



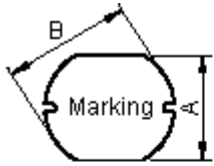
PART NO.

MCSD105-471KU

REVISIONS

| ECN # | REV | DESCRIPTION | DRAWN | DATE | CHECKD | DATE | APPRVD | DATE |
|-------|-----|-------------|--------|---------|--------|---------|---------|---------|
| - | A | RELEASED | Shashi | 09/2/11 | Jagan | 09/2/11 | Farnell | 23/2/11 |

Configurations and Dimensions



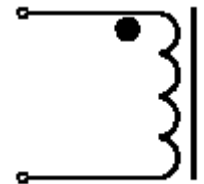
Top View



Side View

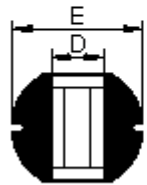
| | | |
|---|--------------|-------------|
| A | 9 ±0.4 mm | - |
| B | 10 ±0.4 mm | - |
| C | 5.4 ±0.5 mm | - |
| D | 3.5 mm | (Reference) |
| E | 10.2 ±0.5 mm | - |

Schematic Diagram

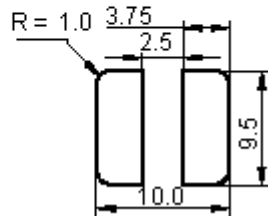


Note:

1. Wire Ø0.2mm x 1P 2UEWF 155°C
2. 93.5TS (Reference)



Bottom View



Suggest PCB Layout

Dimensions : Millimetres

Marking : 471 YY : Year
YYWW WW : Week

Electrical Characteristics

(at 25°C)

| Test Condition | | |
|---------------------------------------|-----|---------------------------------|
| 100KHz 0.25V | L | 470µH ±10% |
| at 25°C | DCR | 1.48Ω (Maximum) |
| 100KHz 0.25V 1 _{rms} = 0.42A | ΔT | Temperature rise 40°C (Maximum) |

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

Test Data for Mechanical

| Test Item | A mm | B mm | C mm | D mm | E mm |
|----------------|-------------|-------------|-------------|-----------------|-------------|
| Specification | 9 ±0.4 | 10 ±0.4 | 5.4 ±0.5 | 3.5 (Reference) | 10.2 ±0.5 |
| 1 | 9 | 9.99 | 5.43 | 2.42 | 9.83 |
| 2 | | 9.97 | 5.49 | 2.54 | 9.81 |
| 3 | 8.96 | 10 | 5.4 | 2.6 | 9.89 |
| 4 | 8.98 | 10.02 | 5.5 | 2.76 | 9.83 |
| 5 | 9.98 | 9.98 | 5.43 | 2.52 | 9.89 |
| Average | 9.18 | 9.99 | 5.45 | 2.57 | 9.85 |

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DRAWN BY:

Shashi

DATE:

09/02/11

CHECKED BY:

Jagan

DATE:

09/02/11

APPROVED BY:

Farnell

DATE:

23/02/11

DRAWING TITLE:

Inductor

SIZE **A** DWG NO.

