



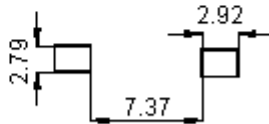
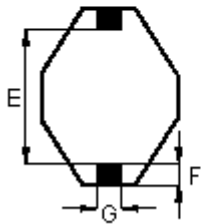
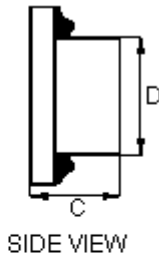
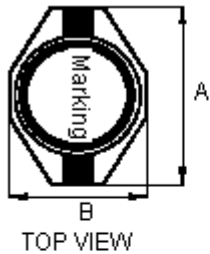
PART NO.

MCBFS5220-471KU

REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	Shashi	19/2/11	Jagan	19/2/11	Farnell	05/3/11

Configurations and Dimensions



BOTTOM VIEW

Suggest PCB Layout

Dimensions : Millimetres

Marking : 471

Electrical Characteristics (at 25°C)

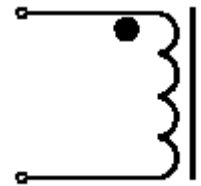
Test Condition		
100KHz 0.1V	L	470µH ±10%
at 25°C	DCR	3.84Ω (Maximum)
100KHz 0.1V I <sub>rms</sub> = 0.42A	L at I <sub>rms</sub>	ΔT40°C (Maximum)

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

Note : I<sub>rms</sub>: Temperature Rise 40°C

A	12.95 mm	(Maximum)
B	9.5 mm	(Maximum )
C	5.2 mm	(Maximum )
D	8.4 ±0.3 mm	-
E	7.62 mm	(Reference)
F	2.54 mm	(Reference)
G	2.54 mm	(Reference)

Schematic Diagram



Note:

1. Wire Ø0.11mm x 1P 2UEWF 155°C
2. 138.5TS (Reference)



Test Data for Mechanical

Test Item	A mm	B mm	C mm	D mm	E mm	F mm	G mm
Specification	12.95 (Maximum)	9.5 (Maximum)	5.2 (Maximum)	8.4 ±0.3	7.62 (Reference)	2.54 (Reference)	2.54 (Reference)
1	12.78	9.2	4.81	8.5	7.62	2.52	2.53
2	12.75	9.22	4.8	8.48	7.6	2.51	2.52
3	12.78	9.23	4.81	8.51	7.61	2.53	2.53
4	12.8	9.18	4.78	8.52	7.62	2.5	2.51
5	12.76	9.20	4.79	8.49	7.59	2.52	2.52
<b>Average</b>	<b>12.77</b>	<b>9.21</b>	<b>4.8</b>	<b>8.5</b>	<b>7.61</b>	<b>2.52</b>	<b>2.52</b>

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Shashi	19/02/11
CHECKED BY:	DATE:
Jagan	19/02/11
APPROVED BY:	DATE:
Farnell	05/03/11

DRAWING TITLE:

Inductor

SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10003449	BFS5220-471KU	A
SCALE: NTS	U.O.M.: mm	SHEET: 1 OF 4	



PART NO.

MCBFS5220-471KU

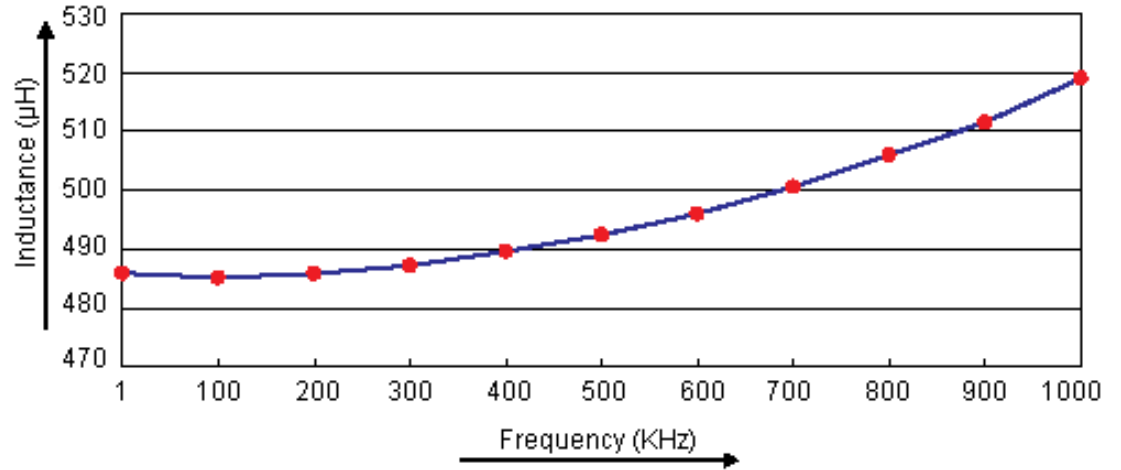
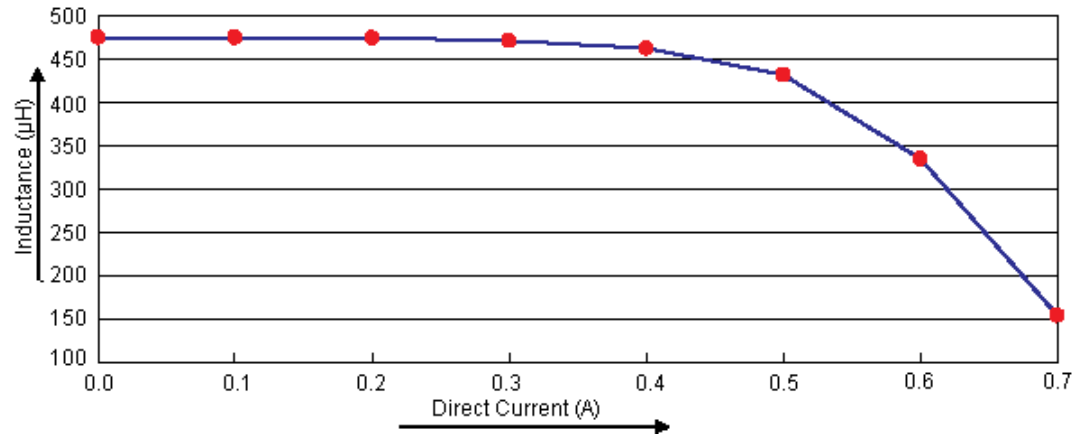
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-	A	RELEASED	Shashi	19/2/11	Jagan	19/2/11	Farnell	05/3/11

