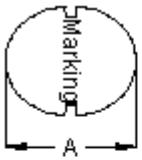
multicomp

PART NO.

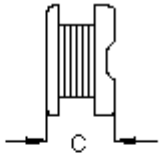
MCSDC0805-680KU

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

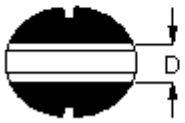
Configurations and Dimensions



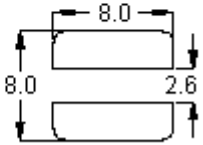
Top View



Side View



Bottom View



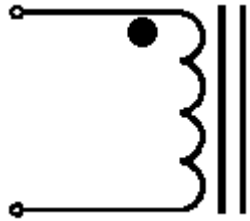
Suggest PCB Layout

A	7.8 mm	(Max.)
C	5.3 mm	
D	2.6 mm	(Ref.)

Dimensions : Millimetres

Marking : 680

Schematic Diagram



Note:

1. Wire Ø0.25mm × 1P 2UEWF 155°C
2. 47.5TS (Reference)

RoHS Compliant

Electrical Characteristics (at 25°C)

Test Condition		
1 KHz 1 V	L	68 µH ±10%
at 25°C	DCR	0.3 Ω (Max.)
1 KHz 1 V I_{sat} = 1.3 A	L at I_{sat}	L drops 35% (Max.)
1 KHz 1 V I_{rms} = 0.85 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	**7.8 (Max.)**	**5.3 (Max.)**	**2.6 (Ref.)**
1	7.5	5.01	2.52
2	7.52	5.03	2.49
3	7.48	5.04	2.43
4	7.5	5.05	2.55
5	7.49	5.03	2.47
Average	**7.5**	**5.03**	**2.49**

TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY:	DATE:
ASK	20/4/11
CHECKED BY:	DATE:
ASH	20/4/11
APPROVED BY:	DATE:
	04/5/11

DRAWING TITLE: **Inductor**

SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10003474	MCSDC0805-680KU	A

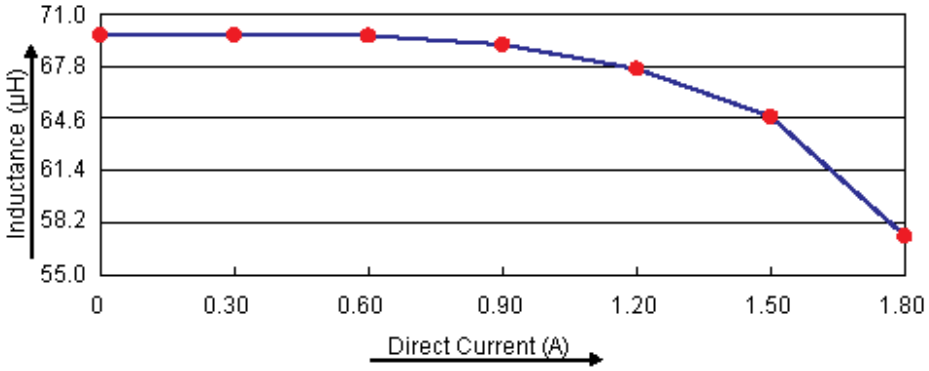
SCALE: NTS | U.O.M.: mm | SHEET: 1 OF 3

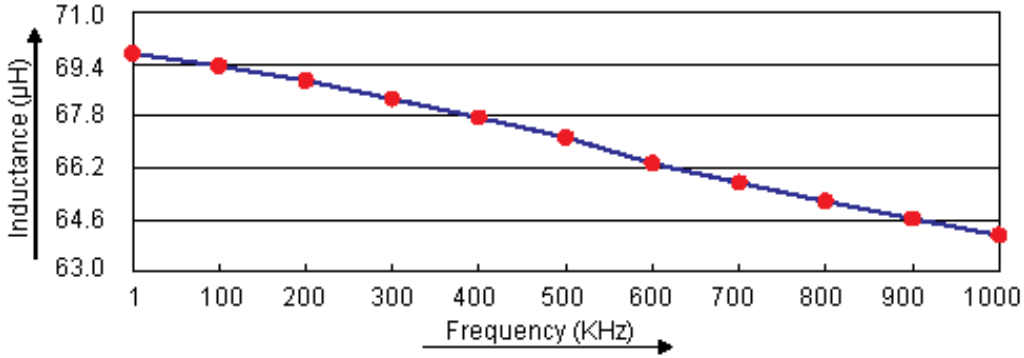
multicomp	PART NO. MCSDC0805-680KU	REVISIONS								
		ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
		-	A	RELEASED	ASK	20/4/11	ASH	20/4/11		04/5/11

Test Data for Electrical

Test Item	L μH	DCR Ω	L at I_{sat} μH	ΔT
Condition	**1 KHz 1 V**	**at 25°C**	**1 KHz 1 V I_{sat} = 1.3 A**	**1 KHz 1 V I_{rms} = 0.85 A**
Specification	**68 ±10%**	**0.3 (Max.)**	**L drops 35% (Max.)**	**Temperature rise 40°C (Max.)**
1	69.73	0.26	68.3	OK
2	69.95		68.19	
3	69.45	0.25	68.35	
4	68.7	0.26	68.25	
5	69.25	0.25	68.05	
Average	**69.42**	**0.26**	**68.23**	**OK**

Electric Characteristics





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ASK	20/4/11
CHECKED BY:	DATE:
ASH	20/4/11
APPROVED BY:	DATE:
	04/5/11

DRAWING TITLE: **Inductor**

SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10003474	MCSDC0805-680KU	A

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

multicomp	PART NO. MCSDC0805-680KU	REVISIONS								
		ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
		-	A	RELEASED	ASK	20/4/11	ASH	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	R5A CDR7.5 × 5 (ST) B3.4 F2.5
2	Wire	Ø0.25 mm × 1P 2UEWF (155°C)
3	Solder (Lead-free)	Sn99.3% / Cu0.7%

Part Number Table

Description	Part Number
Inductor, 68µH, 10%, SMD	MCSDC0805-680KU

http://www.element14.com

http://www.farnell.com

http://www.newark.com

TOLERANCES:

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DRAWN BY:	DATE:
ASK	20/4/11
CHECKED BY:	DATE:
ASH	20/4/11
APPROVED BY:	DATE:
	04/5/11

DRAWING TITLE: **Inductor**

SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10003474	MCSDC0805-680KU	A

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