



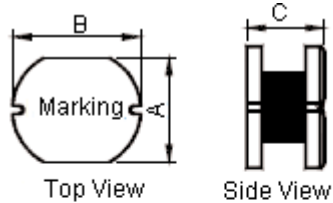
PART NO.

MCSDC0503-100MU

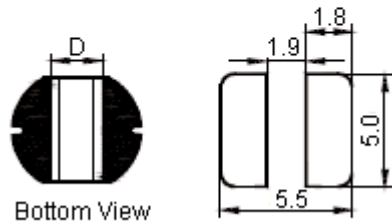
REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	Ashok	10/2/11	Jagan	10/2/11	Farnell	24/2/11

Configurations and Dimensions



A	4.8 ± 0.5 mm	-
B	5.0 ± 0.3 mm	-
C	3.0 ± 0.3 mm	-
D	2.0 mm	Reference



Suggest PCB Layout
Dimensions : Millimetres

Electrical Characteristics

Test condition		
100KHz 1.0V	L	10.0 μH ± 20%
at 25°C	DCR	130.0 mΩ (Maximum)
1KHz 1.0V I _{rms} =1.30A	ΔT	temperature rise 40°C (Maximum)

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

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Ashok	10/02/11
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Jagan	10/02/11
APPROVED BY:	DATE:
Farnell	24/02/11

DRAWING TITLE:

Inductor

SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10003087	SDC0503-100MU	A
SCALE: NTS	U.O.M.: mm	SHEET: 1 OF 5	



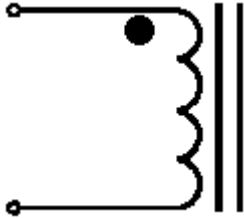
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Schemtaic Diagram



Note:

- (1) Wire Ø0.23mm x 1P 2UEF1/U 155°C
- (2) 20.5TS(REF)

Test Data for Mechanical

Test Item	A mm	B mm	C mm	D mm
Specification	4.8 ±0.5	5.0 ±0.3	3.0 ±0.3	2.0 (Reference)
1	4.60	4.86	3.05	1.74
2	4.54	4.88	3.02	1.77
3	4.56	4.85	3.03	1.74
4	4.61	4.87	3.02	1.81
5	4.53	4.85	3.03	1.68
Average	4.57	4.86	3.03	1.75

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PART NO.

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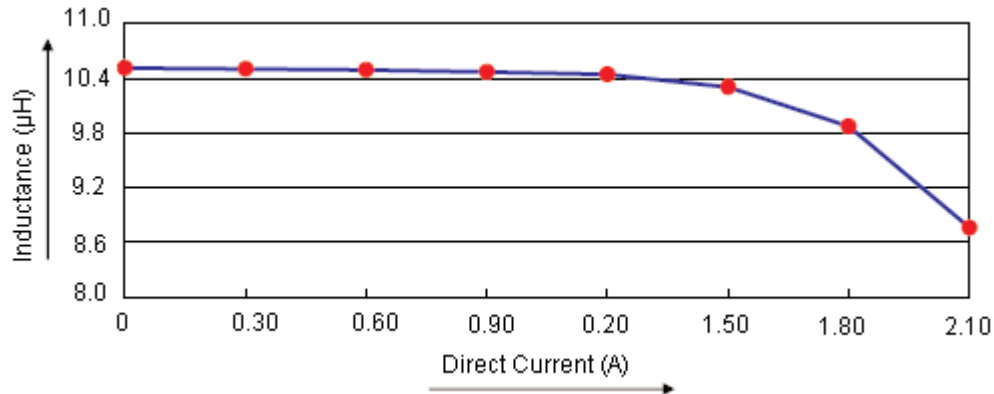
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Test Data for Electrical

Test Item	L μH	DCR mΩ	ΔT
Condition	1KHz 1.0V	at 25°C	1KHz 1.0V I _{rms} =1.30A
Specification	10.0 ±20%	130.0 (Maximum)	temperature rise 40°C (Maximum)
1	10.51	102.61	OK
2	10.45	101.54	OK
3	10.38	100.78	OK
4	10.26	101.50	OK
5	10.33	101.95	OK
Average	10.39	101.68	OK

Electric Characteristics



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Inductor			
SIZE A	DWG NO. M10003087	ELECTRONIC FILE SDC0503-100MU	REV A
SCALE: NTS	U.O.M.: mm	SHEET: 3 OF 5	

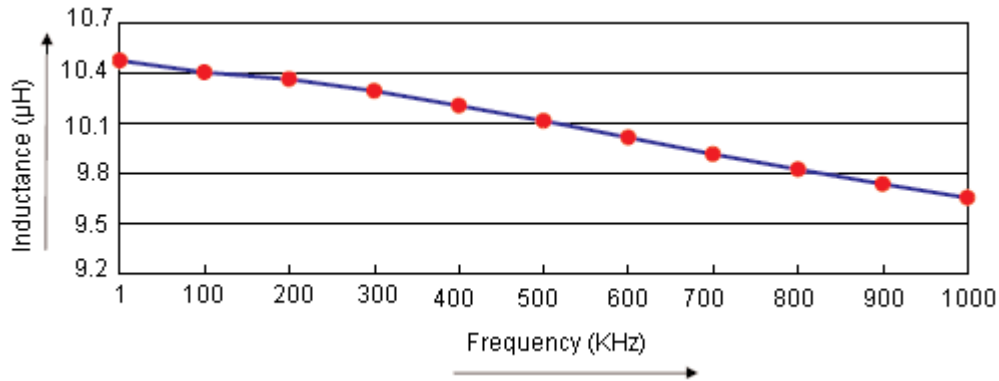


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Reliability Test

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.

<http://www.farnell.com>

<http://www.newark.com>

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

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SCALE: NTS	U.O.M.: mm	SHEET: 4 OF 5	



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Material List

No	Item	Material Description
1	Core	R5A CDR5 x 3(ST) B2 F1.5
2	Wire	Ø0.23mm x 1P 2UEF1/U 155°C
3	Solder (Lead Free)	Sn99.3%/Cu0.7%

Part Number Table

Description	Part Number
Inductors, 10UH, 20%, SMD	MCSDC0503-100MU

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