



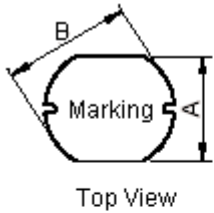
PART NO.

**MCSD105-820KU**

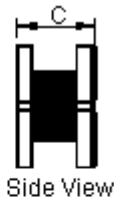
**REVISIONS**

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	Sidhu	09/2/11	Jagan	09/2/11	Farnell	23/2/11

**Configurations and Dimensions**

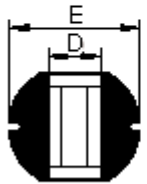


Top View

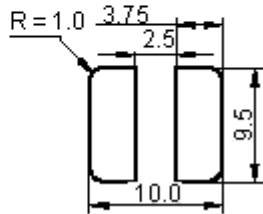


Side View

A	9 ±0.4 mm	-
B	10 ±0.4 mm	-
C	5.4 ±0.5 mm	-
D	3.5 mm	(Reference)
E	10.2 ±0.5 mm	-



Bottom View



Suggest PCB Layout

Dimensions : Millimetres

Marking : 820 YY : Year  
YYWW WW : Week

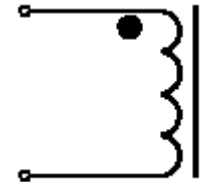
**Electrical Characteristics**

(at 25°C)

Test Condition		
100KHz 0.25V	L	82µH ±10%
at 25°C	DCR	0.25mΩ (Maximum)
100KHz 0.25V I <sub>rms</sub> = 1A	ΔT	Temperature rise 40°C (Maximum)

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

**Schematic Diagram**



**Note:**

1. Wire Ø0.35mm x 1P 2UEWF 155°C
2. 39.5TS (Reference)

**Test Data for Mechanical**

Test Item	A mm	B mm	C mm	D mm	E mm
Specification	9 ±0.4	10 ±0.4	5.4 ±0.5	3.5 (Reference)	10.2 ±0.5
1	9.01	10.1	5.63	3.42	9.8
2	9.02	10.07	5.56	3.9	9.81
3	9.05	10.21	5.58	3.5	9.85
4	9.08	10.23	5.56	3.26	9.83
5	9.18	10.11	5.6	3.89	9.82
<b>Average</b>	<b>9.07</b>	<b>10.14</b>	<b>5.59</b>	<b>3.59</b>	<b>9.82</b>

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**DRAWN BY:**

sidhu

**DATE:**

09/02/11

**CHECKED BY:**

Jagan

**DATE:**

09/02/11

**APPROVED BY:**

Farnell

**DATE:**

23/02/11

**DRAWING TITLE:**

**Inductor**

SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10002622	SD105-820KU	A
SCALE: NTS		U.O.M.: mm	SHEET: 1 OF 3



