



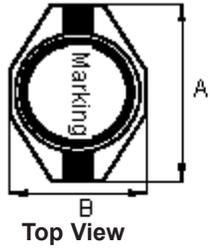
PART NO.

MCBFS5220-2R2MU

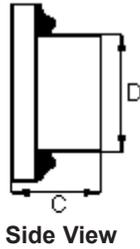
REVISIONS

| ECN # | REV | DESCRIPTION | DRAWN | DATE | CHECKD | DATE | APPRVD | DATE |
|-------|-----|-------------|-------|---------|--------|---------|--------|---------|
| - | A | RELEASED | ASH | 20/4/11 | SID | 20/4/11 | | 04/5/11 |

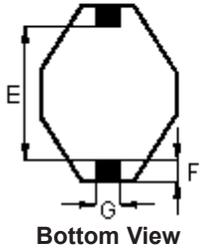
Configurations and Dimensions



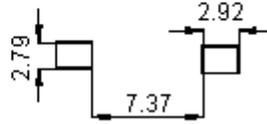
Top View



Side View



Bottom View

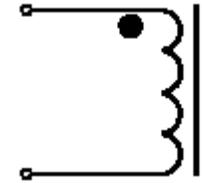


Suggest PCB Layout

Dimensions : Millimetres

| | | |
|---|-------------|--------|
| A | 12.95 mm | (Max.) |
| B | 9.5 mm | |
| C | 5.2 mm | |
| D | 8.4 ±0.3 mm | - |
| E | 7.62 mm | (Ref.) |
| G | 2.54 mm | |

Schematic Diagram



Note:

1. Wire Ø0.35mm × 1P 2UEWF 155°C
2. 9.5TS (Reference)



Marking : 2R2

Electrical Characteristics (at 25°C)

| Test Condition | | |
|---|-----------------------|----------------|
| 100 KHz 0.1 V | L | 2.2 µH ±20% |
| at 25°C | DCR | 27 mΩ (Max.) |
| 100 KHz 0.1 V I _{rms} = 5.96 A | L at I _{rms} | ΔT 40°C (Max.) |

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

Note : I_{rms} : Temperature rise 40°C

Test Data for Mechanical

| Test Item | A mm | B mm | C mm | D mm | E mm | F mm | G mm |
|---------------|--------------|------------|------------|----------|-------------|-------------|-------------|
| Specification | 12.95 (Max.) | 9.5 (Max.) | 5.2 (Max.) | 8.4 ±0.3 | 7.62 (Ref.) | 2.54 (Ref.) | 2.54 (Ref.) |
| 1 | 12.75 | 9.21 | 4.78 | 8.5 | 7.62 | 2.52 | 2.53 |
| 2 | 12.73 | 9.22 | 4.8 | 8.48 | 7.6 | 2.51 | 2.52 |
| 3 | 12.78 | 9.2 | 4.81 | 8.51 | 7.61 | 2.53 | 2.53 |
| 4 | 12.8 | 9.18 | 4.8 | 8.52 | 7.62 | 2.5 | 2.51 |
| 5 | 12.74 | 9.2 | 4.79 | 8.49 | 7.59 | 2.52 | 2.52 |
| Average | 12.76 | 9.2 | 4.8 | 8.5 | 7.61 | 2.52 | 2.52 |

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DRAWING TITLE:

Inductor

| | | | |
|------------------|-----------------------------|------------------------------------|-----------------|
| SIZE A | DWG NO. M10003210 | ELECTRONIC FILE MCBFS5220-2R2MU | REV A |
| SCALE: NTS | | U.O.M.: mm | SHEET: 1 OF 4 |



