



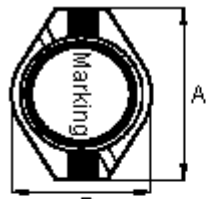
PART NO.

MCBFS7330-221MU

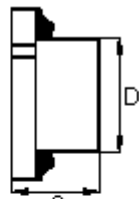
REVISIONS

| ECN # | REV | DESCRIPTION | DRAWN | DATE    | CHECKD | DATE    | APPRVD  | DATE    |
|-------|-----|-------------|-------|---------|--------|---------|---------|---------|
| -     | A   | RELEASED    | Sidhu | 19/2/11 | Jagan  | 19/2/11 | Farnell | 07/3/11 |

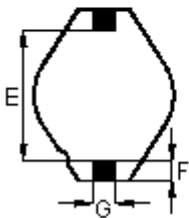
Configurations and Dimensions



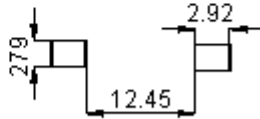
Top View



Side View



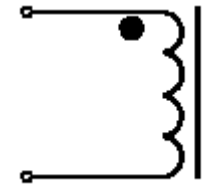
Bottom View



Suggest PCB Layout  
Dimensions : Millimetres

|   |              |           |
|---|--------------|-----------|
| A | 18.54 mm     | Maximum   |
| B | 15.24 mm     | Maximum   |
| C | 7.62 mm      | Maximum   |
| D | 12.7 ±0.3 mm | -         |
| E | 12.7 mm      | Reference |
| F | 2.54 mm      | Reference |
| G | 2.54 mm      | Reference |

Schematic Diagram



Note:

- (1) Wire Ø0.32mm x 1P 2UEWF 155°C
- (2) 57.5TS (Reference)



Marking : 221  
YYWW

YY : Year  
WW : Week

Electrical Characteristics

(at 25°C)

| Test Condition                      |                       |                  |
|-------------------------------------|-----------------------|------------------|
| 100KHz 0.1V                         | L                     | 220µH ±20%       |
| at 25°C                             | DCR                   | 470mΩ (Maximum)  |
| 100KHz 0.1V I <sub>rms</sub> = 1.2A | L at I <sub>rms</sub> | ΔT40°C (Maximum) |

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

Note: I<sub>rms</sub> 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 | 18.54 (Maximum) | 15.24 (Maximum) | 7.62 (Maximum) | 12.7 ±0.3 | 12.7 (Reference) | 2.54 (Reference) | 2.54 (Reference) |
| 1             | 18.06           | 14.01           | 7.01           | 12.68     | 12.91            | 2.54             | 2.54             |
| 2             | 18.04           | 14              | 6.98           | 12.71     | 12.92            | 2.53             | 2.53             |
| 3             | 18.06           | 14.03           | 6.99           | 12.65     | 12.86            | 2.52             | 2.53             |
| 4             | 18.05           | 14              | 6.95           | 12.66     | 12.88            | 2.51             | 2.54             |
| 5             | 18.06           | 14.02           | 6.96           | 12.67     | 12.9             | 2.52             | 2.53             |
| Average       | 18.05           | 14.01           | 6.98           | 12.67     | 12.89            | 2.52             | 2.54             |

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| DRAWN BY:    | DATE:    |
| Sidhu        | 19/02/11 |
| CHECKED BY:  | DATE:    |
| Jagan        | 19/02/11 |
| APPROVED BY: | DATE:    |
| Farnell      | 07/03/11 |

DRAWING TITLE:

Inductor

|            |                      |                                  |          |
|------------|----------------------|----------------------------------|----------|
| SIZE<br>A  | DWG NO.<br>M10003453 | ELECTRONIC FILE<br>BFS7330-221MU | REV<br>A |
| SCALE: NTS | U.O.M.: mm           | SHEET: 1 OF 3                    |          |