M10002782

ELECTRONIC FILE
SD105-471KU

REV
A

SCALE: NTS

U.O.M.: mm

SHEET: 1 OF 3



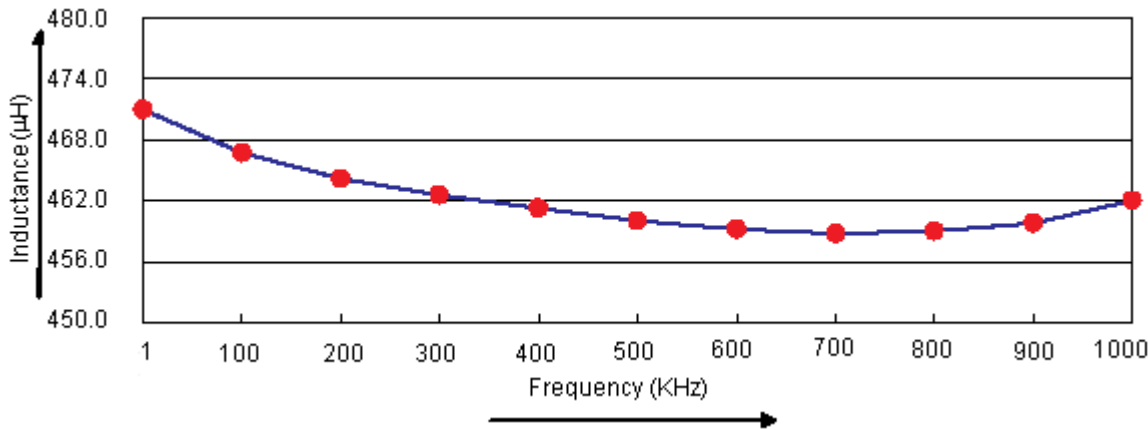
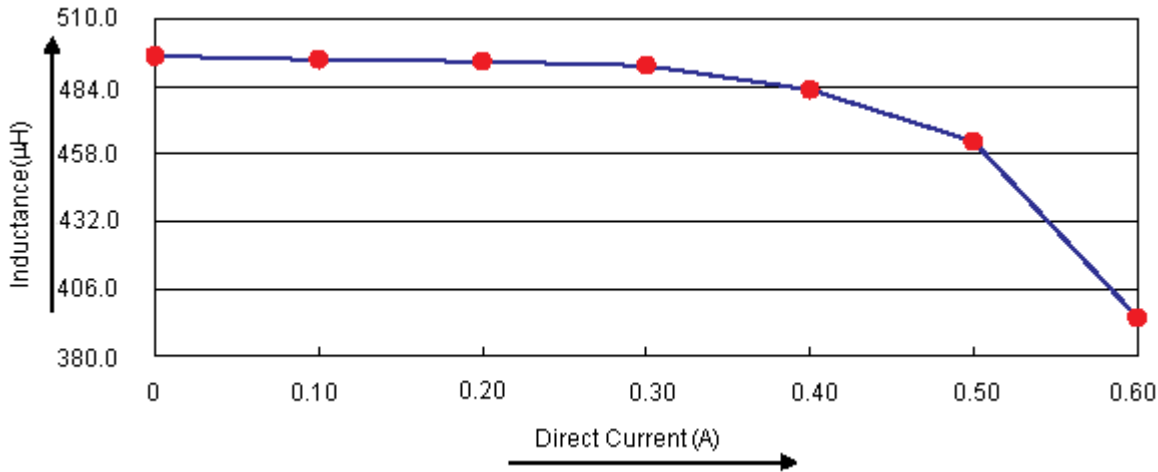
PART NO.

MCS D105-471KU

REVISIONS

| ECN # | REV | DESCRIPTION | DRAWN | DATE | CHECKD | DATE | APPRVD | DATE |
|-------|-----|-------------|--------|---------|--------|---------|---------|---------|
| - | A | RELEASED | Shashi | 09/2/11 | Jagan | 09/2/11 | Farnell | 23/2/11 |

Electric Characteristics



Test Data for Electrical

| Test Item | L µH | DCR Ω | ΔT |
|----------------|-----------------|-------------------|--|
| Condition | 100KHz 0.25V | at 25°C | 100KHz 0.25V I _{rms} = 0.42A |
| Specification | 470 ±10% | 1.48 (Maximum) | Temperature rise 40°C (Maximum) |
| 1 | 499.5 | 0.97 | OK |
| 2 | 496.35 | | OK |
| 3 | 484.9 | | OK |
| 4 | 486.85 | 0.96 | OK |
| 5 | 496.05 | 0.98 | OK |
| Average | 492.730 | 0.97 | OK |

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| CHECKED BY: | DATE: |
| Jagan | 09/02/11 |
| APPROVED BY: | DATE: |
| Farnell | 23/02/11 |

| | | | |
|-----------------------|----------------|------------------------|----------------------|
| DRAWING TITLE: | | | |
| Inductor | | | |
| SIZE | DWG NO. | ELECTRONIC FILE | REV |
| A | M10002782 | SD105-471KU | A |
| SCALE: NTS | | U.O.M.: mm | SHEET: 2 OF 3 |



PART NO.

MCS D105-471KU

REVISIONS

| ECN # | REV | DESCRIPTION | DRAWN | DATE | CHECKD | DATE | APPRVD | DATE |
|-------|-----|-------------|--------|---------|--------|---------|---------|---------|
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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 ±5°C Dip time : 5 +0/-0.5 seconds. |

Material List

| No. | Item | Material Description |
|-----|--------------------|--------------------------------|
| 1 | Core | R5A CDR10 x 5.4 (ST) B3.8 F2.6 |
| 2 | Wire | Ø0.2mm x 1P 2UEWF 155°C |
| 3 | Solder (Lead Free) | 99.3%Sn0.7%Cu |

Part Number Table

| Description | Part Number |
|-----------------------------|----------------|
| Inductor, 470µH, 420mA, 10% | MCS D105-471KU |

<http://www.farnell.com>

<http://www.newark.com>

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

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| Farnell | 23/02/11 |

DRAWING TITLE:

Inductor

| SIZE | DWG NO. | ELECTRONIC FILE | REV |
|------------|-----------|-----------------|---------------|
| A | M10002782 | SD105-471KU | A |
| SCALE: NTS | | U.O.M.: mm | SHEET: 3 OF 3 |