

1. WTI Series (Ceramic Type)

(b). UV glue cover type (Size: 0402(1005)~1008(2520))

Range of Size: (0402(1005)~1008(2520))
 Test Equipment: **HP4286, 4287A & 4291B** - For "Inductance" & "Q"
HP4287A & 8753E - For "SRF"
HP4287A, GOM-801G & 502BC - For "DCR"
 Operating Temperature: -40 ~+105

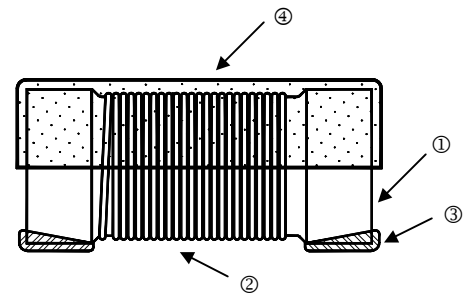


Applications

- > Cordless (DECT/CT1CT2) & Cellular (CDMA/GSM/PHS) Phone.
- > Remote control, wireless security system.
- > WLL, Wireless LAN / Mouse / Keyboard / Earphone.
- > GPS receiver.
- > VCO, RF Module & other wireless products.
- > CATV Filter, Tuner.
- > Cable Modem / XDSL Tuner.
- > Set Top Box.

Features

- > Wirewound ceramic construction provide high SRF.
- > Ultra compact inductors provide exceptional Q values.
- > Low Profile, high Q are available.
- > Outstanding endurance from Pull-up force, mechanical shock and pressure.
- > Smaller size of 0402(1005) & tighter tolerance down to +/- 2%.

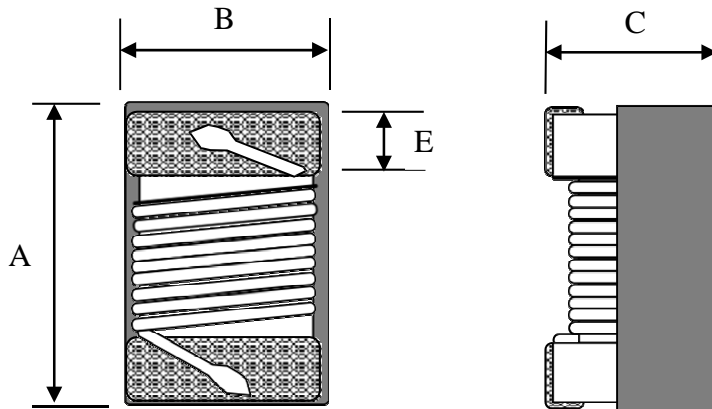


Construction

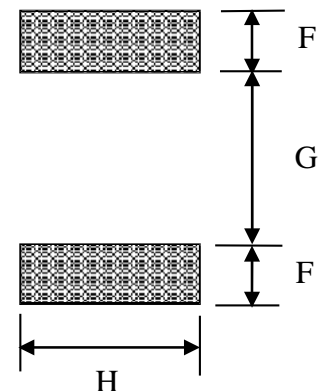
1. Ceramic Core
2. Wire
3. Electrode
4. UV Glue

General Dimensions and Configuration

SHAPE:



PCB PATTERN



DIMENSIONS:

Series	Unit	A	B	C	E	F	G	H
WTI-0402C	mm	1.15±0.1	0.70±0.1	0.60±0.1	0.20	0.36	0.46	0.66

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HP4287A & 8753E - For "SRF"

HP4287A, GOM-801G & 502BC - For "DCR"

Operating Temperature : -40 ~+125

Inductance, SRF, Q and Rated Current ranges

SERIES	Inductance (nH)	SRF (Min.) (GHz)	Q (Min.)	I (Rated) (mA)
WTI-0402C	1.00~68	12.700~1.620	15~25	1360~100
WTI-0603C	1.60~390	12.500~0.900	16~40	700~100
WTI-0805C	2.70~4700	7.900~0.188	15~65	600~90
WTI-1008C	10.00~3900	4.100~0.100	20~65	1000~260

Color Coding

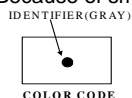
Color	Figures	Multiplier
Black	0	1
Brown	1	10
Red	2	100
Orange	3	1000
Yellow	4	10000
Green	5	-
Blue	6	-
Violet	7	-
Gray	8	-
White	9	-

WTI-0402C Series

No Color Coding

WTI-0603C, WTI-0805C Series

Because of small size, these parts are marked with a single color dot.

