

APPROVAL SHEET

WLCW2520 **SMD Wire Wound Ceramic Chip Inductors**

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

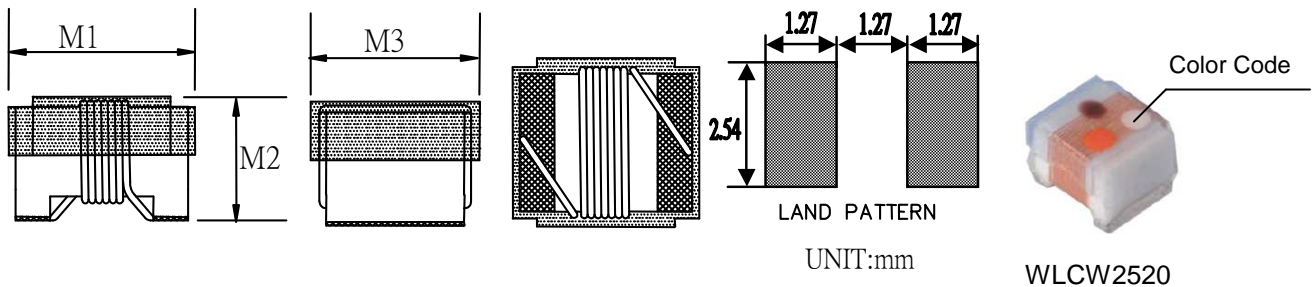
Features

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.

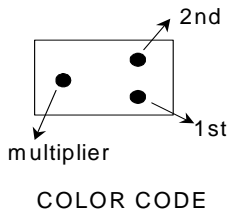
Applications

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

Shape and Dimension



Unit: mm



Example : WLCW2520Z0□10NPB
MARKING : Dots 1 and 2 indicate the inductance in nano Henries.
 (DOTS 1 : BROWN , DOTS 2 : BLACK)
 Dots 3 indicates number of zeroes to be added.
 (DOTS 3 : BLACK)

WLCW Series	M1	M2		M3
2520	2.92(MAX)	5N6~R91	2.02(MAX)	2.79(MAX)
		1R0~150	2.10(MAX)	

Ordering Information

WL	CW	2520	Z0	J	10N	P	B
Product Code	Series	Dimensions	Series extension	Tolerance	Value	Packing Code	
WL: Inductor	SMD Wire Wound Ceramic Chip inductor.	2520 :EIA 1008	Z0:STD	G: ± 2% J: ± 5% K: ±10%	8N2 =8.2N 10N =10nH R12=120nH 2R0=2000nH 120=12000nH	P=7" Reeled (Embossed tape)	B:STD

Electrical Characteristics

WLCW2520 series

Walsin Part Number	L (nH)	Tolerance	Measuring Frequency (MHz)	Q (Min)	Test Freq (MHz)	SRF (GHz) Min	RDC Max (Ω)	I _{rms} (mA)	Color Code		
									1st	2nd	multiplier
WLCW2520Z0□8N2PB	8.2	J	50	50	500	4.1	0.08	1000	GRAY	RED	BLACK
WLCW2520Z0□10NPB	10	J、K	50	50	500	4.10	0.08	1000	BROWN	BLACK	BLACK
WLCW2520Z0□12NPB	12	J、K	50	50	500	3.30	0.09	1000	BROWN	RED	BLACK
WLCW2520Z0□15NPB	15	J、K	50	50	500	2.50	0.10	1000	BROWN	GREEN	BLACK
WLCW2520Z0□18NPB	18	G、J、K	50	50	350	2.50	0.11	1000	BROWN	GRAY	BLACK
WLCW2520Z0□22NPB	22	G、J、K	50	55	350	2.40	0.12	1000	RED	RED	BLACK
WLCW2520Z0□24NPB	24	G、J、K	50	50	350	1.90	0.13	1000	RED	YELLOW	BLACK
WLCW2520Z0□27NPB	27	G、J、K	50	55	350	1.60	0.13	1000	RED	VIOLET	BLACK
WLCW2520Z0□33NPB	33	G、J、K	50	60	350	1.60	0.14	1000	ORANGE	ORANGE	BLACK
WLCW2520Z0□36NPB	36	G、J、K	50	60	350	1.60	0.15	1000	ORANGE	BLUE	BLACK
WLCW2520Z0□39NPB	39	G、J、K	50	60	350	1.50	0.15	1000	ORANGE	WHITE	BLACK
WLCW2520Z0□47NPB	47	G、J、K	50	65	350	1.50	0.16	1000	YELLOW	VIOLET	BLACK
WLCW2520Z0□56NPB	56	G、J、K	50	65	350	1.30	0.18	1000	GREEN	BLUE	BLACK
WLCW2520Z0□68NPB	68	G、J、K	50	65	350	1.30	0.20	1000	BLUE	GRAY	BLACK
WLCW2520Z0□82NPB	82	G、J、K	50	60	350	1.00	0.22	1000	GRAY	RED	BLACK
WLCW2520Z0□R10PB	100	G、J、K	25	60	350	1.00	0.56	650	BROWN	BLACK	BROWN
WLCW2520Z0□R12PB	120	G、J、K	25	60	350	0.950	0.63	650	BROWN	RED	BROWN
WLCW2520Z0□R15PB	150	G、J、K	25	45	100	0.850	0.70	580	BROWN	GREEN	BROWN
WLCW2520Z0□R18PB	180	G、J、K	25	45	100	0.750	0.77	620	BROWN	GRAY	BROWN
WLCW2520Z0□R20PB	200	G、J、K	25	50	100	0.750	0.81	500	RED	BLACK	BROWN
WLCW2520Z0□R22PB	220	G、J、K	25	45	100	0.700	0.84	500	RED	RED	BROWN
WLCW2520Z0□R24PB	240	G、J、K	25	50	100	0.650	0.84	500	RED	YELLOW	BROWN
WLCW2520Z0□R27PB	270	G、J、K	25	45	100	0.600	0.91	500	RED	VIOLET	BROWN
WLCW2520Z0□R30PB	300	G、J、K	25	45	100	0.585	1.05	660	ORANGE	BLACK	BROWN
WLCW2520Z0□R33PB	330	G、J、K	25	45	100	0.570	1.05	450	ORANGE	ORANGE	BROWN
WLCW2520Z0□R36PB	360	G、J、K	25	45	100	0.530	1.05	660	ORANGE	BLUE	BROWN
WLCW2520Z0□R39PB	390	G、J、K	25	45	100	0.500	1.12	470	ORANGE	WHITE	BROWN
WLCW2520Z0□R43PB	430	G、J、K	25	45	100	0.480	1.19	600	YELLOW	ORANGE	BROWN
WLCW2520Z0□R47PB	470	G、J、K	25	45	100	0.450	1.19	470	YELLOW	VIOLET	BROWN
WLCW2520Z0□R56PB	560	G、J、K	25	45	100	0.415	1.33	400	GREEN	BLUE	BROWN
WLCW2520Z0□R62PB	620	G、J、K	25	45	100	0.375	1.40	300	BLUE	RED	BROWN

