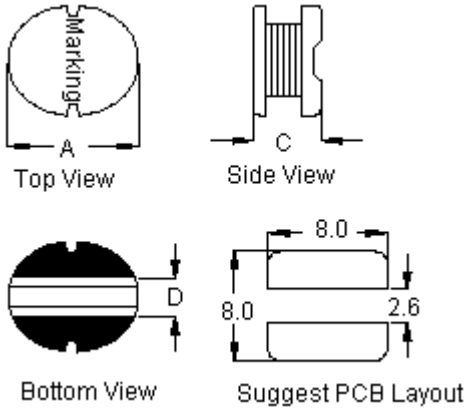
| PART NO. | REVISIONS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| MCSDC0805-100MU | ECN # | REV | DESCRIPTION | DRAWN | DATE | CHECKD | DATE | APPRVD | DATE |
| | - | A | RELEASED | Shambu | 10/2/11 | Jagan | 10/2/11 | Farnell | 24/2/11 |

## Configurations and Dimensions

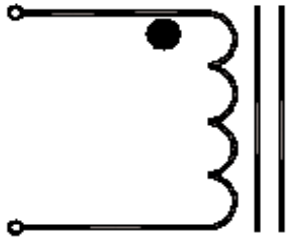



| | | |
|---|---|---|
| A | 7.8 mm | (Maximum) |
| C | 5.3 mm | (Maximum) |
| D | 2.6 mm | (Reference) |

Dimensions : Millimetres

**Marking: 100**

## Schematic Diagram



**Note:**

1. Wire Ø0.35mm x 1P 2UEWF155°C
2. 16.5TS (Reference)

RoHS Compliant

## Electrical Characteristics (at 25°C)

| Test Condition | | |
|---|---|---|
| 1KHz 1V | L | 10µH ±20% |
| at 25°C | DCR | 70mΩ (Maximum) |
| 1KHz 1V $I_{sat}$ = 3.2A | L at $I_{sat}$ | L drops 35% (Maximum) |
| 1KHz 1V $I_{rms}$ = 2.3A | ΔT | Temperature Rise 40°C (Maximum) |

Operating temperature: -55°C to +130°C

## Test Data for Mechanical

| Test Item | A mm | C mm | D mm |
|---|---|---|---|
| **Specification** | **7.8 (Maximum)** | **5.3 (Maximum)** | **2.6 (Reference)** |
| 1 | 7.48 | 5.08 | 2.5 |
| 2 | 7.51 | 5.03 | 2.48 |
| 3 | 7.49 | 5.05 | 2.43 |
| 4 | 7.5 | 5.04 | 2.52 |
| 5 | 7.49 | 5.05 | 2.41 |
| **Average** | **7.49** | **5.05** | **2.47** |



TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

| DRAWN BY: | DATE: |
|---|---|
| Shambu | 10/02/11 |
| CHECKED BY: | DATE: |
| Jagan | 10/02/11 |
| APPROVED BY: | DATE: |
| Farnell | 24/02/11 |