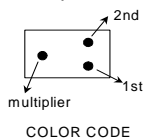


Ex : WTI-0805C-33NJ

MARKING : GRAY

WTI-1008C Series

These parts are marked with 3 color dots.



Ex : WTI-1008C-10NJ

MARKING : Dots 1 and 2 indicate the inductance in nano Henries.

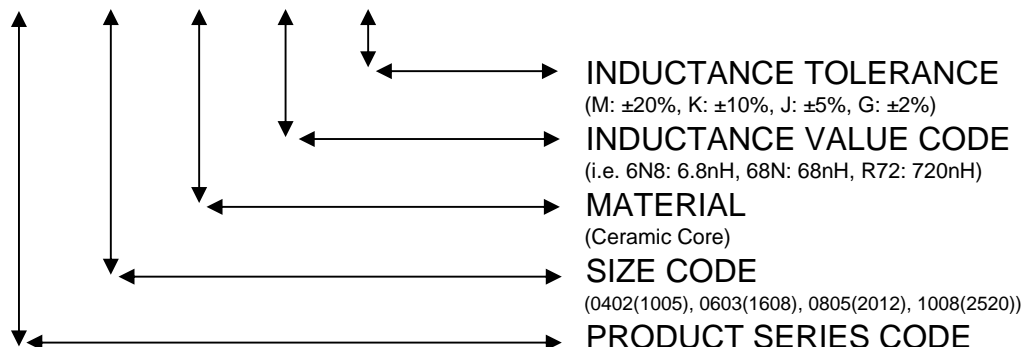
(DOT 1 : BROWN , DOT 2 : BLACK)

MARKING : Dot 3 indicates number of zeroes to be added.

(DOT 3 : BLACK)

Part Numbering Systems

WTI- 0402 C - R72M



(V) WIRE WOUND CHIP INDUCTORS

1(b). WTI Series (UV glue cover) (Size: 0402(1005)~1008(2520))

Electrical Characteristics

WTI-0402C Series Wire Wound Chip Inductors / UV Glue Cover Type

PART NUMBER	INDUCTANCE (μ H)	Rdc() $\pm 30\%$	Isat (A) Typ.(Max)	Irms (A) Typ.	TOLERANCE
WTI-0402C-R72M	0.72@7.9MHz	0.27	0.48(0.45)	0.8	M , T

- 1、 Test equipment :
L/Q/DCR : E4982A + Agilent 16197A
- 2、 Isat : For Inductance drop 30% from its value without current.
- 3、 Irms for a 40 rise above 25 ambient.
- 4、 Operating temperature : -40 ~+105 .
- 5、 Storage Temperature: 20 ~25 , Humidity < 65%RH

