

**multicomp**

PART NO.

MCSD105-220MU

## REVISIONS

ECN #

REV

DESCRIPTION

DRAWN

DATE

CHECKD

DATE

APPRVD

DATE

-

A

RELEASED

Sidhu

09/2/11

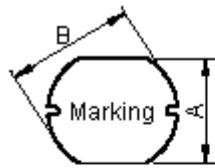
Jagan

09/2/11

Farnell

23/2/11

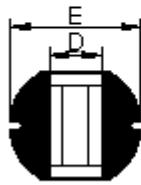
## Configurations and Dimensions



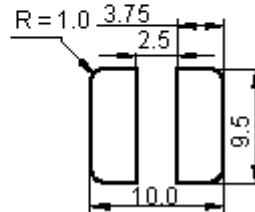
Top View



Side View



Bottom View



Suggest PCB Layout

Dimensions : Millimetres

Marking: 220  
YYWW

## Electrical Characteristics

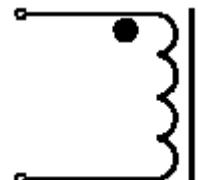
(at 25°C)

Test Condition		
100KHz 0.25V	L	22 $\mu$ H $\pm$ 20%
at 25°C	DCR	100m $\Omega$ (Maximum)
100KHz 0.25V I <sub>rms</sub> = 1.95A	$\Delta$ T	Temperature Rise 40°C (Maximum)

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

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

## Schematic Diagram



## Note:

- (1) Wire Ø0.45mm x 1P 2UEWF 155°C
- (2) 20.5TS (Reference)

## Test Data for Mechanical

Test Item	A mm	B mm	C mm	D mm	E mm
Specification	9 $\pm$ 0.4	10 $\pm$ 0.4	5.4 $\pm$ 0.5	3.5 (Reference)	10.2 $\pm$ 0.5
1	9.01	10.02	5.63	3.13	9.79
2	9.03	10.05	5.55	3.52	9.82
3	9.09	10.14	5.53	3.35	9.83
4	9.04	10.04		3.25	
5	9.06	9.97	5.52	3.17	9.9
Average	9.05	10.04	5.55	3.28	9.83

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plc 2011.

**TOLERANCES:**  
UNLESS OTHERWISE  
SPECIFIED,  
DIMENSIONS ARE  
FOR REFERENCE  
PURPOSES ONLY.

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  
**A**

DWG NO.

M10002615

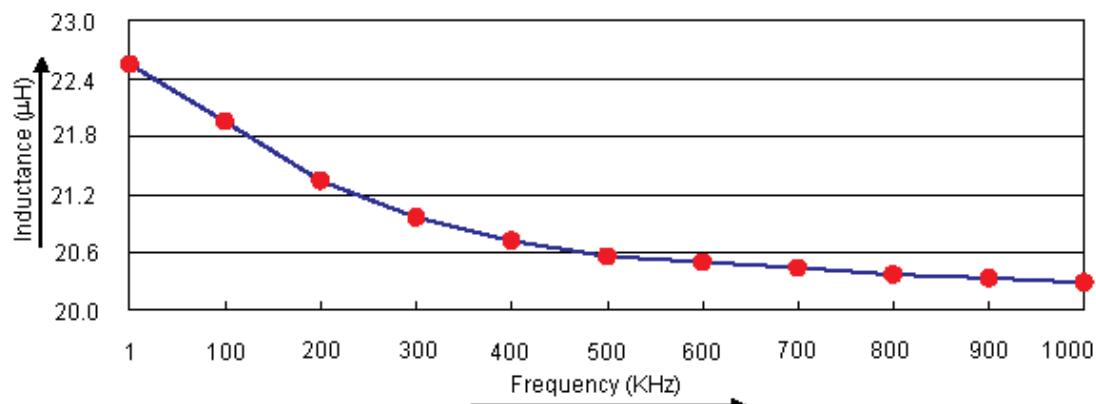
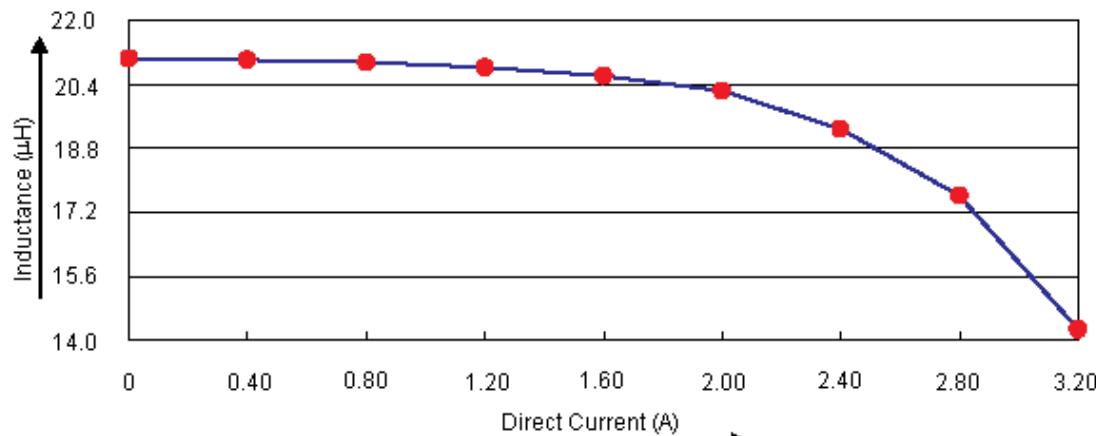
ELECTRONIC FILE  
SD105-220MUREV  
**A**

SCALE: NTS

U.O.M.: mm

SHEET: 1 OF 3

## Electric Characteristics



## Test Data for Electrical

Test Item	L μH	DCR mΩ	ΔT
Condition	100KHz 0.25V	at 25°C	100KHz 0.25V I <sub>rms</sub> = 1.95A
Specification	22 ±20%	100 (Maximum)	Temperature Rise 40°C(Maximum)
1	20.98	52	OK
2	21.12	49	OK
3	24.03	50.4	OK
4	20.96	48.7	OK
5	21.2	51.6	OK
Average	21.658	50.34	OK

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plc 2011.

**TOLERANCES:**  
UNLESS OTHERWISE  
SPECIFIED,  
DIMENSIONS ARE  
FOR REFERENCE  
PURPOSES ONLY.

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.

M10002615

ELECTRONIC FILE  
SD105-220MUREV  
A

SCALE: NTS

U.O.M.: mm

SHEET: 2 OF 3



PART NO.  
MCSD105-220MU

### REVISIONS

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

## 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°C ±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	Ø0.45mm x 1P 2UEWF 155°C
3	Solder (Lead Free)	99.3%Sn0.7%Cu

## Part Number Table

Description	Part Number
Inductor, 22µH, 20%, 2pins	MCSD105-220MU

<http://www.farnell.com>

<http://www.newark.com>

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

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plc 2011.

TOLERANCES: UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.	DRAWN BY:	DATE:	DRAWING TITLE: Inductor			
	sidhu	09/02/11	SIZE A	DWG NO. M10002615	ELECTRONIC FILE SD105-220MU	
	CHECKED BY:	DATE:			Jagan	09/02/11
	APPROVED BY:	DATE:	Farnell	23/02/11	SCALE: NTS	U.O.M.: mm
						SHEET: 3 OF 3