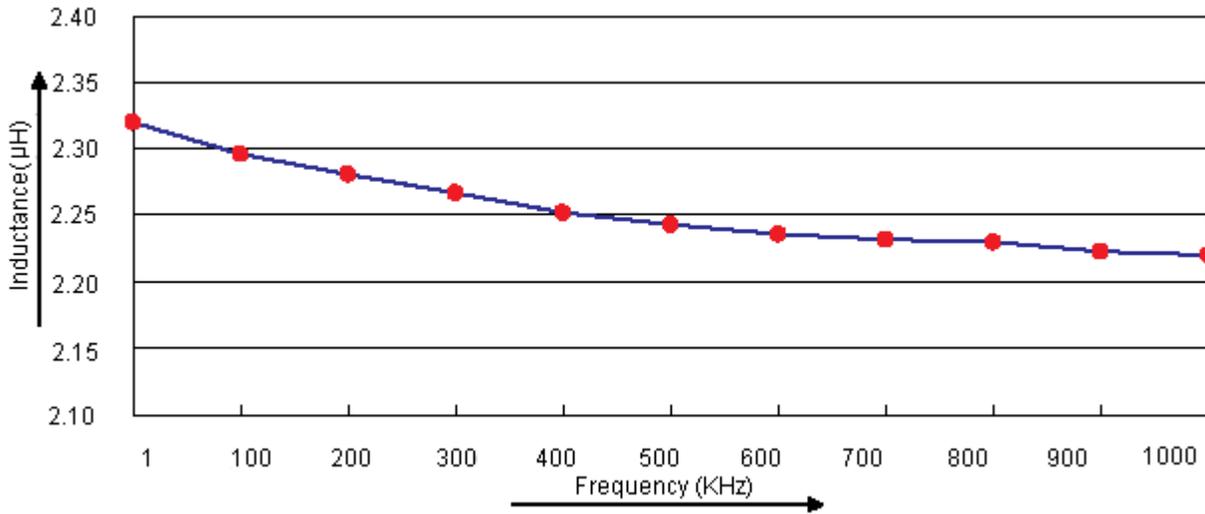
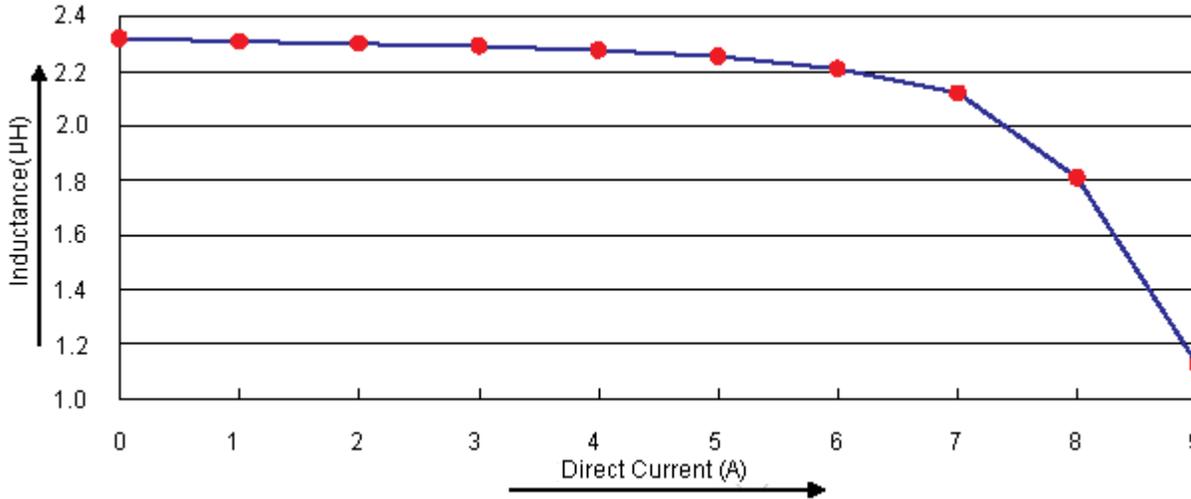
PART NO.