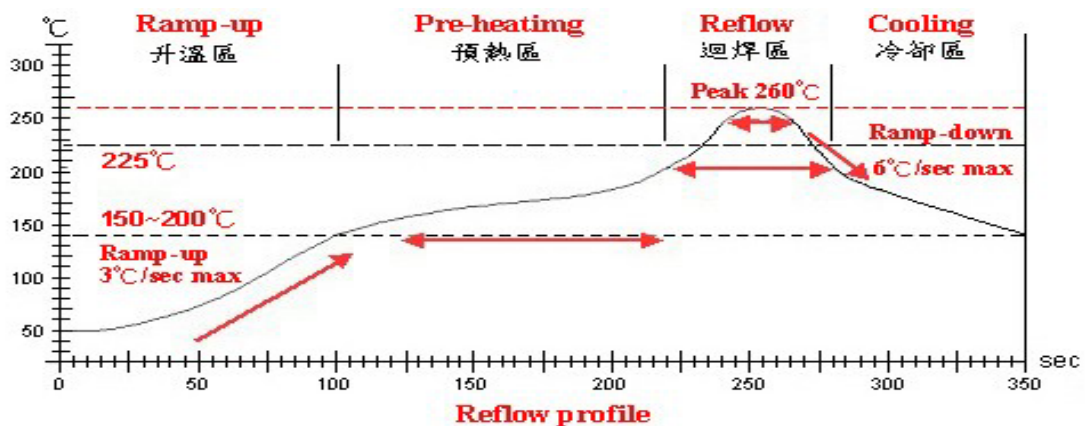
1. Environmental Performance																		
No.	Item	Specification	Test Method															
1-1	Temperature Cycle		One Cycle:															
			<table border="1"> <thead> <tr> <th>Step</th> <th>Temperature ()</th> <th>Time (min.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-40\pm3</td> <td>30</td> </tr> <tr> <td>2</td> <td>25\pm2</td> <td>3</td> </tr> <tr> <td>3</td> <td>105\pm3</td> <td>30</td> </tr> <tr> <td>4</td> <td>25\pm2</td> <td>3</td> </tr> </tbody> </table>	Step	Temperature ()	Time (min.)	1	-40 \pm 3	30	2	25 \pm 2	3	3	105 \pm 3	30	4	25 \pm 2	3
			Step	Temperature ()	Time (min.)													
			1	-40 \pm 3	30													
2	25 \pm 2	3																
3	105 \pm 3	30																
4	25 \pm 2	3																
Total: 5 cycles Measured After Exposure In The Room Condition For 1Hrs																		
1-2	Static Humidity	Appearance: No Damage L : Within Spec Q : Within Spec	Temperature: 85 \pm 2 Relative Humidity: 90 ~ 95% Time: 24Hrs Measured After Exposure In The Room Condition For 2Hrs															
1-3	High Temperature Resistance		Temperature: 105 \pm 3 Time: 48 \pm 12Hrs Measured After Exposure In The Room Condition For 2Hrs															
1-4	Low Temperature Resistance		Temperature: -40 \pm 3 Time: 48 \pm 12Hrs Measured After Exposure In The Room Condition For 2Hrs															

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2. Mechanical Performance

No.	Item	Specification	Test Method
2-1	Resistance To Soldering Heat	Appearance: No Damage	1. Pre-Heating: 150 , 1min. 2. Solder Composition: Sn96.5/Ag3.0. 3. Solder Temperature: 260±5 . 4. Immersion Time: 10±1sec.
2-2	Solderability	The Electrodes Shall Be At Least 90% Covered With New Solder Coating	1. Pre-Heating: 150 , 1min. 2. Solder Composition: Sn/Ag3.0/Cu0.5 . 3. Solder Temperature: 255±5 . 4. Immersion Time: 4±1sec.
2-3	Component Adhesion (Push Test)	1 Lbs. For 0402 1 Lbs. For 0603 2 Lbs. For 0805 2 Lbs. For 1008	The Device Should Be Reflow Soldered (255 ±5 For 10 Seconds) To A Tinned Copper Substrate. A Force Gauge Should Be Applied To The Side Of The Component. The Device Must Withstand A Minimum Force Of 1 Or 2 Pounds Without A Failure Of The Termination Attached To Component.
2-4	Vibration	Appearance: No Damage L, Q: Within Spec.	1. Solder specimen inductor on the test printed circuit board. Apply vibrations in each of the x,y and z directions for 2 hours for a total of 6 hours. 2. Freq:10~50Hz, Amplitude: 1.5mm

3. Recommended Lead-Free IR Reflow Conditions



Lead-Free(LF) 標準溫度分析範圍

Refer to J-STD-020C

管制項目 Item.	升溫區 Ramp-up	預熱區 Pre-heating	迴焊區 Reflow	Peak Temp	冷卻區 Cooling
溫度範圍 Temp. scope	R.T. ~ 150°C	150°C ~ 200°C	225°C	260±5°C	Peak Temp. ~ 150°C
實際時間 Time result	—	60 ~ 180 sec	20 ~ 60sec	5 ~ 10 sec	—

NOTE :

1. Re-flow possible times : within 2 times
2. Nitrogen adopted is recommended while in re-flow