



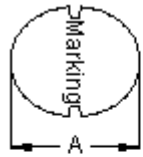
PART NO.

MCSDC1006-821KU

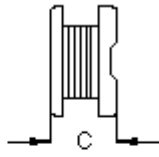
REVISIONS

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

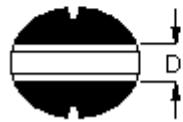


Top View

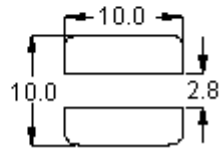


Side View

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



Bottom View



Suggest PCB Layout

Dimensions : Millimetres

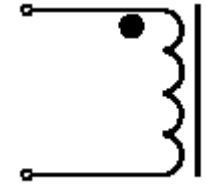
Marking : 821

Electrical Characteristics (at 25°C)

Test Condition		
1 KHz 1 V	L	820 μ H \pm 10%
at 25°C	DCR	2.55 Ω (Max.)
1 KHz 1 V $I_{rms} = 0.24$ A	Δ 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. 134.5TS (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
Average	9.52	5.57	2.81

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DRAWING TITLE:

Inductor

SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10003055	MCSDC1006-821KU	A
SCALE: NTS	U.O.M.: mm	SHEET: 1 OF 3	



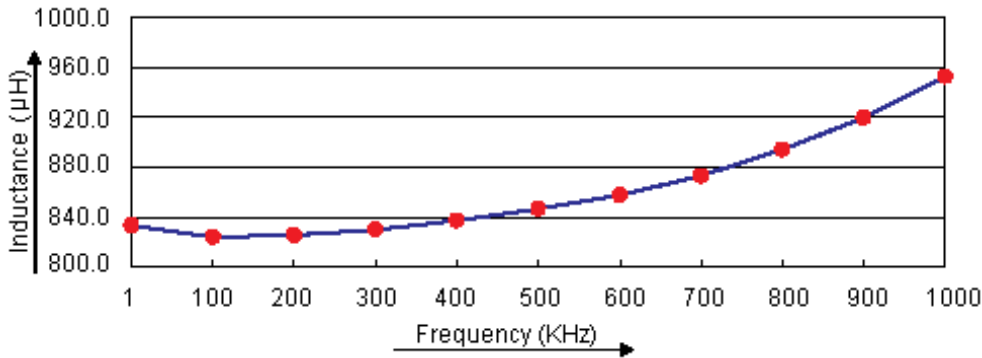
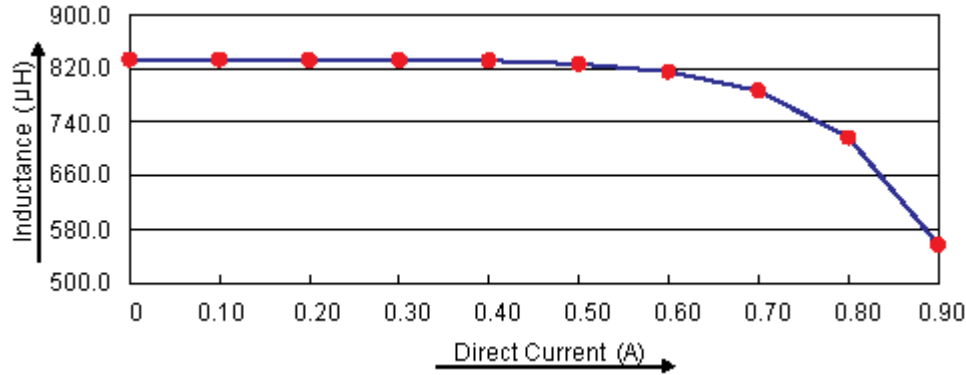
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Electric Characteristics



Test Data for Electrical

Test Item	L µH	DCR Ω	ΔT
Condition	1 KHz 1 V	at 25°C	1 KHz 1 V I _{rms} = 0.24 A
Specification	820 ±10%	2.55 (Max.)	Temperature rise 40°C (Max.)
1	838.6	2.12	OK
2	833.9	2.13	
3	832.7		
4	834.8	2.12	
5	836.5		
Average	835.3	2.12	OK

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APPROVED BY:	DATE:
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DRAWING TITLE:

Inductor

SIZE A	DWG NO. M10003055	ELECTRONIC FILE MCSDC1006-821KU	REV A
SCALE: NTS	U.O.M.: mm	SHEET: 2 OF 3	



PART NO.

MCSDC1006-821KU

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 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, 820µH, 10%, SMD	MCSDC1006-821KU

<http://www.element14.com>

<http://www.farnell.com>

<http://www.newark.com>

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DRAWING TITLE:

Inductor

SIZE
A

DWG NO.

M10003055

ELECTRONIC FILE
MCSDC1006-821KU

REV
A

SCALE: NTS

U.O.M.: mm

SHEET: 3 OF 3