MCBFS5220-2R2MU

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Electric Characteristics



Test Data for Electrical

| Test Item | L µH | DCR mΩ | L at I _{rms} µH |
|---------------|---------------|--------------|--|
| Condition | 100 KHz 0.1 V | at 25°C | 100 KHz 0.1 V I _{rms} = 5.96 A |
| Specification | 2.2 ±20% | 27 (Max.) | ΔT 40°C (Max.) |
| 1 | 2.3 | 22.76 | OK |
| 2 | 2.36 | 22.42 | |
| 3 | 2.25 | 22.45 | |
| 4 | 2.24 | 22.56 | |
| 5 | 2.31 | 22.51 | |
| Average | 2.29 | 22.54 | OK |

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| | 04/05/11 |

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Inductor

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| SIZE A | DWG NO. M10003210 | ELECTRONIC FILE MCBFS5220-2R2MU | REV A |
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PART NO.

MCBFS5220-2R2MU

REVISIONS

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| | | | | | | | | |

Reliability Test

| Test Item | Specifications | Test Method and Remarks |
|----------------------------------|--|--|
| Solderability | The electrodes shall be at least 90% covered with new solder coating. | According to IEC68-2-20 Soldering temperature : 245 ±5°C Solder : Sn99.3% / Cu0.7% Flux : Rosin Immersion time : 5 ±1 s |
| Soldering heat resistance | Appearance : No damage Inductance change : Within ±10% of initial value | Preheat temperature 150°C Preheat time : 1 min Solder temperature : 260 ±5°C Dipping time : 10 ±1 s Measured at room temperature after placing for 24 hours. |
| Vibration (Out LAB) | Appearance : No damage All electrical and mechanical parameters within tolerance. | According to MIL-STD202 Method 204 Frequency : 10 to 55 Hz Amplitude : 1.52 mm Direction and time X Y and Z direction for 2 hours each. |
| Humidity resistance test | Appearance : No damage All electrical and mechanical parameters within tolerance. | According to IEC68-2-1 Method Ca Temperature : 40 ±2°C Humidity : 90%-95% RH Test time : 500 ±2 hrs The component should be stabilized at normal condition for 24 hours before test. |
| High temperature resistance test | Appearance : No damage All electrical and mechanical parameters within tolerance. | According to IEC68-2-2 Temperature : 85 ±3°C Test time : 500 +24 hrs The component should be stabilized at normal condition for 24 hours before test. |
| Low temperature resistance test | Appearance : No damage All electrical and mechanical parameters within tolerance. | According to IEC68-2-1 Method A (Ad) Temperature : -40 ±3°C Test time : 500 +24 hrs The component should be stabilized at normal condition for 24 hours before test. |
| Temperature cycles test | Appearance : No damage All electrical and mechanical parameters within tolerance. | According to IEC68-2-14 Method N (Nb) High-temperature : 85 ±3°C duration 30 mins Room-temperature : 25 ±2°C duration 3 hrs Low-temperature : -40 ±3°C duration 30 mins Room-temperature : 25 ±2°C duration 3 hrs Number of cycle : 10 cycles The component should be stabilized at normal condition for 24 hours before test. |

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DATE:

04/05/11

DRAWING TITLE:

Inductor

SIZE

A

DWG NO.

M10003210

ELECTRONIC FILE

MCBFS5220-2R2MU

REV

A

SCALE: NTS

U.O.M.: mm

SHEET: 3 OF 4



PART NO.

MCBFS5220-2R2MU

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| | | | | | | | | |

Material List

| No. | Item | Material Description |
|-----|--------------------|--|
| 1 | Core | R5A DR4.8 × 4 R5A RI 8.4 × 4.1 × 6.85 |
| 2 | Wire | Ø0.35 mm × 1P 2UEWF (155°C) |
| 3 | Solder (Lead-free) | Sn99.3% / Cu0.7% |
| 4 | Glue | TH320D / TH320-3 |
| 5 | Base | SN-BS019.01 LCP |

Part Number Table

| Description | Part Number |
|----------------------------|-----------------|
| Inductor, 2.2µH, 20%, 5.6A | MCBFS5220-2R2MU |

<http://www.element14.com>

<http://www.farnell.com>

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Inductor

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| SIZE A | DWG NO. M10003210 | ELECTRONIC FILE MCBFS5220-2R2MU | REV A |
| SCALE: NTS | U.O.M.: mm | SHEET: 4 OF 4 | |