



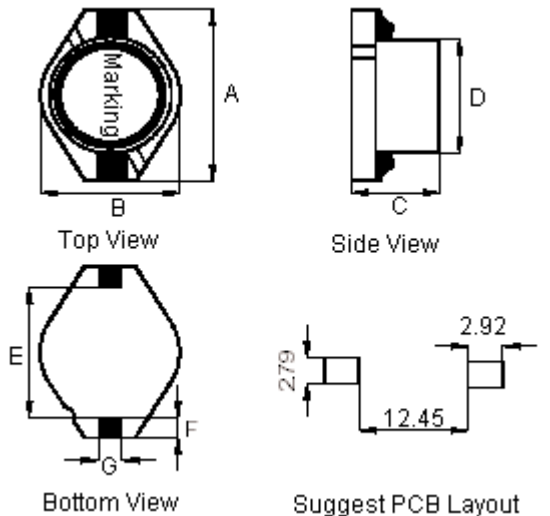
PART NO.

MCBFS7330-680MU

REVISIONS

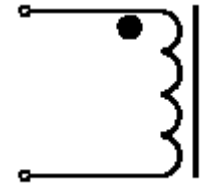
| ECN # | REV | DESCRIPTION | DRAWN | DATE    | CHECKD | DATE    | APPRVD  | DATE   |
|-------|-----|-------------|-------|---------|--------|---------|---------|--------|
| -     | A   | RELEASED    | Arun  | 19/2/11 | Jagan  | 19/2/11 | Farnell | 7/3/11 |

Configurations and Dimensions



|   |              |           |
|---|--------------|-----------|
| 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 Ø0.4mm x 1P 2UEWF 155°C
- (2) 31.5TS (Reference)

Marking : 680  
YYWW

YY : Year  
WW : Week

Suggest PCB Layout  
Dimensions : Millimetres

Electrical Characteristics

(at 25°C)

| Test Condition                      |                       |                  |
|-------------------------------------|-----------------------|------------------|
| 100KHz 0.25V                        | L                     | 68µH ±20%        |
| at 25°C                             | DCR                   | 138mΩ (Maximum)  |
| 100KHz 0.1V I <sub>rms</sub> = 2.2A | 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) | 12.70 ±0.3 | 12.70 (Reference) | 2.54 (Reference) | 2.54 (Reference) |
| 1             | 18              | 14.01           | 7.02           | 12.69      | 12.89             | 2.51             | 2.54             |
| 2             | 18.04           | 14              | 6.92           | 12.65      | 12.9              | 2.5              | 2.53             |
| 3             | 18.01           | 14.06           | 6.98           | 12.71      | 12.88             | 2.53             | 2.52             |
| 4             | 18.06           | 14.05           | 6.94           | 12.65      | 12.91             |                  | 2.53             |
| 5             | 18.04           | 14.01           | 6.96           | 12.66      | 12.93             | 2.52             | 2.51             |
| Average       | 18.03           | 14.03           | 6.96           | 12.67      | 12.90             | 2.52             | 2.53             |

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

DRAWING TITLE:

Inductor

|            |            |                 |      |
|------------|------------|-----------------|------|
| SIZE       | DWG NO.    | ELECTRONIC FILE | REV  |
| A          | M10003469  | BFS7330-680MU   | A    |
| SCALE: NTS | U.O.M.: mm | SHEET: 1        | OF 3 |



