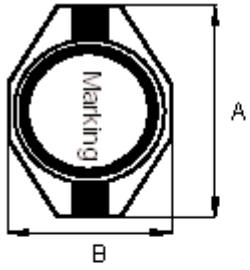
multicomp

PART NO.

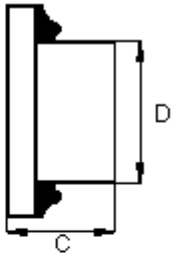
MCBFS5220-680MU

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

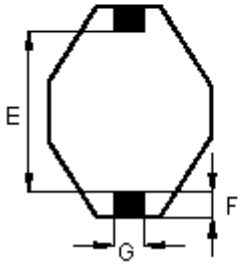
Configurations and Dimensions



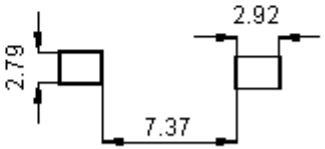
Top View



Side View



Bottom View

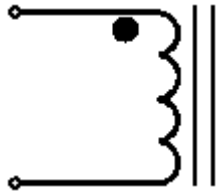


Suggest PCB Layout

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.)
F	2.54 mm	
G		

Schematic Diagram



Note:

1. Wire Ø0.15mm × 1P 2UEWF 155°C.
2. 51.5TS (Reference)

RoHS Compliant

Marking : 680

Electrical Characteristics (at 25°C)

Test Condition		
100 KHz 0.1 V	L	68 µH ±20%
at 25°C	DCR	0.73 Ω (Max.)
100 KHz 0.1 V I_{rms} = 1.07 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	12.78	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	9.2	4.79	8.49	7.59	2.52	2.52
Average	**12.77**	**9.21**	**4.8**	**8.5**	**7.61**	**2.52**	**2.52**

TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY:	DATE:
ASH	20/04/11
CHECKED BY:	DATE:
SID	20/04/11
APPROVED BY:	DATE:
	04/05/11

