APPROVAL SHEET

WLCW1608
SMD Wire Wound Ceramic Chip Inductors

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

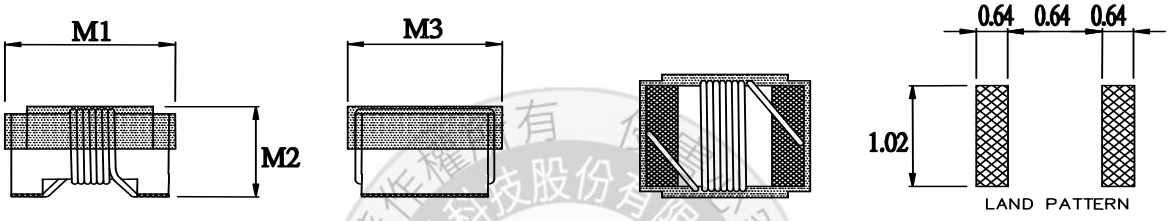
Features

1. Standard chip size bobbin with wire wound coil provides high reliability, productivity and performance.
2. Excellence Q and SRF characteristics for RF application, such as LO tank, antenna matching and filter.
3. Wide range inductance and various tolerance options.
4. RoHS compliant.

Applications

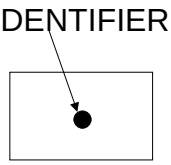
1. Communication: GSM/3G/LTE, Wi-Fi, GPS.
2. Consumer: Cabel/Terrestrial/BS Tuner, Bluetooth, Wireless Audio, Remote control.
3. M2M: ZigBee, Proprietary wilreless.

Shape and Dimension



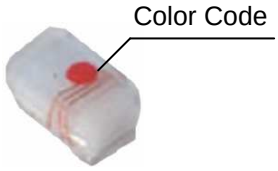
Unit: mm

MARKING



Example : WLCW1608Z0□1N6PB

MARKING : BLACK



WLCW1608

MARK COLOR CODE IN COMPOSITE SPECIFICATION

WLCW Series	M1	M2	M3
1608	1.8(MAX)	1.02(MAX)	1.12(MAX)

Ordering Information

WL	CW	1608	Z0	J	1N6	P	B
Product Code	**Series**	**Dimensions**	**Series extension**	**Tolerance**	**Value**	**Packing Code**	
WL: Inductor	SMD Wire Wound Ceramic Chip inductor.	1608 (EIA 0603)	Z0:STD	G: ± 2% J: ± 5% K: ± 10%	1N6 =1.6nH 12N=12nH R12=120nH	P=7" Reeled (Embossed tape)	B:STD

Electrical Characteristics

WLCW1608 series

Walsin Part Number	L (nH)	Tolerance	Q (Min)	Measuring Frequency (MHz)	SRF (GHz) Min	DCR Max (Ω)	Irms (mA)	Color Code
WLCW1608Z0□1N6PB	1.6	J、K	24	250	12.5	0.03	700	BLACK
WLCW1608Z0□1N8PB	1.8	J、K	16	250	12.5	0.045	700	BROWN
WLCW1608Z0□2N1PB	2.1	J、K	20	250	5.8	0.05	700	RED
WLCW1608Z0□2N2PB	2.2	J、K	20	250	5.8	0.10	700	ORANGE
WLCW1608Z0□3N3PB	3.3	J、K	20	250	5.5	0.07	700	VIOLET
WLCW1608Z0□3N6PB	3.6	J、K	22	250	5.9	0.063	700	RED
WLCW1608Z0□3N9PB	3.9	J、K	22	250	6.9	0.08	700	ORANGE
WLCW1608Z0□4N3PB	4.3	J、K	22	250	5.9	0.063	700	YELLOW
WLCW1608Z0□4N7PB	4.7	J、K	20	250	5.8	0.116	700	GREEN
WLCW1608Z0□5N1PB	5.1	J、K	20	250	5.7	0.14	700	BLUE
WLCW1608Z0□5N6PB	5.6	J、K	15	250	5.8	0.15	700	GRAY
WLCW1608Z0□6N1PB	6.1	J、K	25	250	5.8	0.11	700	WHITE
WLCW1608Z0□6N8PB	6.8	G、J、K	27	250	5.8	0.11	700	VIOLET
WLCW1608Z0□7N5PB	7.5	G、J、K	28	250	4.8	0.106	700	GRAY
WLCW1608Z0□8N2PB	8.2	G、J、K	25	250	5.8	0.12	700	BLACK
WLCW1608Z0□8N4PB	8.4	G、J、K	28	250	4.6	0.109	700	RED
WLCW1608Z0□8N5PB	8.5	G、J、K	28	250	4.6	0.109	700	RED
WLCW1608Z0□8N7PB	8.7	G、J	28	250	4.6	0.109	700	WHITE
WLCW1608Z0□9N5PB	9.5	G、J	28	250	5.4	0.135	700	BLACK
WLCW1608Z0□10NPB	10	G、J	31	250	4.8	0.13	700	BROWN
WLCW1608Z0□11NPB	11	G、J	33	250	4.0	0.086	700	RED
WLCW1608Z0□12NPB	12	G、J	35	250	4.0	0.13	700	ORANGE
WLCW1608Z0□13NPB	13	G、J	35	250	4.0	0.15	700	Yellow
WLCW1608Z0□14NPB	14	G、J	35	250	4.0	0.17	700	BROWN
WLCW1608Z0□15NPB	15	G、J	35	250	4.0	0.17	700	YELLOW
WLCW1608Z0□16NPB	16	G、J	34	250	3.3	0.104	700	GREEN
WLCW1608Z0□18NPB	18	G、J	35	250	3.1	0.17	700	BLUE
WLCW1608Z0□20NPB	20	G、J	40	250	3.0	0.19	700	GREEN
WLCW1608Z0□22NPB	22	G、J	38	250	3.0	0.19	700	VIOLET

