



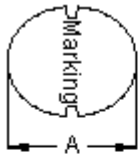
PART NO.

MCSDC1006-680KU

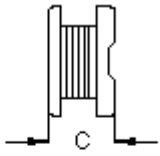
REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	Arun	10/2/11	Jagan	10/2/11	Farnell	24/2/11

Configurations and Dimensions

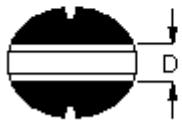


Top View

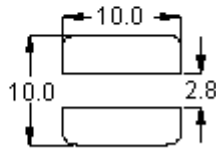


Side View

A	9.8 mm	(Maximum)
C	5.8 mm	(Maximum)
D	2.9 mm	(Reference)



Bottom View

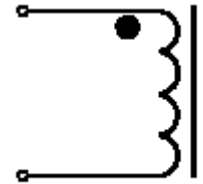


Suggest PCB Layout

Dimensions : Millimetres



Schematic Diagram



Note:

- Wire  $\varnothing 0.32\text{mm} \times 1\text{P} 2\text{UEF1/U } 155^\circ\text{C}$
- 38.5TS (Reference)

Marking : 680

Electrical Characteristics

(at 25°C)

Test Condition		
1KHz 1V	L	68 $\mu\text{H} \pm 10\%$
at 25°C	DCR	220m $\Omega$ (Maximum)
1KHz 1V $I_{\text{rms}} = 1.1\text{A}$	$\Delta T$	Temperature rise 40°C (Maximum)

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

Test Data for Mechanical

Test Item	A mm	C mm	D mm
Specification	9.8 (Maximum)	5.8 (Maximum)	2.9 (Reference)
1	9.56	5.54	2.81
2	9.54	5.61	2.83
3	9.52	5.57	2.79
4	9.49	5.53	2.76
5	9.51	5.58	2.84
Average	9.52	5.57	2.81

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DRAWN BY:	DATE:
Arun	10/02/11
CHECKED BY:	DATE:
Jagan	10/02/11
APPROVED BY:	DATE:
Farnell	24/02/11

DRAWING TITLE:

Inductor

SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10003054	SDC1006-680KU	A
SCALE: NTS	U.O.M.: mm	SHEET: 1 OF 3	



PART NO.

**MCSDC1006-680KU**

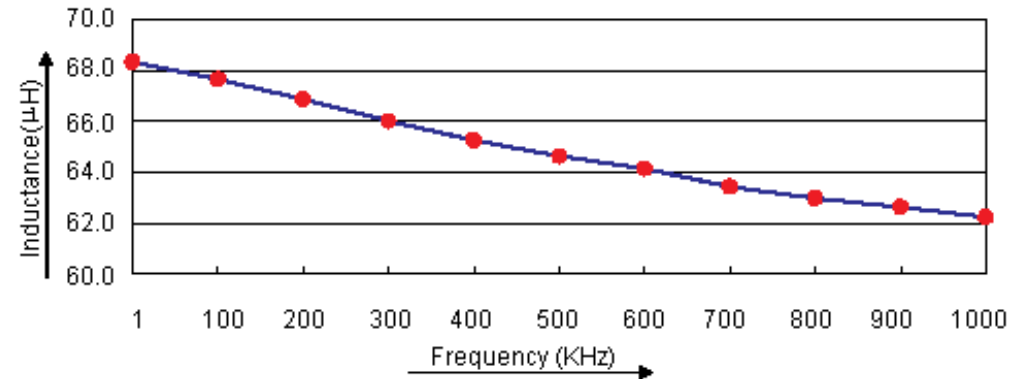
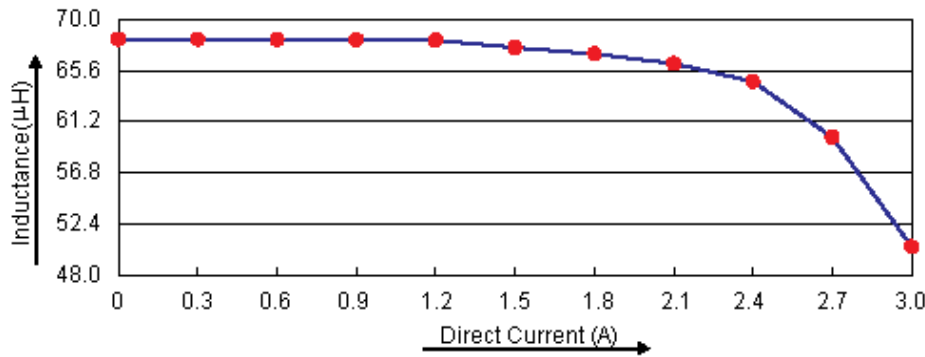
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-	A	RELEASED	Arun	10/2/11	Jagan	10/2/11	Farnell	24/2/11

**Test Data for Electrical**

Test Item	L μH	DCR mΩ	ΔT
Condition	1KHz 1V	at 25°C	1KHz 1V I <sub>rms</sub> = 1.1A
Specification	68 ±10%	220 (Maximum)	Temperature rise 40°C (Maximum)
1	68.29	181.02	OK
2	68.26	181.28	OK
3	68.25	180.85	OK
4	68.18	180.79	OK
5	68.21	151.07	OK
<b>Average</b>	<b>68.24</b>	<b>175</b>	<b>OK</b>

**Electric Characteristics**



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<b>APPROVED BY:</b>	<b>DATE:</b>
Farnell	24/02/11

<b>DRAWING TITLE:</b>			
<b>Inductor</b>			
<b>SIZE</b>	<b>DWG NO.</b>	<b>ELECTRONIC FILE</b>	<b>REV</b>
<b>A</b>	<b>M10003054</b>	<b>SDC1006-680KU</b>	<b>A</b>
<b>SCALE: NTS</b>		<b>U.O.M.: mm</b>	<b>SHEET: 2 OF 3</b>



PART NO.

**MCSDC1006-680KU**

**REVISIONS**

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
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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 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 No damage DCR change : Within ±20% Inductance change : Within ±20%	According to J-STD-020B level 3 Test condition :60°C 60% RH Test duration :40 hours 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 Steam aging category : 97°C 98% RH Steam aging duration : 8 hours Solder : Lead-free solder Solder temperature : 260 ±5°C Dip time : 5 +0/-0.5 seconds.

**Material List**

No.	Item	Material Description
1	Core	K22 DRM 9.5 x 5.5 RB-R B = 4.5 F = 3
2	Wire	Ø0.32mm x 1P 2UEF1/U 155°C
3	Solder (Lead Free)	Sn99.3%/Cu0.7%

**Part Number Table**

Description	Part Number
Inductors, 68µH, 10%, SMD	MCSDC1006-680KU

<http://www.farnell.com>

<http://www.newark.com>

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

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Farnell	24/02/11

<b>DRAWING TITLE:</b>			
<b>Inductor</b>			
<b>SIZE</b>	<b>DWG NO.</b>	<b>ELECTRONIC FILE</b>	<b>REV</b>
A	M10003054	SDC1006-680KU	A
<b>SCALE: NTS</b>		<b>U.O.M.: mm</b>	<b>SHEET: 3 OF 3</b>