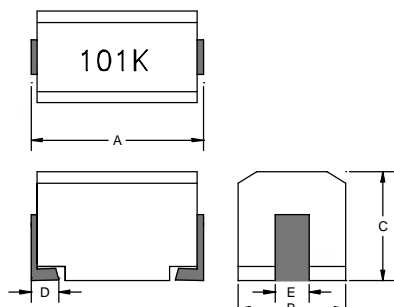


1. Features

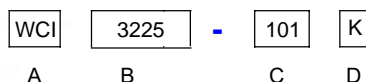
- 1.Low profile very effective in space-conscious applications
- 2.Low resistance and high energy storage.

2. Dimension



Chip size					
Size	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
3225	3.2±0.3	2.5±0.2	2.2±0.2	0.6 typ.	1.0±0.2

3. Part Numbering



A:Series

B:Dimension Ax B

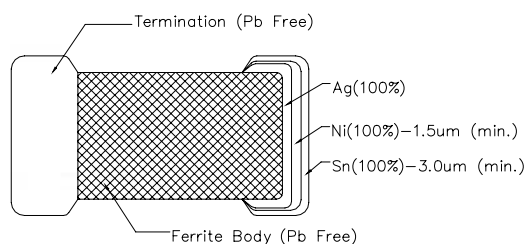
C:Inductance

D:Inductance Tolerance

101=100 μ H

K= ± 10%, J= ± 5%, L= ± 15%, M= ± 20%

4. Schematic Diagram



5. Specification

Part Number	Inductance (uH)	Q min.	Test Frequency (MHz)	SRF (MHz) min.	DC Resistance (Ohm) max.	Rated Current (mA)
WCI3225-010M	0.010	15	100	2500	0.13	450
WCI3225-012M	0.012	17	100	2300	0.14	450
WCI3225-015M	0.015	19	100	2100	0.16	450
WCI3225-018M	0.018	21	100	1900	0.18	450
WCI3225-022M	0.022	23	100	1700	0.20	450
WCI3225-027M	0.027	23	100	1500	0.22	450
WCI3225-033M	0.033	25	100	1400	0.24	450
WCI3225-039M	0.039	25	100	1300	0.27	450

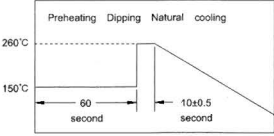
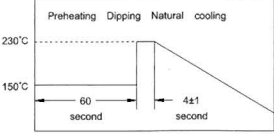
5. Specification

Part Number	Inductance (uH)	Q min.	Test Frequency (MHz)	SRF (MHz) min.	DC Resistance (Ohm) max.	Rated Current (mA)
WCI3225-047M	0.047	26	100	1200	0.30	450
WCI3225-056M	0.056	26	100	1100	0.33	450
WCI3225-068M	0.068	27	100	1000	0.36	450
WCI3225-082M	0.082	27	100	900	0.40	450
WCI3225-R10M	0.10	28	100	700	0.44	450
WCI3225-R12M	0.12	30	25.2	500	0.22	450
WCI3225-R15M	0.15	30	25.2	450	0.25	450
WCI3225-R18M	0.18	30	25.2	400	0.28	450
WCI3225-R22M	0.22	30	25.2	350	0.30	450
WCI3225-R27M	0.27	30	25.2	320	0.36	450
WCI3225-R33M	0.33	30	25.2	300	0.40	450
WCI3225-R39M	0.39	30	25.2	250	0.45	450
WCI3225-R47M	0.47	30	25.2	220	0.50	450
WCI3225-R56M	0.56	30	25.2	180	0.55	450
WCI3225-R68M	0.68	30	25.2	160	0.60	450
WCI3225-R82M	0.82	30	25.2	140	0.65	450
WCI3225-1R0M	1.0	30	7.96	120	0.70	400
WCI3225-1R2M	1.2	30	7.96	100	0.75	390
WCI3225-1R5M	1.5	30	7.96	85	0.85	370
WCI3225-1R8M	1.8	30	7.96	80	0.90	350
WCI3225-2R2M	2.2	30	7.96	75	1.0	320
WCI3225-2R7M	2.7	30	7.96	70	1.1	290
WCI3225-3R3M	3.3	30	7.96	60	1.2	260
WCI3225-3R9M	3.9	30	7.96	55	1.3	250
WCI3225-4R7M	4.7	30	7.96	50	1.5	220
WCI3225-5R6M	5.6	30	7.96	47	1.6	200
WCI3225-6R8M	6.8	30	7.96	43	1.8	180
WCI3225-8R2M	8.2	30	7.96	40	2.0	170
WCI3225-100K	10	30	2.52	36	2.1	150
WCI3225-120K	12	30	2.52	33	2.5	140
WCI3225-150K	15	30	2.52	30	2.8	130
WCI3225-180K	18	30	2.52	27	3.3	120
WCI3225-220K	22	30	2.52	25	3.7	110
WCI3225-270K	27	30	2.52	20	5.0	80
WCI3225-330K	33	30	2.52	17	5.6	70
WCI3225-390K	39	30	2.52	16	6.4	65
WCI3225-470K	47	30	2.52	15	7.0	60
WCI3225-560K	56	30	2.52	16	8.0	55
WCI3225-680K	68	30	2.52	12	9.0	50
WCI3225-820K	82	30	2.52	11	10	45
WCI3225-101K	100	20	0.796	10	10	40
WCI3225-121K	120	20	0.796	10	11	70
WCI3225-151K	150	20	0.796	8	15	65
WCI3225-181K	180	20	0.796	7	17	65
WCI3225-221K	220	20	0.796	7	21	50

