



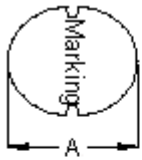
PART NO.

MCSDC0604-4R7MU

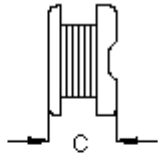
REVISIONS

| 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



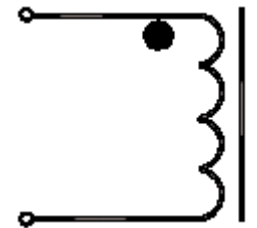
Top View



Side View

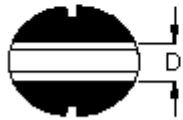
| | | |
|---|--------|-------------|
| A | 5.8 mm | (Maximum) |
| C | 4.8 mm | (Maximum) |
| D | 1.8 mm | (Reference) |

Schematic Diagram

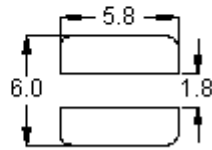


Note:

1. Wire Ø0.28mm x 1P 2UEF1/U 155°C
2. 12.5TS (Reference)



Bottom View



Suggest PCB Layout

Dimensions : Millimetres

Marking : 4R7

Electrical Characteristics

(at 25°C)

| Test Condition | | |
|---------------------------------|-----|---------------------------------|
| 1KHz 1V | L | 4.7µH ±20% |
| at 25°C | DCR | 80mΩ (Maximum) |
| 1KHz 1V I _{rms} = 1.8A | 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 | 5.8 (Maximum) | 4.8 (Maximum) | 1.8 (Reference) |
| 1 | 5.62 | 4.61 | 1.86 |
| 2 | 5.63 | 4.58 | 1.91 |
| 3 | 5.59 | 4.59 | 1.84 |
| 4 | 5.61 | 5.62 | 1.78 |
| 5 | 5.62 | 4.61 | 1.82 |
| Average | 5.61 | 4.8 | 1.84 |

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TOLERANCES:

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DRAWN BY:

Shambu

DATE:

10/02/11

CHECKED BY:

Jagan

DATE:

10/02/11

APPROVED BY:

Farnell

DATE:

24/02/11

DRAWING TITLE:

Inductor

SIZE
A

DWG NO.

M10003211

ELECTRONIC FILE
SDC0604-4R7MU

REV
A

SCALE: NTS

U.O.M.: mm

SHEET: 1 OF 3



PART NO.

MCSDC0604-4R7MU

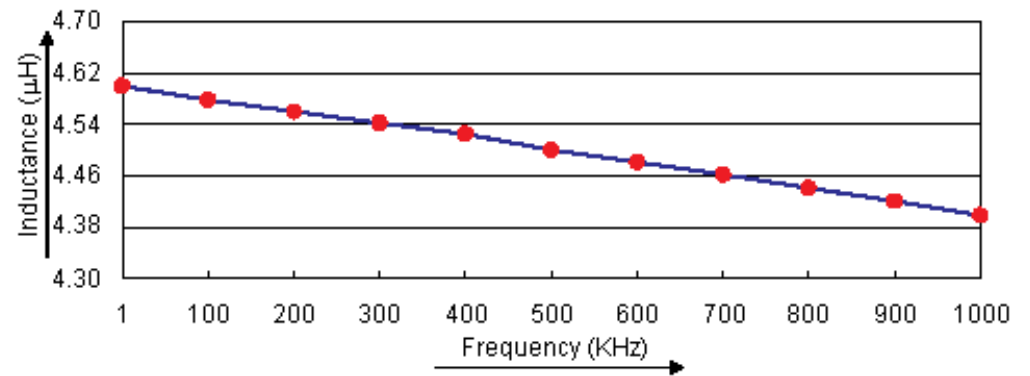
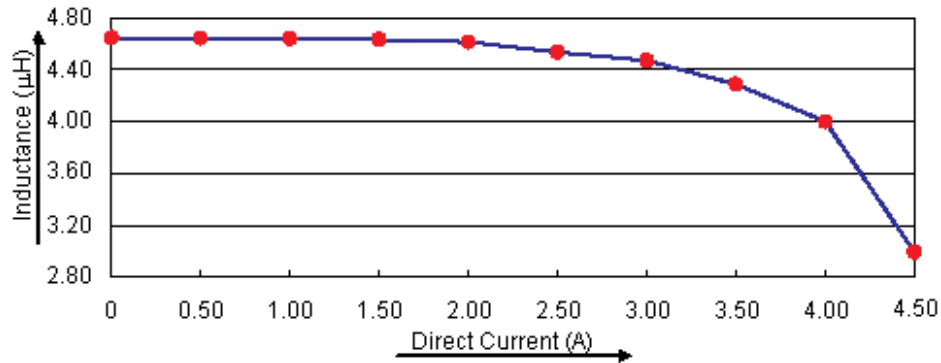
REVISIONS

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|-------|-----|-------------|--------|---------|--------|---------|---------|---------|
| - | A | RELEASED | Shambu | 10/2/11 | Jagan | 10/2/11 | Farnell | 24/2/11 |

Test Data for Electrical

| Test Item | L μH | DCR mΩ | ΔT |
|----------------|-------------|-----------------|------------------------------------|
| Condition | 1KHz 1V | at 25°C | 1KHz 1V I _{rms} = 1.8A |
| Specification | 4.7 ±20% | 80 (Maximum) | Temperature rise 40°C (Maximum) |
| 1 | 4.64 | 42.52 | OK |
| 2 | 4.6 | 40.79 | OK |
| 3 | 4.58 | 41.56 | OK |
| 4 | 4.61 | 41.15 | OK |
| 5 | 4.53 | 41.4 | OK |
| Average | 4.59 | 41.48 | OK |

Electric Characteristics



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| 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 | M10003211 | SDC0604-4R7MU | A |
| SCALE: NTS | | U.O.M.: mm | SHEET: 2 OF 3 |



PART NO.

MCSDC0604-4R7MU

REVISIONS

| 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 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 No damage DCR change : Within ±20% Inductance change : Within ±20% | According to J-STD-020B level 3 Test condition :60°C 60% RH Test duration :40 hours 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 Steam aging category : 97°C 98% RH Steam aging duration : 8 hours Solder : Lead-free solder Solder temperature : 260°C ±5°C Dip time : 5 +0/-0.5 seconds. |

Material List

| No. | Item | Material Description |
|-----|--------------------|----------------------------------|
| 1 | Core | R5A CDR5.6 x 4.55 (ST) B2.4 F2.1 |
| 2 | Wire | Ø0.28mm x 1P 2UEF1/U (155°C) |
| 3 | Solder (Lead Free) | Sn99.3%/Cu0.7% |

Part Number Table

| Description | Part Number |
|----------------------------|------------------------|
| Inductors, 4.7µH, 20%, SMD | MCSDC0604-4R7MU |

<http://www.farnell.com>

<http://www.newark.com>

<http://www.cpc.co.uk>

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

DRAWING TITLE:

Inductor

| | | | |
|-------------------|-----------------------------|---|----------------------|
| SIZE A | DWG NO. M10003211 | ELECTRONIC FILE SDC0604-4R7MU | REV A |
| SCALE: NTS | | U.O.M.: mm | SHEET: 3 OF 3 |