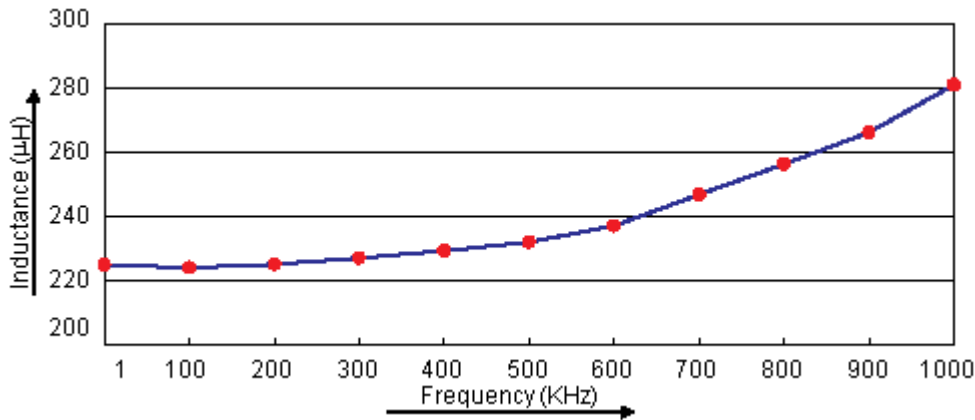
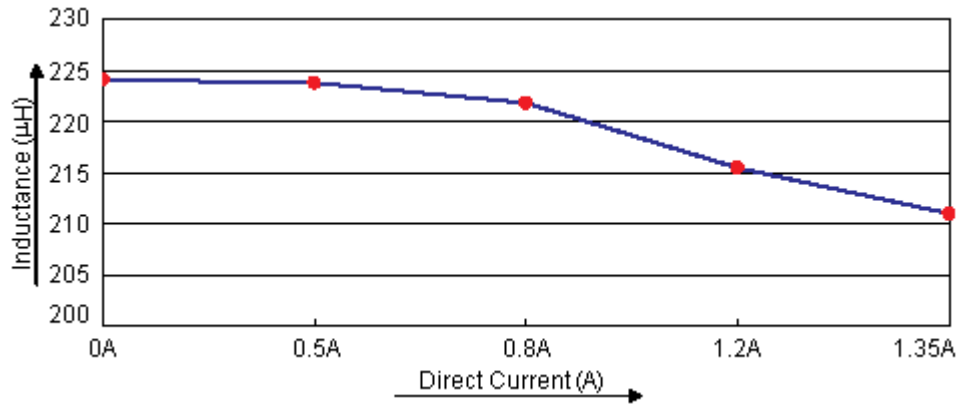
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| -     | A   | RELEASED    | Sidhu | 19/2/11 | Jagan  | 19/2/11 | Farnell | 07/3/11 |

Electric Characteristics



Test Data for Electrical

| Test Item      | L<br>µH        | DCR<br>mΩ        | L at I <sub>rms</sub><br>µH            |
|----------------|----------------|------------------|--|
| Condition      | 100KHz<br>0.1V | at 25°C          | 100KHz 0.1V<br>I <sub>rms</sub> = 1.2A |
| Specification  | 220 ±20%       | 470<br>(Maximum) | ΔT40°C<br>(Maximum)                    |
| 1              | 216.59         | 310.9            | OK                                     |
| 2              | 213.41         | 309.8            | OK                                     |
| 3              | 216.83         | 311.4            | OK                                     |
| 4              | 217.97         | 311.6            | OK                                     |
| 5              | 216.05         | 311.7            | OK                                     |
| <b>Average</b> | <b>216.17</b>  | <b>311.08</b>    | <b>OK</b>                              |

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



PART NO.

MCBFS7330-221MU

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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<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               | N5D DR9.7 x 5.8<br>N5D R112.7 x 5.7 x 10.8 |
| 2   | Wire               | Ø0.32mm x 1P 2UEWF 155°C                   |
| 3   | Solder (Lead Free) | 99.3%Sn / 0.7%Cu                           |
| 4   | Glue               | TH320D / TH320-3                           |
| 5   | Base               | DR13-RT-A DAP                              |

Part Number Table

| Description                | Part Number     |
|----------------------------|-----------------|
| Inductor, 220µH, 20%, 1.4A | MCBFS7330-221MU |

<http://www.farnell.com>

<http://www.newark.com>

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

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