Walsin Part Number	L (nH)	Tolerance	Q (Min)	Measuring Frequency (MHz)	SRF (GHz) Min	RDC Max (Ω)	Irms (mA)	Color Code
WLCW1608Z0□24NPB	24	G、J	37	250	2.65	0.135	700	GRAY
WLCW1608Z0□27NPB	27	G、J	40	250	2.8	0.22	600	WHITE
WLCW1608Z0□30NPB	30	G、J	37	250	2.25	0.22	600	BLACK
WLCW1608Z0□33NPB	33	G、J	40	250	2.3	0.22	600	BROWN
WLCW1608Z0□36NPB	36	G、J	38	250	2.08	0.25	600	RED
WLCW1608Z0□39NPB	39	G、J	40	250	2.2	0.25	600	ORANGE
WLCW1608Z0□43NPB	43	G、J	39	250	2.0	0.28	600	YELLOW
WLCW1608Z0□47NPB	47	G、J	38	200	2.0	0.28	600	GREEN
WLCW1608Z0□56NPB	56	G、J	38	200	1.9	0.31	600	BLUE
WLCW1608Z0□62NPB	62	G、J	37	200	1.8	0.34	600	GRAY
WLCW1608Z0□68NPB	68	G、J	37	200	1.7	0.34	600	VIOLET
WLCW1608Z0□72NPB	72	G、J	34	150	1.7	0.49	400	GRAY
WLCW1608Z0□75NPB	75	G、J	34	150	1.7	0.52	400	BLUE
WLCW1608Z0□82NPB	82	G、J	34	150	1.7	0.54	400	WHITE
WLCW1608Z0□91NPB	91	G、J	30	150	1.7	0.50	400	BLUE
WLCW1608Z0□R10PB	100	G、J	34	150	1.4	0.58	400	BLACK
WLCW1608Z0□R11PB	110	G、J	32	150	1.35	0.61	300	BROWN
WLCW1608Z0□R12PB	120	G、J	32	150	1.3	0.65	300	RED
WLCW1608Z0□R13PB	130	G、J	30	150	1.4	0.72	300	WHITE
WLCW1608Z0□R15PB	150	G、J	28	150	0.99	0.92	280	ORANGE
WLCW1608Z0□R18PB	180	G、J	25	100	0.99	1.25	240	YELLOW
WLCW1608Z0□R20PB	200	G、J	25	100	0.99	1.98	200	RED
WLCW1608Z0□R22PB	220	G、J	25	100	0.9	1.9	200	GREEN
WLCW1608Z0□R26PB	260	G、J	25	100	1.0	2.0	200	VIOLET
WLCW1608Z0□R27PB	270	G、J	24	100	0.9	2.3	170	BLUE
WLCW1608Z0□R33PB	330	G、J	24	100	0.9	3.9	185	VIOLET
WLCW1608Z0□R39PB	390	G、J	25	100	0.9	4.35	100	GRAY
WLCW1608Z0□R43PB	430	G、J	25	100	0.8	4.5	100	GREEN
WLCW1608Z0□R47PB	470	G、J	25	100	0.6	3.6	80	WHITE
WLCW1608Z0□R68PB	680	J	25	100	0.5	6.3	60	BLACK