6. Reliability Test Conditions

Item 項目	Performance 標準	Test Condition 測試條件
Operating Temperature 操作溫度	-40~+85°C	
Storage temperature and Humidity range 儲存溫度與濕度範圍	-40~+85°C	

Electrical Performance Test

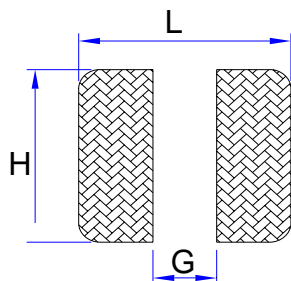
Inductance 電感值	Refer to standard electrical characteristics list. 參考標準特性規格表	HP4291,HP4287A
DCR 直流阻抗		HP4338B,CH16502,Agilent33420A Micro-Ohm Meter.
Rated Current 額定電流		Applied the current to coils, the inductance change shall be less than 10% to initial value.
Temperature Rise Test 溫昇測試	$\Delta T=30^{\circ}\text{C}$ max.	1.Applied the allowed DC current. 2.Temperature measured by digital surface thermometer.
Solder Heat Resistance 耐焊錫熱	Appearance:No significant abnormality. Inductance change:Within $\pm 20\%$. 外觀:無顯著異常. 電感值:變異性在初始值20%以內	 <p>Preheat:150°C,60sec. Solder: Sn-Ag3.0-Cu0.5 Solder temperature:260±5°C Flux for lead free: rosin Dip time:10±0.5sec.</p> <p>預熱:150°C,60sec. 錫爐溫度: 260±5°C 時間: 10±0.5sec. 助焊劑:rosin</p>
Solderability Test 端面焊錫性	More than 90% of the terminal electrode should be covered with solder. 端電極之錫覆蓋面達90%以上.	 <p>Preheat:150°C,60sec. Solder: Sn-Ag3.0-Cu0.5 Solder temperature:230±5°C Flux for lead free: rosin Dip time:4±1sec.</p> <p>預熱:150°C,60sec. 錫爐溫度: 230±5°C 時間:4±1sec. 助焊劑:rosin</p>

