{ to } 5999\text{mm} \pm 10.00\text{mm}$
 $6000 \text{ to } 9999\text{mm} \pm 15.00\text{mm}$
- Reinforcement length F: $6.00 \text{ to } 20.00 \pm 2.00\text{mm}$
- End squareness s-s': 0.30mm max.



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2.3 COMPOSITION

- Conductor: Material: Tin plated copper conductor
 Thickness: 0.10mm nominal (Standard)
- Insulation tape: Material: Polyester + Flame retardant adhesive
 Thickness: 0.115mm nominal
 Color: white
- Reinforcement tape: Material: Polyester + Adhesive
 Thickness: 0.23mm nominal
 Color: Blue

2.4 Safety agency approvals

Not applicable.

3 RATINGS

3.1 Current and applicable conductors

Cross section	Amps
0.03mm ²	0.5

3.2 Temperature

Operating temperature: -40°C to +80°C

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4 PERFORMANCE

4.1 Electrical requirements

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Conductor resistance	ASTM B 193	730 ohms/km MAXIMUM
2	Insulation resistance cond. to cond.	500 V DC	10 Mohms/km 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		30 V AC MAXIMUM
6	Current rating	at 23°C increase in 10°C at the surface (all conductors under load)	0.5 A MIN

4.2 Physical requirements

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
7	Temperature rating		-40°C to +80°C
8	Heat resistance	168 hours at 113°C	Insulation resistance Dielectric test
9	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
10	Cold coiling	96 hours at -40°C / The sample will be wound on a 3mm dia. Mandrel	Insulation resistance Dielectric test Visual inspection
11	Wear by abrasion	Test following EN3475-503 Weight: 500g Speed: 60 cycles/min Abrasion tool: 0.13mm dia.	10000 cycles (standard) 1000 cycles (shielded) MINIMUM
12	Folding	The specimen shall be folded manually (Bending angle: 180° / Radius: 4mm)	20 times MINIMUM
13	Moisture resistance	96 hours at 60°C, 95% RH	Insulation resistance Dielectric test
14	Flame resistance	UL 758 VW-1	Passed
15	Solderability	Immersion of the area which is intended for soldering into a tin bath at 250 ± 10°C During 30 seconds	No delamination Solder reflow below 1 mm

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5 PACKAGING

According to MOLEX packaging specification: PK-21020-001

6 UL APPROVAL

These products are UL compliant under:

UL style 2896

Temperature rating: 80°C

Voltage rating: 30 V AC

7 ROHS COMPLIANCE

Cable construction is RoHS compliant. This includes base FFC, shielded FFC and painted shielded FFC.

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