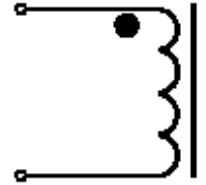


RoHS  
Compliant



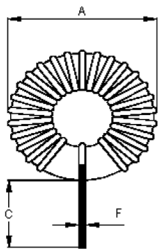
Schematic Diagram



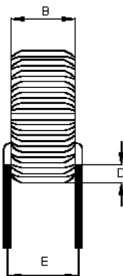
**Note:**

1. Wire UEFN/U (155°C) Ø0.3mm
2. 51TS (Reference) C.W

## Configurations and Dimensions



Front View



Side View

A	15mm (Max.)
B	8mm (Max.)
C	12 ±1mm
D	1mm (Min.)
E	7 ±1mm
F	Ø0.3mm (Ref.)

## Test Data for Mechanical

Test Item	A mm	B mm	C mm	D mm	E mm	F mm
Specification	<b>15 (Max.)</b>	<b>8 (Max.)</b>	<b>12 ±1</b>	<b>1 (Min.)</b>	<b>7 ±1</b>	<b>Ø0.3 (Ref.)</b>
1	13.68	7.18	12.62	2.02	6.94	0.29
2	13.88	7.06	11.68	1.14	6.86	0.3
3	13.75	7.02	11.92	1.9	6.8	0.28
4	13.78	7.06	11.22	2.04	6.98	0.27
5	13.66	7.22	11.48	1.36	7.04	0.3
<b>Average</b>	<b>13.75</b>	<b>7.11</b>	<b>11.78</b>	<b>1.69</b>	<b>6.92</b>	<b>0.29</b>

## Material List

No.	Item	Material Description
1	Core	T50B-75-TAF200 (Red / White)
2	Wire	Ø0.3mm UEFN/U (155°C)
3	Solder (Lead-free)	Sn99.3% / Cu0.7%

## Electrical Characteristics

Test Condition		
10kHz / 5mA	L	109µH ±20%
T <sub>A</sub> = 25°C	DCR	300mΩ (Max.)
10kHz / 5mA I <sub>rms</sub> = 0.5A	ΔT	Temperature rise 40°C (Max.)

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

## 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 ±5% Inductance change : Within ±5%	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 95% 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 / -0.5s

## Test Data for Electrical

Test Item	L μH	DCR mΩ	ΔT
Condition	10kHz / 5mA	T <sub>A</sub> = 25°C	10kHz / 0.5mA I <sub>rms</sub> = 0.5A
Specification	109 ±20%	300 (Max.)	Temperature rise 40°C (Max.)
1	111	251	OK
2	117.8	245	
3	112.5	249.8	
4	115.4	250.3	
5	116.4	243.3	
<b>Average</b>	<b>114.62</b>	<b>247.88</b>	<b>OK</b>

## Part Number Table

Description	Part Number
Inductor, 100μH, 20%, 2 Pins	MCAP105228050A-101MU

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