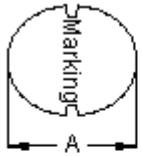
multicomp

PART NO.

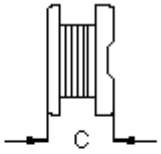
MCSDC1006-821KU

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

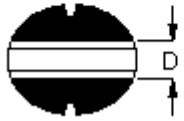
Configurations and Dimensions



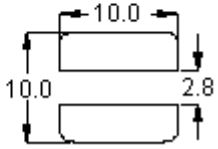
Top View



Side View



Bottom View



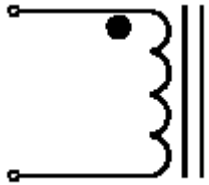
Suggest PCB Layout

Dimensions : Millimetres

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

Marking : 821

Schematic Diagram



Note:

1. Wire Ø0.17mm × 1P 2UEF1/U 155°C
2. 134.5TS (Reference)

RoHS Compliant

Electrical Characteristics (at 25°C)

Test Condition		
1 KHz 1 V	L	820 µH ±10%
at 25°C	DCR	2.55 Ω (Max.)
1 KHz 1 V I_{rms} = 0.24 A	ΔT	Temperature rise 40°C (Max.)

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

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**

TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

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

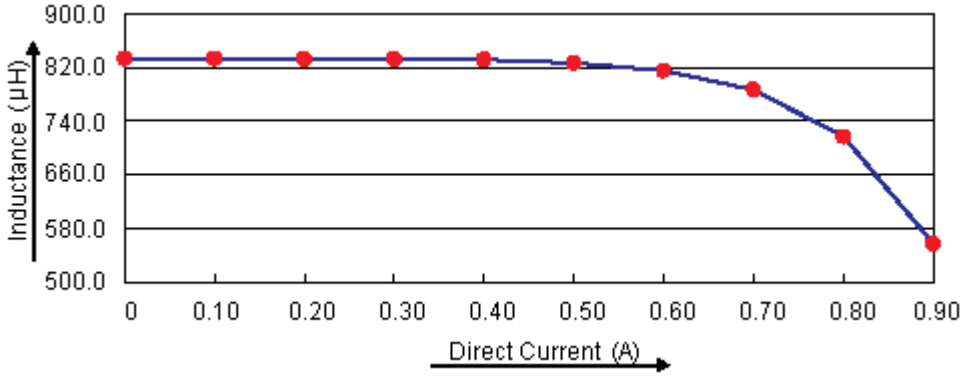
DRAWING TITLE: **Inductor**

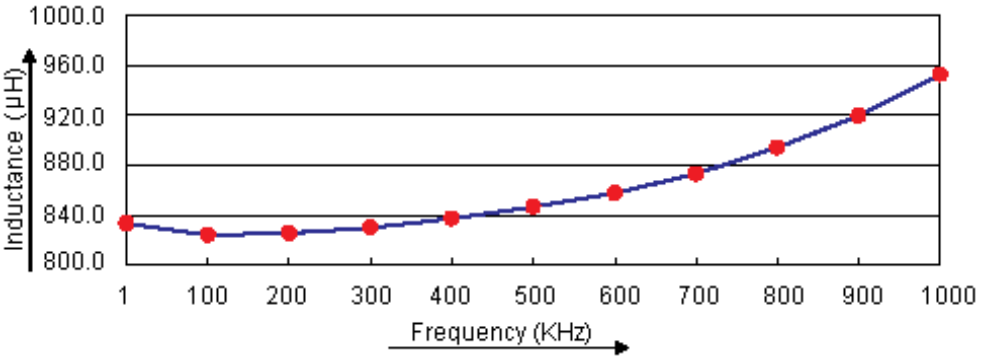
SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10003055	MCSDC1006-821KU	A

SCALE: NTS | U.O.M.: mm | SHEET: 1 OF 3

multicomp	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

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**

TOLERANCES:

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ARU	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	M10003055	MCSDC1006-821KU	A

SCALE: NTS | U.O.M.: mm | SHEET: 2 OF 3

multicomp	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

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

TOLERANCES:

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DRAWN BY:	DATE:
ARU	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	M10003055	MCSDC1006-821KU	A

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