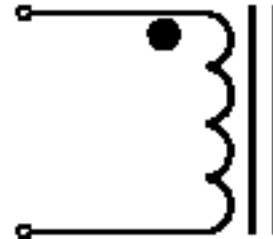


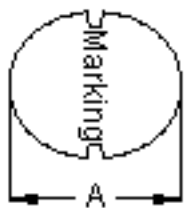
RoHS  
Compliant



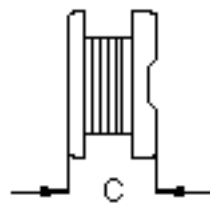
### Schematic Diagram



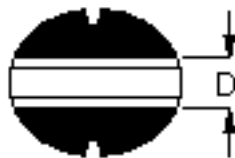
### Configurations and Dimensions



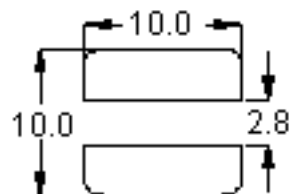
Top View



Side View



Bottom View



Suggest PCB Layout

Dimensions : Millimetres

### Note:

1. Wire  $\varnothing 0.17\text{mm} \times 1\text{P } 2\text{UEF1/U } 155^\circ\text{C}$
2. 134.5TS (Reference)

A	9.8 mm	(Max.)
C	5.8 mm	(Max.)
D	2.9 mm	(Ref.)

Marking : 821

### Electrical Characteristics (at 25°C)

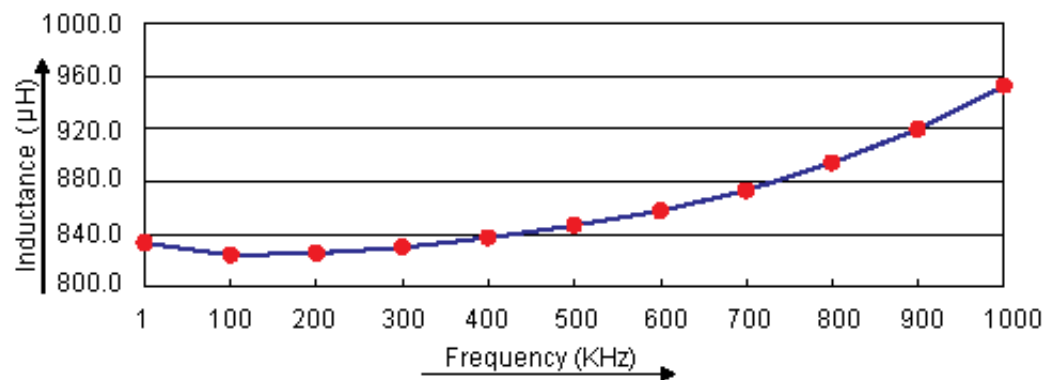
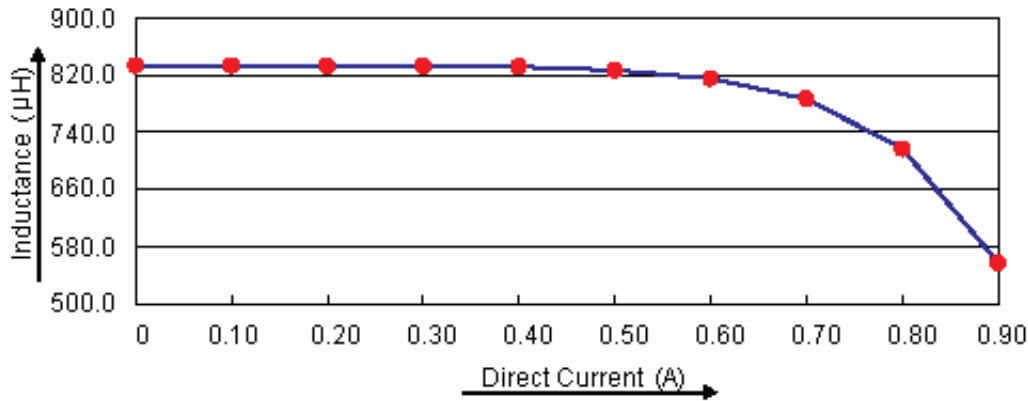
Test Condition		
1 KHz 1 V	L	820 $\mu\text{H} \pm 10\%$
at 25°C	DCR	2.55 $\Omega$ (Max.)
1 KHz 1 V $I_{\text{rms}} = 0.24 \text{ A}$	$\Delta T$	Temperature rise 40°C (Max.)

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

### Test Data for Mechanical

Test Item	A mm	C mm	D mm
Specification	9.8 (Max.)	5.8 (Max.)	2.9 (Ref.)
1	9.56	5.54	2.81
2	9.54	5.61	2.83
3	9.52	5.57	2.79
4	9.49	5.53	2.76
5	9.51	5.58	2.84
Average	9.52	5.57	2.81

## Electric Characteristics



## Test Data for Electrical

Test Item	L µH	DCR Ω	ΔT
Condition	1 KHz 1 V	at 25°C	1 KHz 1 V I <sub>rms</sub> = 0.24 A
Specification	820 ±10%	2.55 (Max.)	Temperature rise 40°C (Max.)
1	838.6	2.12	OK
2	833.9	2.13	
3	832.7		
4	834.8	2.12	
5	836.5		
<b>Average</b>	<b>835.3</b>	<b>2.12</b>	<b>OK</b>

## 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	K22 DRM 9.5 × 5.5 RB-R B = 4.5 F = 3
2	Wire	Ø0.17 mm × 1P 2UEF1/U (155°C)
3	Solder (Lead-free)	Sn99.3% / Cu0.7%

## Part Number Table

Description	Part Number
Inductor, 820µH, 10%, SMD	MCSDC1006-821KU

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