

PRODUCT SPECIFICATION OF THE 0.50MM CENTER FFC JUMPER CABLE (EXTRA FLEXIBLE)

Revision List

| REVISION | MODIFICATION | SHEETS | DATE |
|----------|---------------|--------|------------|
| A | First Release | 1 - 5 | 2011/11/01 |
| | | | |
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| REVISION: | ECR/ECN INFORMATION: EC No: USW2012-0099 DATE: 2011/11/01 | PRODUCT SPECIFICATION 0.50MM CENTER FFC JUMPER CABLE (HIGH TEMPERATURE) | | 1 of 5 | |
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| DOCUMENT NUMBER: | | CREATED / REVISED BY: | CHECKED BY: | APPRO | OVED BY: |
| PS-15166-001 | | M. IMIG | D.ENGLISH | S.Fl | JLTON |



SCOPE

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

PRODUCT DESCRIPTION

PS-15166-001

2.1 Product name and series number

Product name: 0.50MM CENTER FFC JUMPER CABLE (EXTRA FLEXIBLE)

Product material no: 15166-XXXX

2.2 Dimensions, materials and markings

Product dimensions according SD-15166-001.

Number of conductors N: 6 to 80

Span ----- E: 0.50 (N-I) ± 0.10mm

Margin width ------ M: 0.50 + 0.15mm/ -0.096mm

Strip length ······S: 2.00 to 10.00 ± 0.80 mm

End thickness of the connection area $\cdot\cdot$ Tc: 0.30 ± 0.05 mm

Thickness of the insulated area Ti: 0.12 ± 0.05 mm

Insulated length \cdots L: 20 to 60mm \pm 2.00mm

61 to 100mm ± 3.00mm

101 to 200mm ± 4.00mm

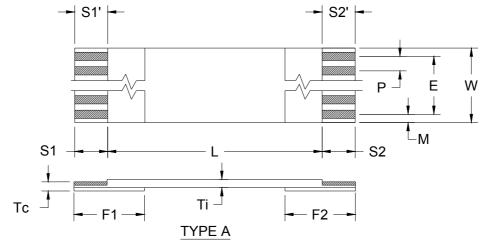
201 to 3999mm ± 5.00mm

4000 to 5999mm \pm 10.00mm

6000 to 9999mm ± 15.00mm

Reinforcement length \cdots F: 6.00 to 20.00 \pm 2.00mm

End squareness ······s-s': 0.30mm max.



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2.3 COMPOSITION

Conductor: Material: Tin plated copper conductor

Thickness: 0.035mm nominal

Insulation tape: Material: Polyester + Flame retardant adhesive

Thickness: 0.043mm nominal

Color: white

Reinforcement tape:Material: Polyester + Adhesive

Thickness: 0.226mm nominal

Color: Blue

2.4 Safety agency approvals

Not applicable.

3 RATINGS

3.1 Current and applicable conductors

| Cross section | Amps | |
|---------------|------|--|
| 0.01mm² | 0.5 | |

3.2 Temperature

Operating temperature: -40°C to +105°C

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4 PERFORMANCE

4.1 Electrical requirements

| ITEM | DESCRIPTION | TEST CONDITION | REQUIREMENT |
|------|--------------------------------------|---|-------------------------|
| 1 | Conductor resistance | | 1730 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 | | 60 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 +105°C |
| 8 | Heat resistance | 168 hours at 136°C | Insulation resistance Dielelectric 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-15166-001

6 UL APPROVAL

These products are UL compliant under:

UL style 20706

Temperature rating: 105°C Voltage rating: 60 V AC

7 ROHS COMPLIANCE

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

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