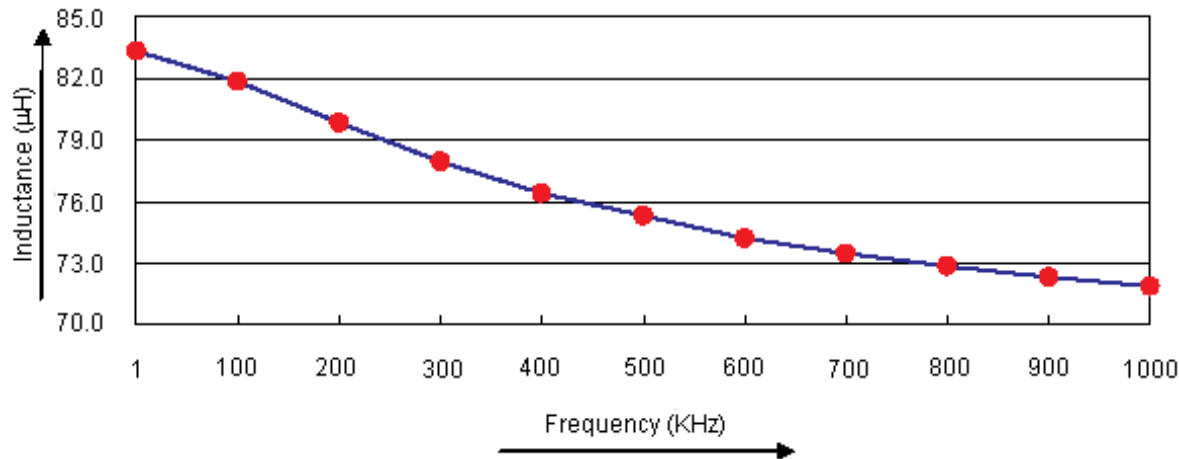
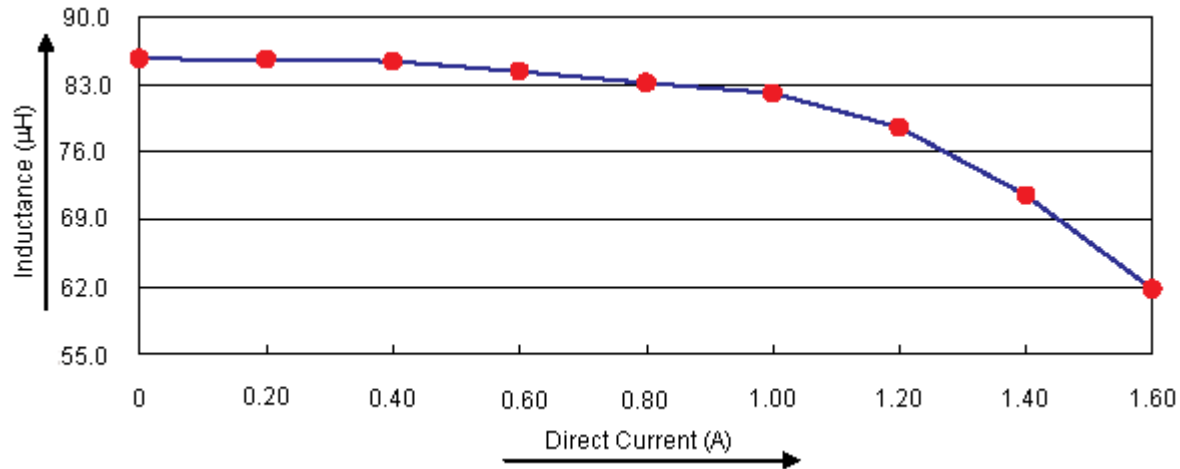
PART NO.

MCS D105-820KU

REVISIONS

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-	A	RELEASED	Sidhu	09/2/11	Jagan	09/2/11	Farnell	23/2/11

Electric Characteristics



Test Data for Electrical

Test Item	L µH	DCR Ω	ΔT
Condition	100KHz 0.25V	at 25°C	100KHz 0.25V I <sub>rms</sub> = 1A
Specification	82 ±10%	0.25 (Maximum)	temperature rise 40°C(Maximum)
1	85.48	0.15	OK
2	85.86		OK
3	85.8		OK
4	84.62		OK
5	85.08		OK
Average	85.368	0.15	OK

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Jagan	09/02/11
<b>APPROVED BY:</b>	<b>DATE:</b>
Farnell	23/02/11

**DRAWING TITLE:**

Inductor

<b>SIZE</b> A	<b>DWG NO.</b> M10002622	<b>ELECTRONIC FILE</b> SD105-820KU	<b>REV</b> A
<b>SCALE:</b> NTS		<b>U.O.M.:</b> mm	<b>SHEET:</b> 2 OF 3



PART NO.

MCS D105-820KU

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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	R5A CDR10 x 5.4 (ST) B3.8 F2.6
2	Wire	Ø0.35mm x 1P 2UEWF 155°C
3	Solder (Lead Free)	99.3%Sn0.7%Cu

Part Number Table

Description	Part Number
Inductor, 82µH, 1A, 10%	MCS D105-820KU

<http://www.farnell.com>

<http://www.newark.com>

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

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<b>APPROVED BY:</b>	<b>DATE:</b>
Farnell	23/02/11

**DRAWING TITLE:**

**Inductor**

<b>SIZE</b> A	<b>DWG NO.</b> M10002622	<b>ELECTRONIC FILE</b> SD105-820KU	<b>REV</b> A
<b>SCALE: NTS</b>		<b>U.O.M.: mm</b>	<b>SHEET: 3 OF 3</b>