Tolerance：K : ±10%、J : ±5%、G : ±2%
OPERATING TEMPERATURE : -40℃ ~ 125℃
MSL：Level 1

TEST INSTRUMENT:
L、Q TEST BY HP4291B
SRF TEST BY HP 8753E / 5071C
DCR TEST BY ZENTECH 502BC

RELIABILITY PERFORMANCE

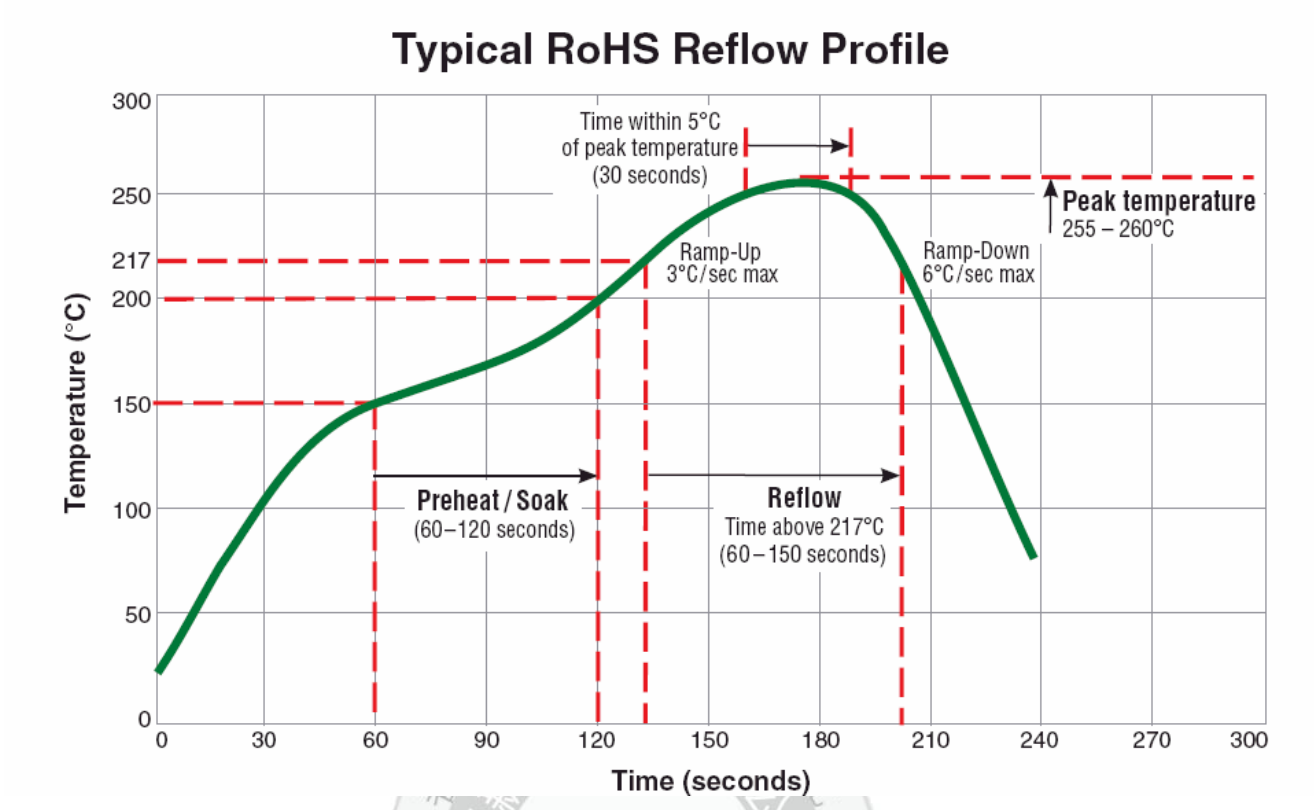
Reliability Experiment For Electrical

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

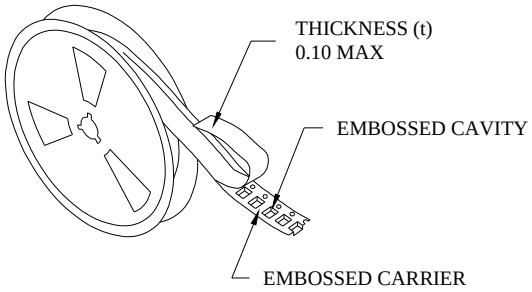
Reliability Experiment For Physical

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℃ for 5Sec in air, Through 2 Cycle. Temperature Ramp:+1~4℃/sec; Above1 83℃, must keep 90 s - 120 s	MIL-STD-202G Method 210F Test Condition (Reflow)
Solder Ability Test	Soak in 245 ℃ solder pot of 3Sec, PAD must have 95% above coverage.	J-STD-003B