Test Data for Electrical

Test Item	L μH	DCR Ω	L at I <sub>rms</sub> μH
Condition	100KHz 0.1V	at 25°C	100KHz 0.1V I <sub>rms</sub> = 0.42A
Specification	470 ±10%	3.84 (Maximum)	ΔT40°C (Maximum)
1	467.8	3.17	OK
2	483.3	3.09	OK
3	472.5	3.13	OK
4	480.1	3.09	OK
5	475.4	3.1	OK
Average	475.82	3.11	OK

Electric Characteristics



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Farnell	05/03/11

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**Inductor**

<b>SIZE</b> A	<b>DWG NO.</b> M10003449	<b>ELECTRONIC FILE</b> BFS5220-471KU	<b>REV</b> A
<b>SCALE: NTS</b>		<b>U.O.M.: mm</b>	<b>SHEET: 2 OF 4</b>



PART NO.

MCBFS5220-471KU

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-	A	RELEASED	Shashi	19/2/11	Jagan	19/2/11	Farnell	05/3/11

Reliability Test

Test Item	Specifications	Test Method and Remarks
Solder ability	The electrodes shall be at least 90% covered with new solder coating.	According to IEC68-2-20; 1. Soldering temperature : 245 ±5°C 2. Solder : 99.3Sn/0.7Cu 3. Flux : Rosin 4. Immersion time : 5 ±1 seconds
Soldering heat resistance	1. Appearance : no damage 2. Inductance change : within ±10% of initial value	1. Preheat temperature: 150°C 2. Preheat time : 1 min 3. Solder temperature : 260 ±5°C 4. Dipping time : 10 ±1 seconds 5. Measured at room temperature after placing for 24 hours.
Vibration (Out Lab)	1. Appearance : no damage 2. All electrical and mechanical parameters within tolerance.	According to MIL-STD202 Method204; 1. Frequency : 10 to 55Hz 2. Amplitude : 1.52mm 3. Direction and time X Y and Z Direction for 2 hours each.
Humidity resistance test	1. Appearance : no damage 2. All electrical and mechanical parameters within tolerance.	According to IEC68-2-2 MethodCa; 1. Temperature : 40 ±2°C 2. Humidity : 90 to 95% RH 3. Test time : 500 ±2H 4. The component should be stabilized at normal condition for 24 hours before test.
High temperature resistance test	1. Appearance : no damage 2. All electrical and mechanical parameters within tolerance.	According to IEC68-2-2; 1. Temperature : 85 ±3°C 2. Test time : 500 +24H 3. The component should be stabilized at normal condition for 24 hours before test.

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Jagan	19/02/11
<b>APPROVED BY:</b>	<b>DATE:</b>
Farnell	05/03/11

**DRAWING TITLE:**

**Inductor**

<b>SIZE</b> A	<b>DWG NO.</b> M10003449	<b>ELECTRONIC FILE</b> BFS5220-471KU	<b>REV</b> A
<b>SCALE: NTS</b>		<b>U.O.M.: mm</b>	<b>SHEET: 3 OF 4</b>



PART NO.

MCBFS5220-471KU

REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	Shashi	19/2/11	Jagan	19/2/11	Farnell	05/3/11

Reliability Test

Test Item	Specifications	Test Method and Remarks
Low temperature resistance test	1. Appearance : no damage 2. All electrical and mechanical parameters within tolerance	According to IEC68-2-1 Method A(Ad); 1. Temperature : 40 ±3°C 2. Test time : 500 +24H 3. The component should be stabilized at normal condition for 24 hours before test.
Temperature cycles test	1. Appearance : no damage 2. All electrical and mechanical parameters within tolerance	According to IEC68-2-14 Method N(Nb); 1. High temperature : 85 ±3 duration : 30 minutes 2. Room temperature : 25 ±2°C duration 3H 3. Low temperature : -40 ±3 duration 30 minutes 4. Room temperature : 25 ±2°C duration 3H 5. Number of cycle : 10 cycles 6. The component should be stabilized at normal condition for 24 hours before test.

Material List

No.	Item	Material Description
1	Core	R5A DR 4.8 x 4 R5A RI 8.4 x 4.1 x 6.85
2	Wire	Ø0.11mm x 1P 2UEWF 155°C
3	Solder (Lead Free)	99.3%Sn/0.7%Cu
4	Glue	TH320D/TH320-3
5	Base	SN-BS019.01 LCP

Part Number Table

Description	Part Number
Inductor, 470µH, 10%, SMD	MCBFS5220-471KU

<http://www.farnell.com>

<http://www.newark.com>

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

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**Inductor**

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<b>SCALE: NTS</b>		<b>U.O.M.: mm</b>	<b>SHEET: 4 OF 4</b>