



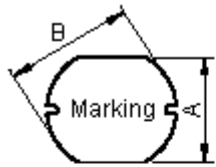
PART NO.

MCS D105-681KU

REVISIONS

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

Configurations and Dimensions



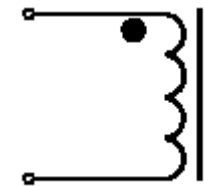
Top View



Side View

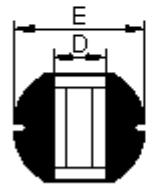
A	9 ±0.4 mm	-
B	10 ±0.4 mm	-
C	5.4 ±0.5 mm	-
D	3.5 mm	(Reference)
E	10.2 ±0.5 mm	-

Schematic Diagram

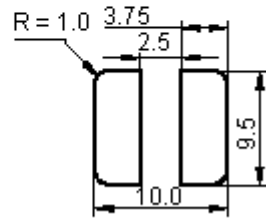


Note:

- Wire Ø0.2mm x 1P 2UEWF 155°C
- 113.5TS (Reference)



Bottom View



Suggest PCB Layout

Dimensions : Millimetres

Marking : 681 YY : Year  
YYWW WW : Week

Electrical Characteristics

(at 25°C)

Test Condition		
100KHz 0.25V	L	680µH ±10%
at 25°C	DCR	2.25Ω (Maximum)
100KHz 0.25V 1 <sub>rms</sub> = 0.28A	ΔT	Temperature rise 40°C (Maximum)

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

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	9.06	10.04	5.52	3.27	9.99
2	9.08	9.98	5.48	3.41	9.89
3	9.04	10.1	5.47	3.49	9.99
4	9.08	9.96	5.48	3.47	10.01
5	9.05	9.93	5.46	3.33	10.02
Average	9.06	10	5.48	3.39	9.98

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TOLERANCES:

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DRAWN BY:

Shashi

DATE:

09/02/11

CHECKED BY:

Jagan

DATE:

09/02/11

APPROVED BY:

Farnell

DATE:

23/02/11

DRAWING TITLE:

Inductor

SIZE A

DWG NO.

M10002783

ELECTRONIC FILE  
SD105-681KU

REV A

SCALE: NTS

U.O.M.: mm

SHEET: 1 OF 3



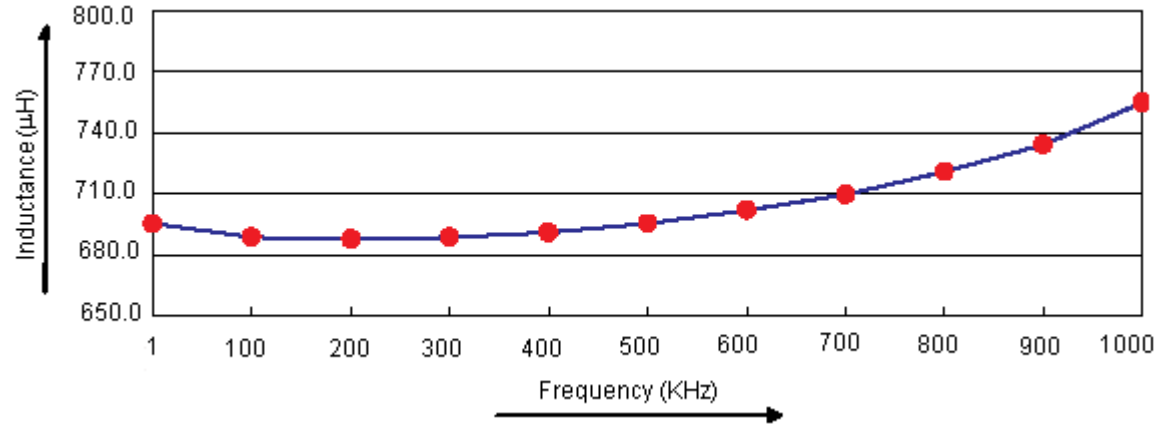
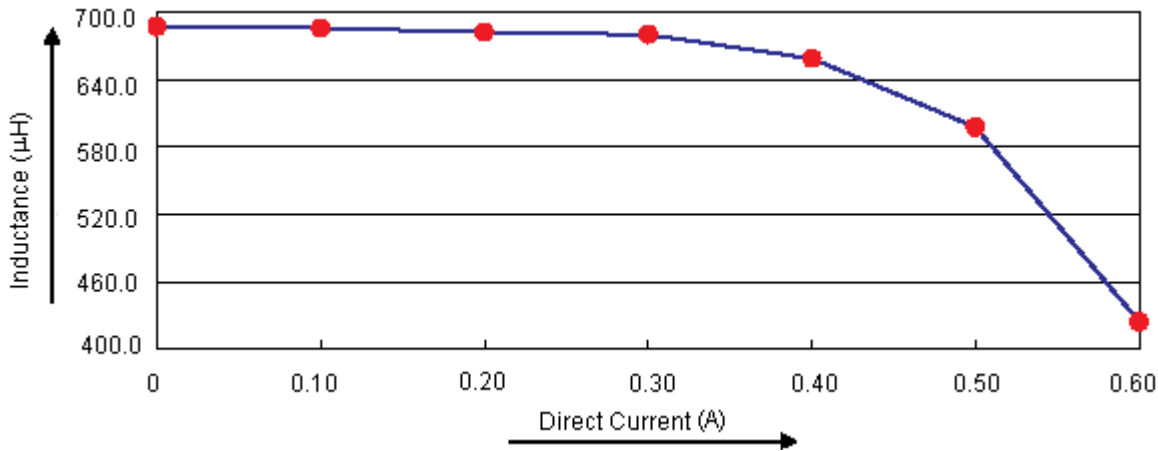
PART NO.

**MCSD105-681KU**

**REVISIONS**

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-	A	RELEASED	Shashi	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> = 0.28A
Specification	680 ±10%	2.25 (Maximum)	Temperature rise 40°C (Maximum)
1	689.75	1.25	OK
2	685	1.28	OK
3	671.25	1.27	OK
4	681.25		OK
5	682.75	1.24	OK
<b>Average</b>	<b>682</b>	<b>1.26</b>	<b>OK</b>

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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> M10002783	<b>ELECTRONIC FILE</b> SD105-681KU	<b>REV</b> A
<b>SCALE: NTS</b>		<b>U.O.M.: mm</b>	<b>SHEET: 2 OF 3</b>



PART NO.

MCS D105-681KU

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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	Ø0.2mm x 1P 2UEWF 155°C
3	Solder (Lead Free)	99.3%Sn0.7%Cu

Part Number Table

Description	Part Number
Inductor, 680µH, 10%, 280mA	MCS D105-681KU

<http://www.farnell.com>

<http://www.newark.com>

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

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Farnell	23/02/11

**DRAWING TITLE:**

**Inductor**

<b>SIZE</b> A	<b>DWG NO.</b> M10002783	<b>ELECTRONIC FILE</b> SD105-681KU	<b>REV</b> A
<b>SCALE: NTS</b>		<b>U.O.M.: mm</b>	<b>SHEET: 3 OF 3</b>