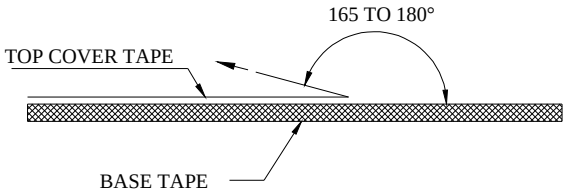
Typical RoHS Reflow Profile

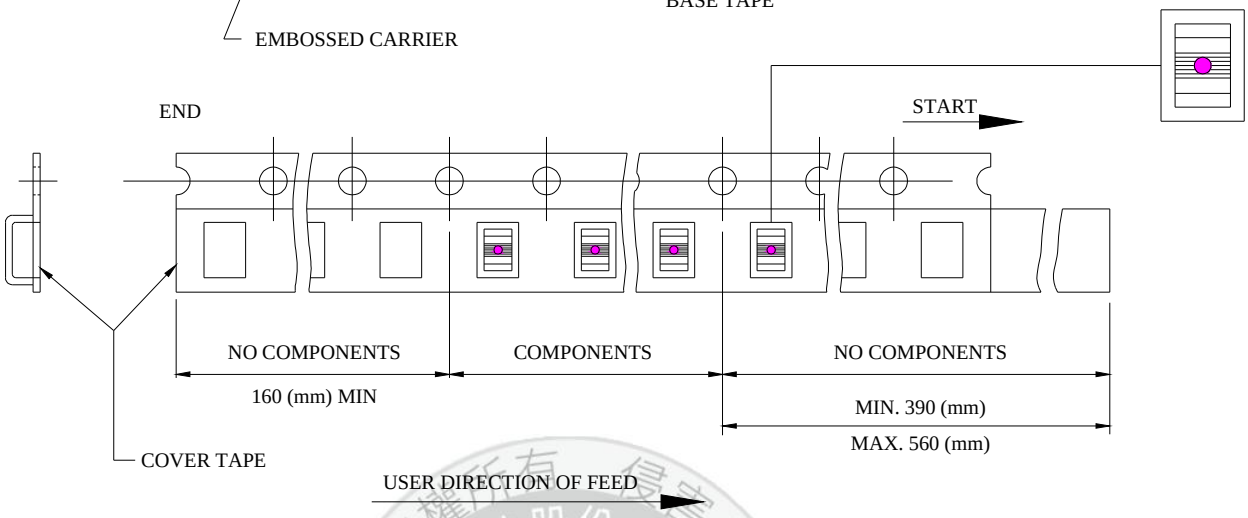


Packaging Specification



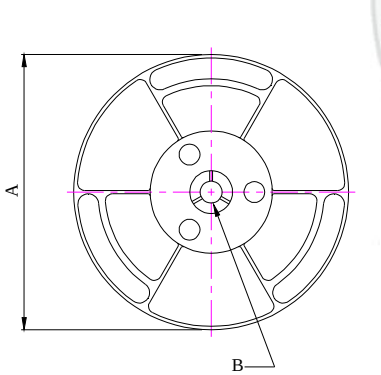
- THE FORCE FOR TEARING OFF COVER TAPE IS 10 TO 100 GRAMS IN THE ARROW DIRECTION.



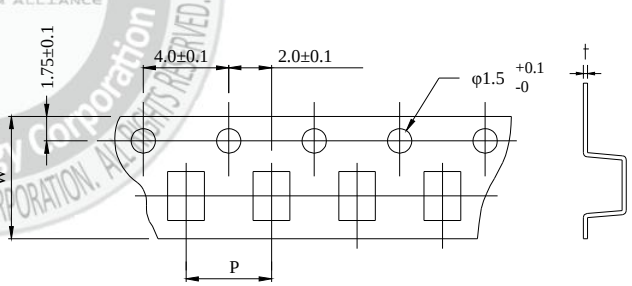


■ CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC



■ DIMENSIONS OF CARRIER TAPE (mm)



	A	B	C	D	N	P	W	t	A
DIM.	180	13.0	8.4	12.5	50	4.0	8.0	0.25	180
TOL.	MAX.	±0.8	+1.0–0	MAX	MIN.	±0.1	±0.2	±0.05	MAX.

Quantity per reel：4K pcs