DRAWING TITLE: Inductor

| SIZE | DWG NO. | ELECTRONIC FILE | REV |
|---|---|---|---|
| A | M10003219 | SDC0805-100MU | A |

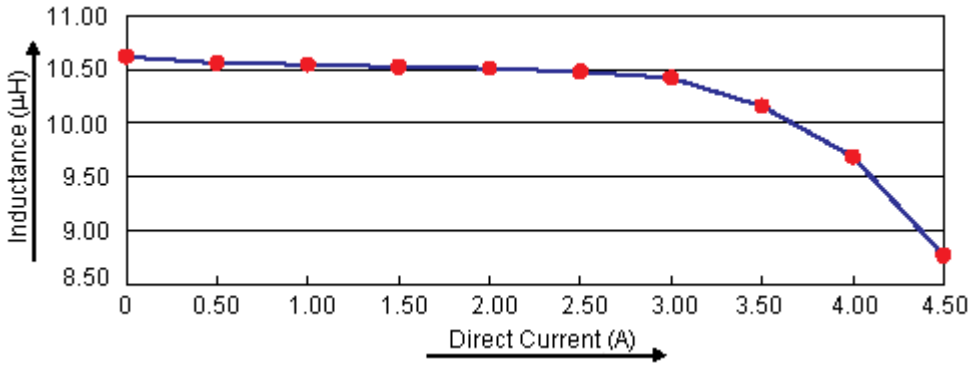
SCALE: NTS | U.O.M.: mm | SHEET: 1 OF 3

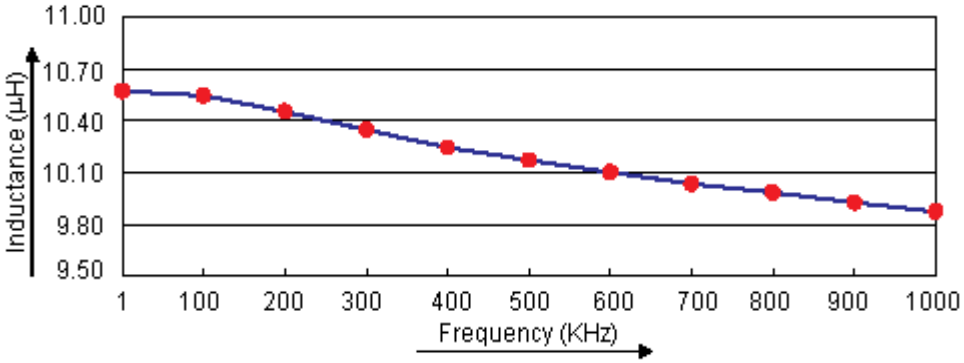
| PART NO. | REVISIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| MCSDC0805-100MU | ECN # | REV | DESCRIPTION | DRAWN | DATE | CHECKD | DATE | APPRVD | DATE |
| | - | A | RELEASED | Shambu | 10/2/11 | Jagan | 10/2/11 | Farnell | 24/2/11 |

## Test Data for Electrical

| Test Item | L µH | DCR mΩ | L at $I_{sat}$ µH | ΔT |
|---|---|---|---|---|
| **Condition** | **1KHz 1V** | **at 25°C** | **1KHz 1V $I_{sat}$ = 3.2A** | **1KHz 1V $I_{rms}$ = 2.3A** |
| **Specification** | **10 ±20%** | **70 (Maximum)** | **L drops 35% (Maximum)** | **Temperature Rise 40°C (Maximum)** |
| 1 | 10.61 | 47.61 | 10.1 | OK |
| 2 | 10.49 | 49.36 | 10.16 | OK |
| 3 | 10.44 | 48.25 | 10.11 | OK |
| 4 | 10.58 | 49.2 | 10.13 | OK |
| 5 | 10.36 | 48.33 | 9.87 | OK |
| **Average** | **10.5** | **48.55** | **10.07** | **OK** |

## Electric Characteristics






TOLERANCES:

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| DRAWN BY: | DATE: |
|---|---|
| Shambu | 10/02/11 |
| CHECKED BY: | DATE: |
| Jagan | 10/02/11 |
| APPROVED BY: | DATE: |
| Farnell | 24/02/11 |

DRAWING TITLE: Inductor

| SIZE | DWG NO. | ELECTRONIC FILE | REV |
|---|---|---|---|
| A | M10003219 | **SDC0805-100MU** | A |

SCALE: NTS | U.O.M.: mm | SHEET: 2 OF 3

| PART NO. | REVISIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| MCSDC0805-100MU | ECN # | REV | DESCRIPTION | DRAWN | DATE | CHECKD | DATE | APPRVD | DATE |
| | - | A | RELEASED | Shambu | 10/2/11 | Jagan | 10/2/11 | Farnell | 24/2/11 |

## Reliability Test

| Test Item | Specifications | Test Method and Remarks |
|---|---|---|
| Operating temperature range | -55°C to +130°C | Including temperature rise due to self-generated heat |
| Storage condition | Ambient temperature : 0°C to 40°C<br>Humidity : Below 70%RH | To maintain the solderability of terminal electrodes, care must be taken to control temperature and humidity in the storage area. |
| Moisture sensitivity | Appearance : No abnormality<br>No damage<br>DCR change : Within ±20%<br>Inductance change : Within ±20% | According to J-STD-020B level 3<br>Test condition : 60°C 60% RH<br>Test duration : 40 hours<br>Recovery : 1 to 2 hours of recovery under the standard condition after the removal from the test chamber. |
| Solderability | All termination shall exhibit a continuous solder coating free from defects for a minimum of 90% of the surface area of any individual lead. | According to J-STD-002B<br>Steam aging category : 97°C 98% RH<br>Steam aging duration : 8 hours<br>Solder : Lead-free solder<br>Solder temperature : 260 ±5°C<br>Dip time : 5 +0/-0.5 seconds. |

## Material List

| No. | Item | Material Description |
|---|---|---|
| 1 | Core | R5A CDR7.5 x 5 (ST) B3.4 F2.5 |
| 2 | Wire | Ø0.35mm x 1P 2UEWF 155°C |
| 3 | Solder (Lead Free) | Sn99.3%/Cu0.7% |

## Part Number Table

| Description | Part Number |
|---|---|
| Inductors, 10µH, 20%, SMD | MCSDC0805-100MU |

**http://www.farnell.com**

**http://www.newark.com**

**http://www.cpc.co.uk**



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| DRAWN BY: | DATE: |
|---|---|
| Shambu | 10/02/11 |
| CHECKED BY: | DATE: |
| Jagan | 10/02/11 |
| APPROVED BY: | DATE: |
| Farnell | 24/02/11 |

DRAWING TITLE: Inductor

| SIZE | DWG NO. | ELECTRONIC FILE | REV |
|---|---|---|---|
| A | M10003219 | SDC0805-100MU | A |

SCALE: NTS | U.O.M.: mm | SHEET: 3 OF 3