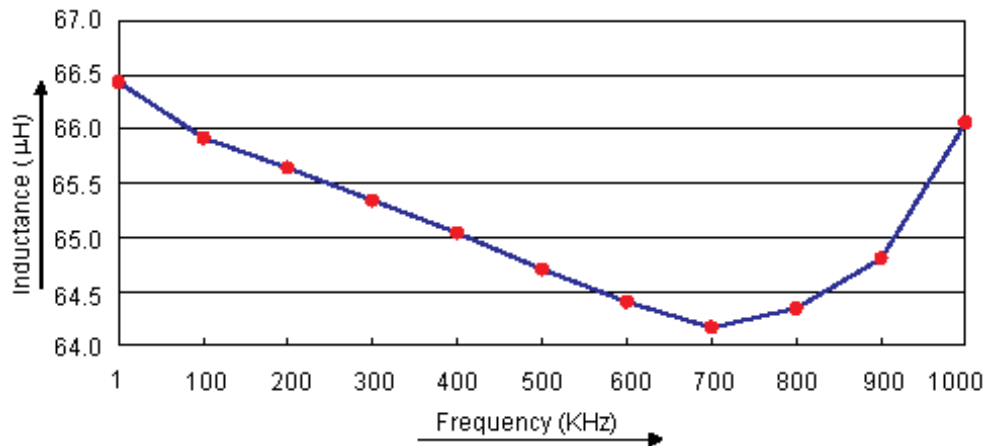
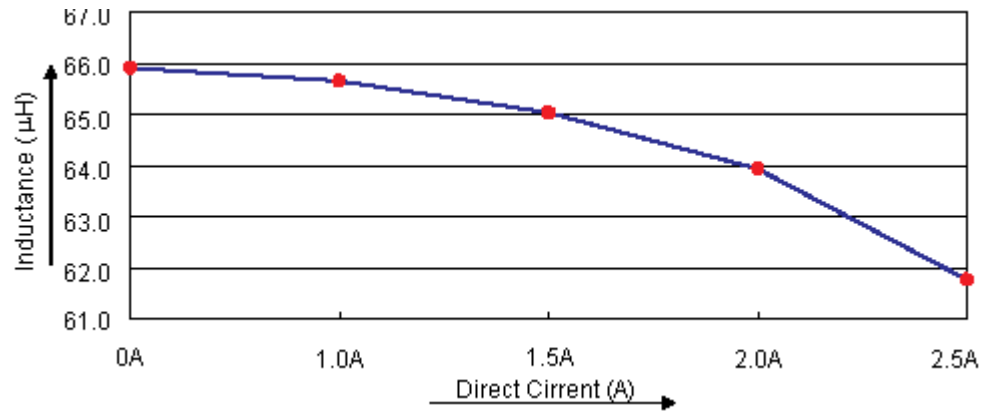
PART NO.

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| -     | A   | RELEASED    | Arun  | 19/2/11 | Jagan  | 19/2/11 | Farnell | 7/3/11 |

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> = 2.2A |
| Specification | 68 ±20%        | 138<br>(Maximum) | ΔT40°C<br>(Maximum)                    |
| 1             | 68.7           | 101.5            | OK                                     |
| 2             | 66.58          | 109.4            | OK                                     |
| 3             | 66.87          | 104.6            | OK                                     |
| 4             | 68.41          | 103.8            | OK                                     |
| 5             | 67.9           | 104.5            | OK                                     |
| Average       | 67.69          | 104.76           | OK                                     |

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| APPROVED BY: | DATE:    |
| Farnell      | 07/03/11 |

DRAWING TITLE:

Inductor

|            |                      |                                  |          |
|------------|----------------------|----------------------------------|----------|
| SIZE<br>A  | DWG NO.<br>M10003469 | ELECTRONIC FILE<br>BFS7330-680MU | REV<br>A |
| SCALE: NTS | U.O.M.: mm           | SHEET: 2 OF 3                    |          |



PART NO.

MCBFS7330-680MU

REVISIONS

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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 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 RI12.7 x 5.7 x 10.8 |
| 2   | Wire               | Ø0.4mm x 1P 2UEWF155°C                     |
| 3   | Solder (Lead Free) | 99.3%Sn / 0.7%Cu                           |
| 4   | Glue               | TH320D / TH320-3                           |
| 3   | Base               | C1270+03009-1 DAP                          |

Part Number Table

| Description               | Part Number     |
|---------------------------|-----------------|
| Inductor, 68µH, 20%, 2.5A | MCBFS7330-680MU |

<http://www.farnell.com>

<http://www.newark.com>

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

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| Inductor       |            |                 |     |
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