

# APPROVAL SHEET

## **WLCW2012HQ SMD Wire Wound Ceramic Chip Inductors (High Q)**

\*Contents in this sheet are subject to change without prior notice.

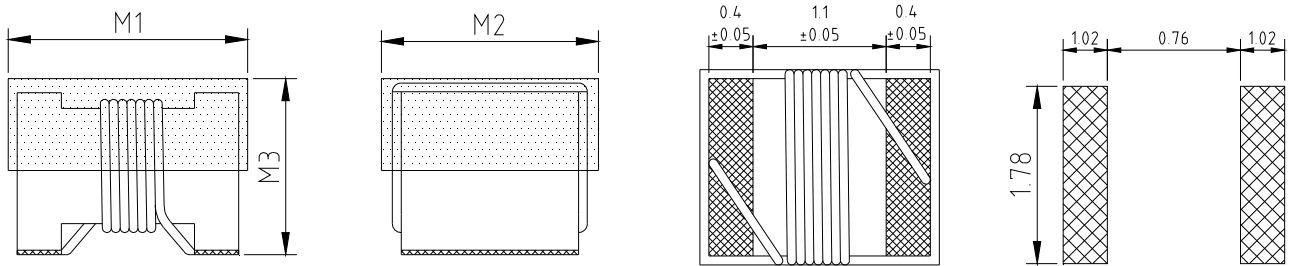
### Features

1. Standard chip size bobbin with wire wound coil provides high reliability, productivity and performance.
2. WLCW2012HQ Series offers higher Q factors. In addition, current handling has been improved with significantly lower DCR values. Like all wire wound ceramic chip inductors, the WLCW2012HQ Series provides exceptional SRFs, tight inductance tolerance and batch consistency.
3. Wide range inductance and various tolerance options.
4. RoHS compliant.

### Applications

1. Communication: GSM/3G/LTE, Wi-Fi, GPS.
2. Consumer: Cabel/Terrestrial/BS Tuner, Bluetooth, Wireless Audio, Remote control.
3. M2M: ZigBee, Proprietary wireless.

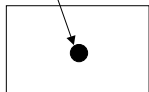
### Shape and Dimension



Recommended Patterns

Unit: mm

IDENTIFIER

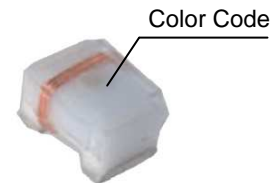


COLOR CODE

Example : WLCW2012HQ□2N5PB

MARKING : BLACK

MARK COLOR CODE IN COMPOSITE SPECIFICATION



WLCW2012HQ

WLCW Series	M1	M2	M3
2012HQ	2.40(MAX)	1.65(MAX)	1.45(MAX)

### Ordering Information

WL	CW	2012	HQ	J	2N5	P	B
<b>Product Code</b> WL: Inductor	<b>Series</b> SMD wire wound ceramic chip inductor.	<b>Dimensions</b> 2012 (EIA 0805)	<b>Series extension</b> HQ: Higher Q & Lower DCR	<b>Tolerance</b> G: ± 2% J: ± 5%	<b>Value</b> 2N5 =2.5nH 12N=12nH	<b>Packing Code</b> P=7" Reeled (Embossed tape)	<b>B:STD</b>

## Electrical Characteristics

### WLCW2012HQ series

Walsin Part Number	L (nH)	Tolerance	Measuring Frequency (MHz)	Q (Min)	Test Freq (MHz)	SRF (GHz) Min	RDC Max ( mOHM )	Irms (mA)	Color Code
WLCW2012HQ□2N5PB	2.5	J	250	80	1500	10.30	20	1.6	Black
WLCW2012HQ□5N6PB	5.6	J	250	98	1500	6.10	35	1.6	Brown
WLCW2012HQ□6N2PB	6.2	J	250	88	1000	4.75	35	1.6	Red
WLCW2012HQ□12NPB	12	G、J	250	80	1000	3.00	45	1.6	Orange
WLCW2012HQ□16NPB	16	G、J	250	72	500	2.95	60	1.5	Yellow
WLCW2012HQ□18NPB	18	G、J	250	75	500	2.55	60	1.4	Green
WLCW2012HQ□20NPB	20	G、J	250	70	500	2.05	55	1.4	Blue
WLCW2012HQ□27NPB	27	G、J	250	75	500	2.00	70	1.3	Violet
WLCW2012HQ□30NPB	30	G、J	250	65	500	1.95	95	1.2	Gray
WLCW2012HQ□39NPB	39	G、J	250	65	500	1.60	110	1.1	White
WLCW2012HQ□48NPB	48	G、J	200	65	500	1.40	95	1.2	Black
WLCW2012HQ□51NPB	51	G、J	200	65	500	1.40	120	1.0	Brown