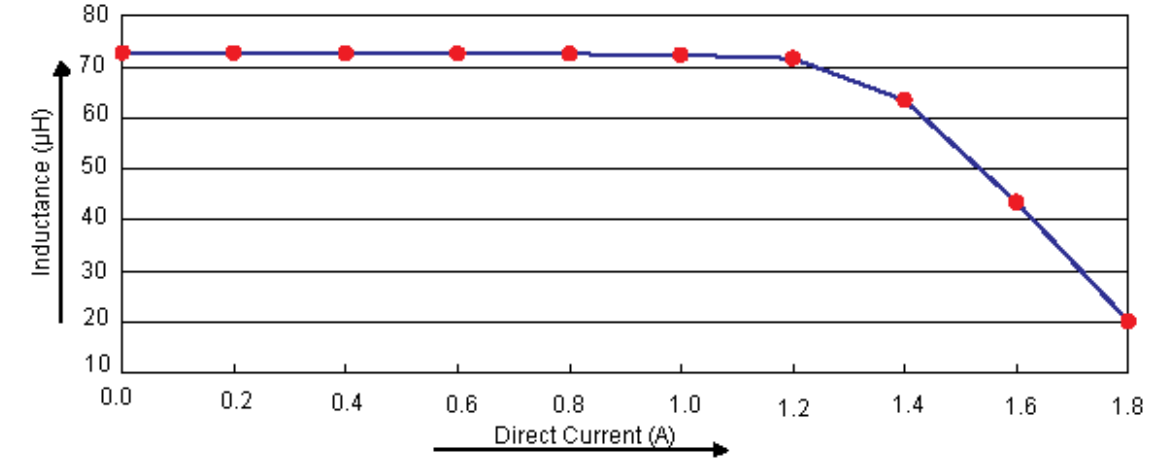
DRAWING TITLE: **Inductor**

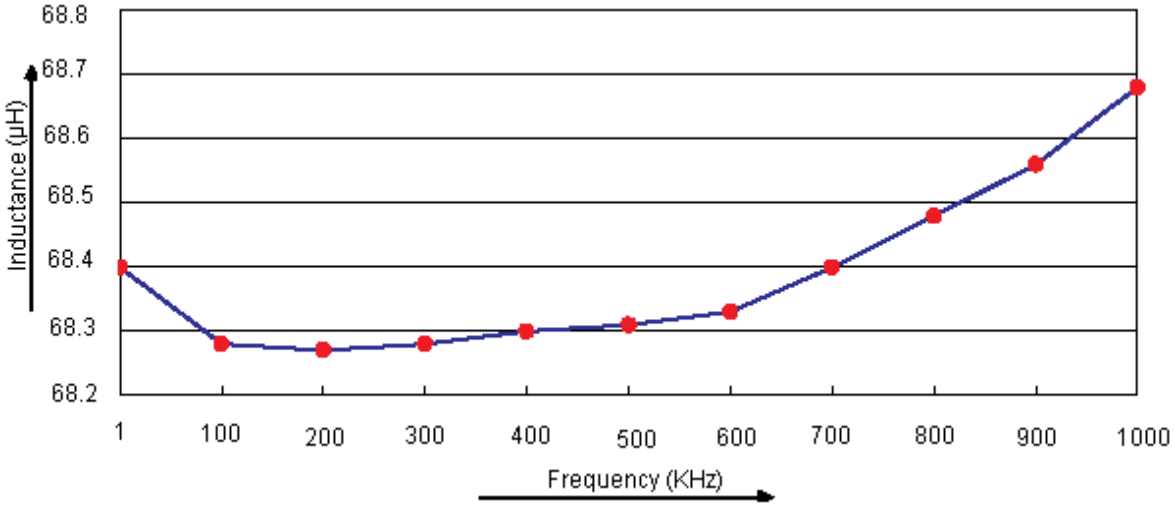
SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10003443	MCBFS5220-680MU	A

SCALE: NTS | U.O.M.: mm | SHEET: 1 OF 4

multicomp	PART NO. MCBFS5220-680MU	REVISIONS								
		ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
		-	A	RELEASED	ASH	20/4/11	SID	20/4/11		04/5/11

Electric Characteristics





Test Data for Electrical

Test Item	L µH	DCR Ω	L at I_{rms} µH
Condition	**100 KHz 0.1 V**	**at 25°C**	**100 KHz 0.1 V I_{rms} = 1.07 A**
Specification	**68 ±20%**	**0.73 (Max.)**	**ΔT 40°C (Max.)**
1	70.68	0.58	OK
2	72.45	0.59	
3	70.46		
4	70.59	0.57	
5	71.25	0.59	
Average	**71.09**	**0.58**	**OK**

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SID	20/04/11
APPROVED BY:	DATE:
	04/05/11

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SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10003443	MCBFS5220-680MU	A

SCALE: NTS | U.O.M.: mm | SHEET: 2 OF 4

multicomp	PART NO. MCBFS5220-680MU	REVISIONS								
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		-	A	RELEASED	ASH	20/4/11	SID	20/4/11		04/5/11

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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SID	20/04/11
APPROVED BY:	DATE:
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DRAWING TITLE: **Inductor**

SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10003443	MCBFS5220-680MU	A

SCALE: NTS | U.O.M.: mm | SHEET: 3 OF 4

multicomp

PART NO.

MCBFS5220-680MU

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

Material List

No.	Item	Material Description
1	Core	R5A DR4.8 × 4 R5A RI 8.4 × 4.1 × 6.85
2	Wire	Ø0.15 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, 68µH, 20%, 1A	MCBFS5220-680MU

http://www.element14.com

http://www.farnell.com

http://www.newark.com

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SID	20/04/11
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DRAWING TITLE: **Inductor**

SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10003443	MCBFS5220-680MU	A

SCALE: NTS | U.O.M.: mm | SHEET: 4 OF 4