



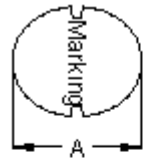
PART NO.

MCSDC1006-102KU

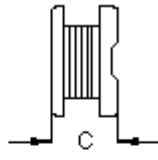
REVISIONS

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

Configurations and Dimensions

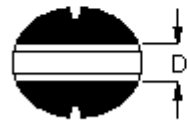


Top View

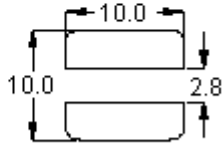


Side View

A	9.8 mm	(Max.)
C	5.8 mm	
D	2.9 mm	(Ref.)



Bottom View



Suggest PCB Layout

Dimensions : Millimetres

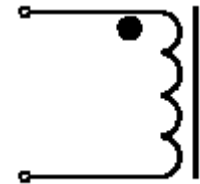
Marking : 102

Electrical Characteristics (at 25°C)

Test Condition		
1 KHz 1 V	L	1 $\mu$ H $\pm$ 10%
at 25°C	DCR	3.1 $\Omega$ (Max.)
1 KHz 1 V $I_{rms} = 0.23$ A	$\Delta$ T	Temperature rise 40°C (Max.)

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

Schematic Diagram



Note:

1. Wire  $\varnothing$ 0.17mm  $\times$  1P 2UEF1/U 155°C
2. 147.5TS (Reference)



Test Data for Mechanical

Test Item	A mm	C mm	D mm
Specification	9.8 (Max.)	5.8 (Max.)	2.9 (Ref.)
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
<b>Average</b>	<b>9.52</b>	<b>5.57</b>	<b>2.81</b>

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SID

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20/4/11

DATE:

20/4/11

DATE:

04/5/11

DRAWING TITLE:

**Inductor**

SIZE  
**A**

DWG NO.

**M10003040**

ELECTRONIC FILE  
**SDC1006-102KU**

REV  
**A**

SCALE: NTS

U.O.M.: mm

SHEET: 1 OF 3



PART NO.

MCSDC1006-102KU

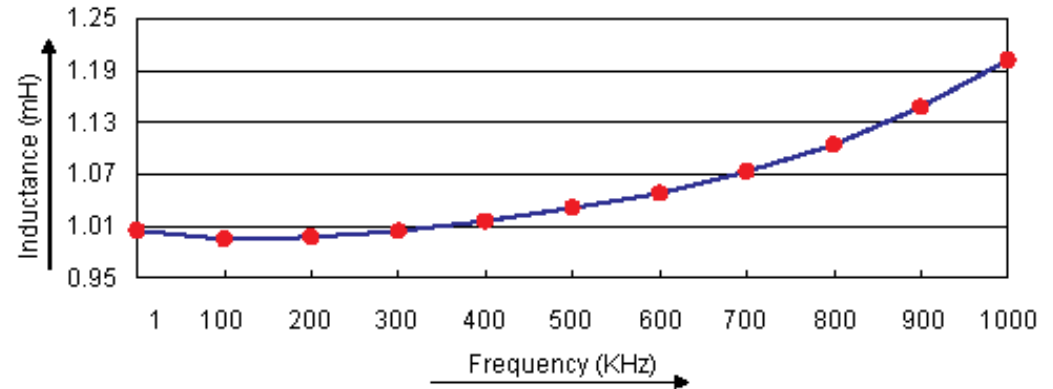
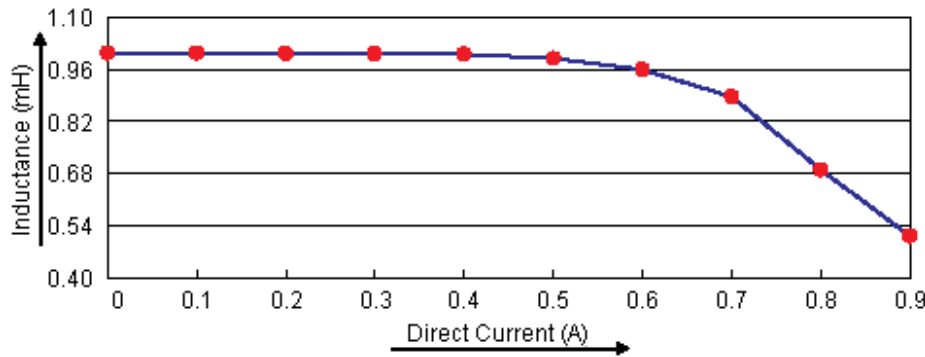
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Test Data for Electrical

Test Item	L mH	DCR Ω	ΔT
Condition	1 KHz 1 V	at 25°C	1 KHz 1 V I <sub>rms</sub> = 0.23 A
Specification	1 ±20%	3.1 (Max.)	Temperature rise 40°C (Max.)
1	0.99	2.37	OK
2	1	2.38	
3			
4	0.99	2.39	
5			
Average	0.99	2.38	OK

Electric Characteristics



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DATE:

20/4/11

DATE:

04/5/11

DRAWING TITLE:

**Inductor**

SIZE  
**A**

DWG NO.

**M10003040**

ELECTRONIC FILE  
**SDC1006-102KU**

REV  
**A**

SCALE: NTS

U.O.M.: mm

SHEET: 2 OF 3



PART NO.

MCSDC1006-102KU

REVISIONS

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

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 hrs 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 hrs Solder : Lead-free solder Solder temperature : 260 ±5°C Dip time : 5 +0 / -0.5 s

Material List

No.	Item	Material Description
1	Core	K22 DRM 9.5 × 5.5 RB-R B = 4.5 F = 3
2	Wire	Ø0.17 mm × 1P 2UEF1/U (155°C)
3	Solder (Lead-free)	Sn99.3% / Cu0.7%

Part Number Table

Description	Part Number
Inductor, 1000µH, 10%, SMD	MCSDC1006-102KU

<http://www.element14.com>

<http://www.farnell.com>

<http://www.newark.com>

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SIZE

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DWG NO.

M10003040

ELECTRONIC FILE

SDC1006-102KU

REV

A

SCALE: NTS

U.O.M.: mm

SHEET: 3 OF 3