Tolerance : J :  $\pm 5\%$ 、G :  $\pm 2\%$

OPERATING TEMPERATURE :  $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$

※MSL : LEVEL 1

L、Q : TESTED BY AGILENT 4287A with 16197A or its equivalent

SRF : TESTED BY HP 8753E or HP4291B with 16193A or its equivalent

DCR: TESTED BY AGILENT 4338B or its equivalent

## RELIABILITY PERFORMANCE

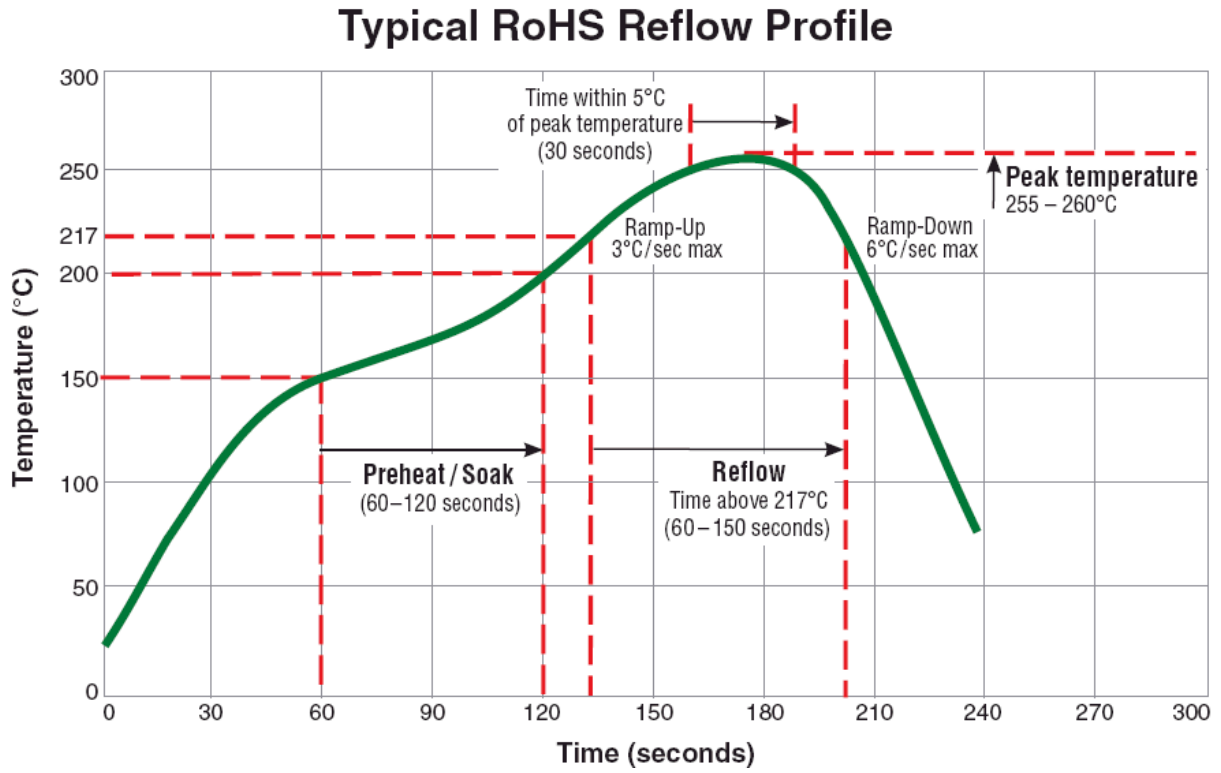
### Reliability Experiment For Electrical

Test Item	Test Condition	Standard Source
Humidity Test	+40°C ± 2°C, humidity of 90% ± 5% (total 96 hours).	MIL-STD-202G Method 103B Test Condition B
High Temperature Test	1. Temperature: +125°C ± 2°C 2. Test time: 48 ± 2hrs	IEC 68-2 Test Condition B
Low Temperature Test	1. Temperature: -40°C ± 2°C 2. Test time: 48 ± 2hrs	IEC 68-2 Test Condition A
Thermal Shock	+125°C ± 5°C (30 minutes) ~ -40 ± 5°C (30 minutes), temperature switch time: 5 minutes (total 50 cycles).	MIL-STD-202G Method 107G Test Condition B-2
Life Test	+70°C ± 5°C (250Hours)	MIL-STD-202G Method 108A Test Condition B

