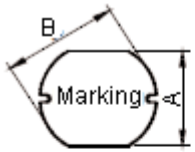
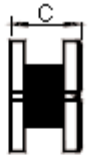
PART NO.	REVISIONS								
MCSD54-221KU	ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
	-	A	RELEASED	Ashok	16/2/11	Jagan	16/2/11	Farnell	02/3/11

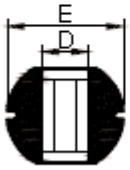
Configurations and Dimensions



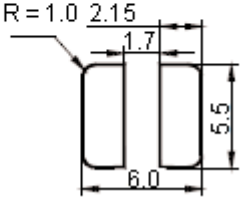
Top View



Side View



Bottom View

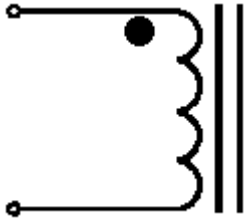


Suggest PCB Layout

Dimensions : Millimetres

A	5.2 ±0.3 mm	-
B	5.8 ±0.3 mm	-
C	4.5 ±0.35 mm	-
D	2 mm	Reference
E	5.8 ±0.5 mm	-

Schematic Diagram



RoHS Compliant

Note:

(1) Wire Ø0.16mm x 1P 2UEWF 155°C
(2) 91.5TS(Reference)

Marking: 221

Electrical Characteristics (at 25°C)

Test condition		
100KHz 0.25V	L	220µH ±10%
at 25°C	DCR	1.57Ω (Maximum)
100KHz 0.25V I_{rms} = 0.35A	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	**5.2 ±0.3**	**5.8 ±0.3**	**4.5 ±0.35**	**2 (Reference)**	**5.8 ±0.5**
1	5.23	5.82	4.57	1.83	5.62
2	5.27	5.74	4.58	1.92	5.69
3	5.26	5.78	4.6	2.01	5.68
4	5.28	5.76	4.62	1.95	5.67
5	5.3	5.8	4.53	1.87	5.65
Average	**5.27**	**5.78**	**4.58**	**1.92**	**5.66**

TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY:	DATE:
Ashok	16/02/11
CHECKED BY:	DATE:
Jagan	16/02/11
APPROVED BY:	DATE:
Farnell	02/03/11

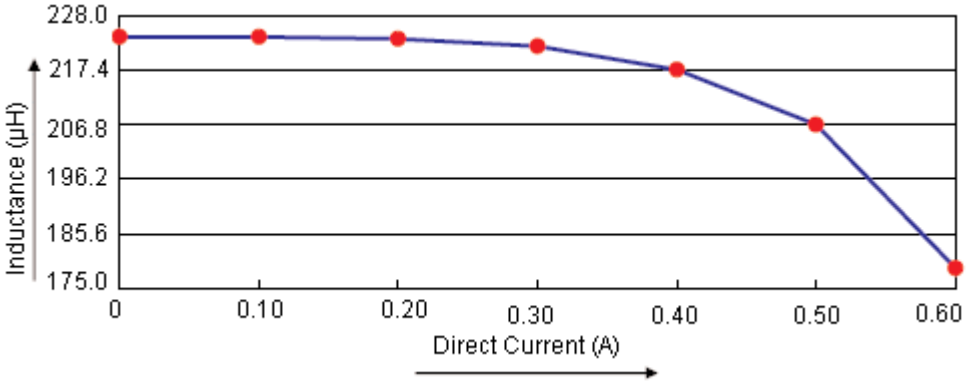
DRAWING TITLE: Inductor

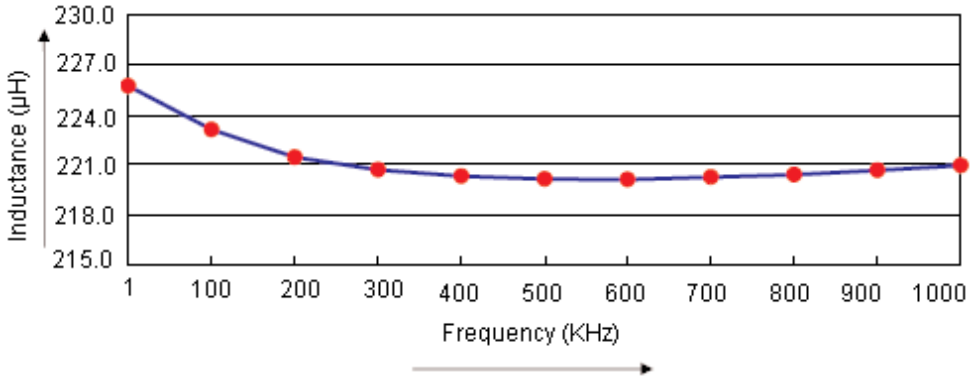
SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10003464	SD54-221KU	A

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

PART NO.	REVISIONS									
MCSD54-221KU	ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
	-	A	RELEASED	Ashok	16/2/11	Jagan	16/2/11	Farnell	02/3/11

Electric Characteristics





Test Data for Electrical

Test Item	L µH	DCR Ω	ΔT
Condition	**100KHz 0.25V**	**at 25°C**	**100KHz 0.25V I_{rms} = 0.35A**
Specification	**220 ±10%**	**1.57 (Maximum)**	**Temperature Rise 40°C (Maximum)**
1	226.08	0.94	OK
2	221.48		OK
3	225.28	0.93	OK
4	219.48	0.95	OK
5	224.62		OK
Average	**223.39**	**0.94**	**OK**

TOLERANCES:

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DRAWN BY:	DATE:
Ashok	16/02/11
CHECKED BY:	DATE:
Jagan	16/02/11
APPROVED BY:	DATE:
Farnell	02/03/11

DRAWING TITLE: Inductor

SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10003464	SD54-221KU	A

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

PART NO.	REVISIONS									
MCSD54-221KU	ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
	-	A	RELEASED	Ashok	16/2/11	Jagan	16/2/11	Farnell	02/3/11

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 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 CDR5.8 x 4.5(ST) B2.4 F2.3
2	Wire	Ø0.16mm x 1P 2UEWF 155°C
3	Solder (Lead Free)	Sn99.3% / Cu0.7%

Part Number Table

Description	Part Number
Inductor, 220µH, 10%, SMD	MCSD54-221KU

http://www.farnell.com

http://www.newark.com

http://www.cpc.co.uk

TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY:	DATE:
Ashok	16/02/11
CHECKED BY:	DATE:
Jagan	16/02/11
APPROVED BY:	DATE:
Farnell	02/03/11

DRAWING TITLE: Inductor

SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10003464	SD54-221KU	A

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