Reliability Test

High Temperature Life Test 高溫測試	Appearance: no damage. Inductance: within $\pm 10\%$ of initial value. Q shall not change more than $\pm 20\%$. No disconnection or short circuit.	外觀不能破損。 電感值:變異值在初始值10%以內。 Q 值:變異值在初始值20%以內。 電性無短路或斷線	Temperature:85±5°C. Duration:500±12hrs. Measured at room temperature after placing for 2 to 3hrs. 溫度:85±5°C. 放置時間:500±12hrs. 測試結束於室溫放置2~3小時,始可測試電氣特性.															
Low Temperature Life Test 低溫測試	Appearance: no damage. Inductance: within $\pm 10\%$ of initial value. Q shall not change more than $\pm 20\%$. No disconnection or short circuit.	外觀不能破損。 電感值:變異值在初始值10%以內。 Q 值:變異值在初始值20%以內。 電性無短路或斷線	Temperature:-40±5°C. Duration:500±12hrs. Measured at room temperature after placing for 2 to 3hrs. 溫度:-40±5°C. 放置時間:500±12hrs. 測試結束於室溫放置2~3小時,始可測試電氣特性.															
Thermal shock 熱衝擊試驗	Appearance: no damage. Inductance: within $\pm 10\%$ of initial value. Q shall not change more than $\pm 20\%$. No disconnection or short circuit.	<table border="1" data-bbox="715 1411 1005 1556"> <thead> <tr> <th>階段</th> <th>溫度(°C)</th> <th>時間(分)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-40±3°C</td> <td>30±3</td> </tr> <tr> <td>2</td> <td>常溫</td> <td>within3</td> </tr> <tr> <td>3</td> <td>+85±3°C</td> <td>30±3</td> </tr> <tr> <td>4</td> <td>常溫</td> <td>within3</td> </tr> </tbody> </table> <p>試驗回數:10 回</p>	階段	溫度(°C)	時間(分)	1	-40±3°C	30±3	2	常溫	within3	3	+85±3°C	30±3	4	常溫	within3	Condition for 1 cycle Step1:-40±3°C 30±3 min. Step2:Room temperature within 3 min. Step3:+85±3°C 30±3 min. Step4: Room temperature within 3 min. Number of cycles:10 Measured at room temperature after placing for 2 to 3 hrs. 測試結束於室溫放置2~3小時,始可測試電氣特性.
階段	溫度(°C)	時間(分)																
1	-40±3°C	30±3																
2	常溫	within3																
3	+85±3°C	30±3																
4	常溫	within3																
Humidity Resistance 高濕測試	Appearance: no damage. Inductance: within $\pm 10\%$ of initial value. Q shall not change more than $\pm 20\%$. No disconnection or short circuit.	外觀不能破損。 電感值:變異值在初始值10%以內。 Q 值:變異值在初始值20%以內。 電性無短路或斷線	Humidity:90~95%RH. Temperature:60±5°C. Applied current:rated current. Duration:500±12hrs. Measured at room temperature after placing for 2 to 3hrs. 濕度:90~95%RH. 溫度:60±5°C. 須加電流:額定電流。 放置時間:500±12hrs. 測試結束於室溫放置2~3小時,始可測試電氣特性.															

7.1. Design of Land Pattern And Solderability

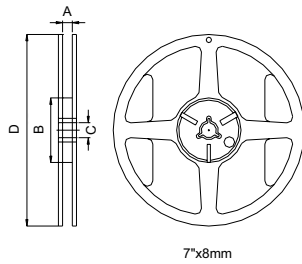
Terminations to be well soldered after immersion in a Sn(99.3)/Cu(0.7) tin/lead solder bath at 245 ± 5°C for 5 ± 1 seconds.



L	G	H
4.0	2.0	2.0

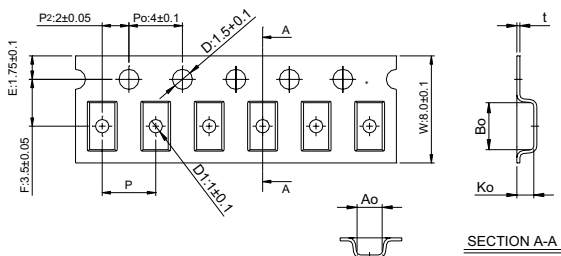
8. Packaging Information

8-1. Reel



Type	A(mm)	B(mm)	C(mm)	D(mm)
7"x8mm	9.0±0.5	60±2	13.5±0.5	178±2

8.2. Tape Dimension (Unit:mm)

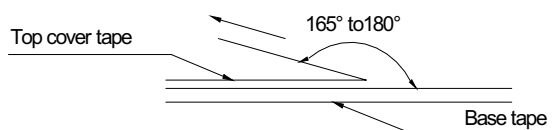


Series	Size	Bo(mm)	Ao(mm)	Ko(mm)	P(mm)	t(mm)
WCI	3225	3.65±0.10	2.88±0.10	2.50±0.10	4.0±0.10	0.25±0.05

8.3. Packaging Specification

Chip Size	3225
Chip / Reel	2000
Inner box	10000
Middle box	50000
Carton	100000

8-4. Tearing Off Force



The force for tearing off cover tape is 15 to 60 grams in the arrow direction under the following conditions.

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	300