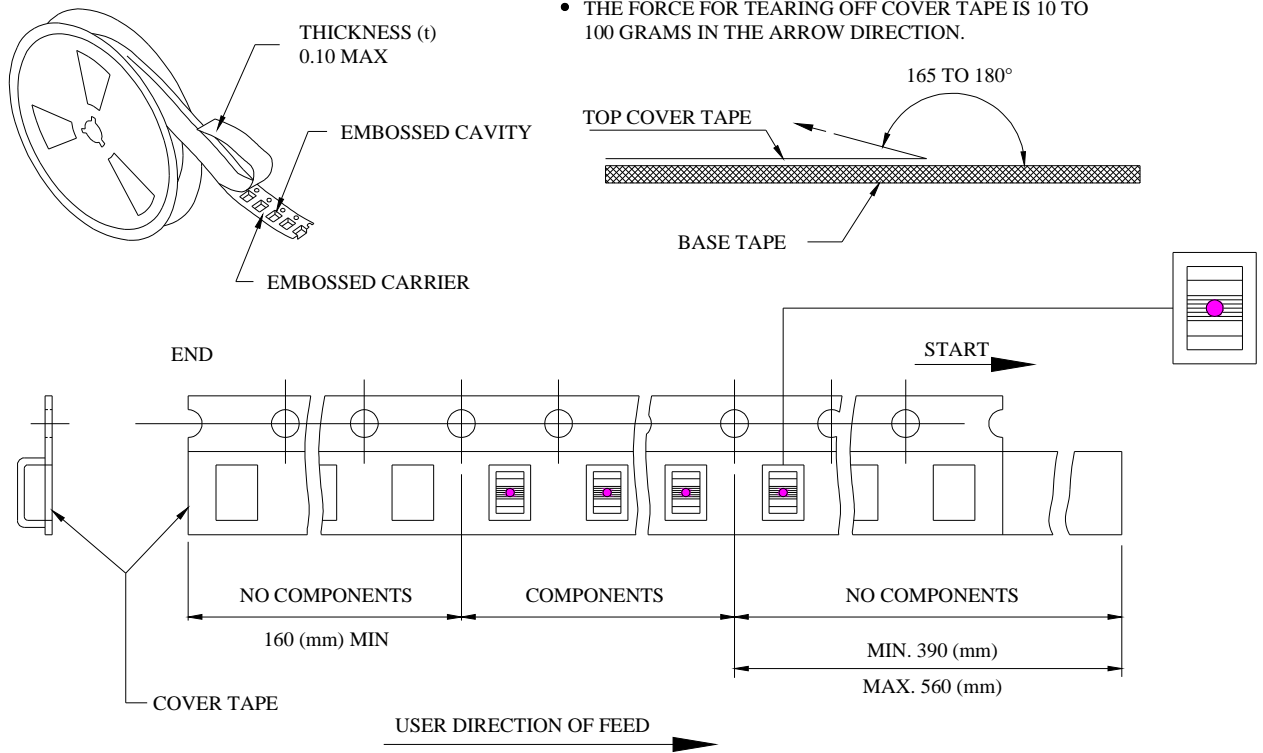
### Reliability Experiment For Physical

Test Item	Test Condition	Standard Source
Vibration Test	10-55-10HZ, amplitude: 1.5mm, direction: X, Y, Z axes, each axis 2 hours (total 6 hours).	MIL-STD-202G Method 201A
Solder Heat Resistance Test	IR/convection reflow: Peak Temp 250 ± 5°C for 5Sec in air, Through 2 Cycle. Temperature Ramp: +1 ~ 4°C/sec; Above 183°C, must keep 90 s - 120 s	MIL-STD-202G Method 210F Test Condition (Reflow)
Solder Ability Test	Soak in 245 °C solder pot of 3Sec, PAD must have 95% above coverage.	J-STD-003B

### Typical RoHS Reflow Profile



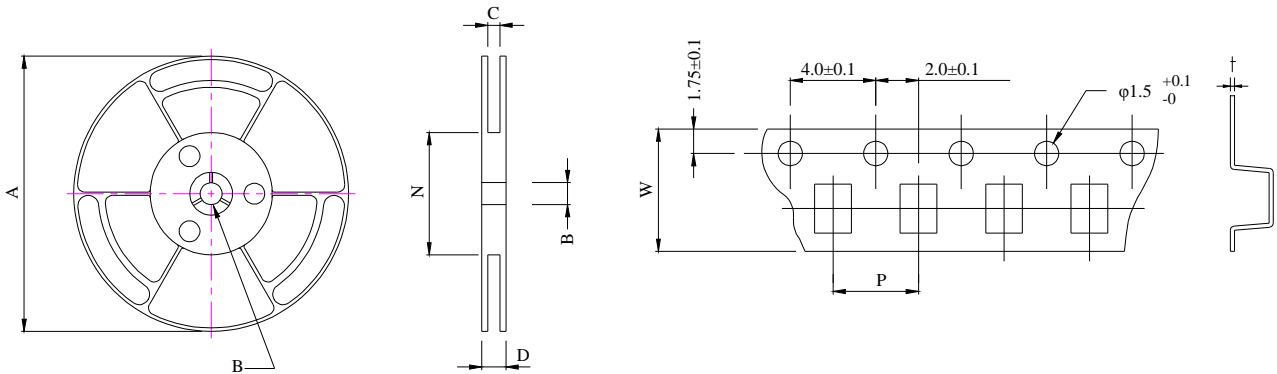
**Packaging Specification**



■ CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC

■ DIMENSIONS OF CARRIER TAPE (mm)



	A	B	C	D	N	P	W	t
DIM.	178	13.0	8.4	12.5	50	4.0	8.0	0.25
TOL.	±2.0	±0.8	-	-	MIN	±0.1	±0.2	±0.05

Quantity per reel : 3K pcs