Walsin Part Number	L (nH)	Tolerance	Measuring Frequency (MHz)	Q (Min)	Test Freq (MHz)	SRF (GHz) Min	RDC Max (Ω)	Irms (mA)	Color Code		
									1st	2nd	multiplier
WLCW2520Z0□R68PB	680	G、J、K	25	45	100	0.375	1.47	400	BLUE	GRAY	BROWN
WLCW2520Z0□R75PB	750	G、J、K	25	45	100	0.360	1.54	360	VIOLET	GREEN	BROWN
WLCW2520Z0□R82PB	820	G、J、K	25	45	100	0.350	1.61	400	GRAY	RED	BROWN
WLCW2520Z0□R91PB	910	G、J、K	25	35	50	0.320	1.68	380	WHITE	BROWN	BROWN
WLCW2520Z0□1R0PB	1000	G、J、K	25	35	50	0.290	1.75	370	BROWN	BLACK	RED
WLCW2520Z0□1R2PB	1200	G、J、K	7.9	35	50	0.250	2.00	310	BROWN	RED	RED
WLCW2520Z0□1R5PB	1500	G、J、K	7.9	28	50	0.200	2.30	330	BROWN	GREEN	RED
WLCW2520Z0□1R8PB	1800	G、J、K	7.9	28	50	0.160	2.60	300	BROWN	GRAY	RED
WLCW2520Z0□2R0PB	2000	G、J、K	7.9	25	50	0.160	2.80	280	RED	BLACK	RED
WLCW2520Z0□2R2PB	2200	G、J、K	7.9	28	50	0.160	2.80	280	RED	RED	RED
WLCW2520Z0□2R7PB	2700	G、J、K	7.9	22	25	0.140	3.20	290	RED	VIOLET	RED
WLCW2520Z0□3R3PB	3300	G、J、K	7.9	22	25	0.110	3.40	290	ORANGE	ORANGE	RED
WLCW2520Z0□3R9PB	3900	G、J、K	7.9	20	25	0.100	3.60	260	ORANGE	WHITE	RED
WLCW2520Z0□4R7PB	4700	G、J、K	7.9	20	25	0.090	4.00	260	YELLOW	VIOLET	RED
WLCW2520Z0□5R6PB	5600	J、K	7.9	16	7.96	0.020	4.00	240	Green	Blue	Red
WLCW2520Z0□8R2PB	8200	G、J、K	7.9	15	7.96	0.025	6.00	170	Gary	Red	Red
WLCW2520Z0□100PB	10000	J、K	2.52	15	7.96	0.020	9.00	150	Brown	Black	Orange
WLCW2520Z0□120PB	12000	J、K	2.52	15	7.96	0.018	10.50	130	Brown	Red	Orange
WLCW2520Z0□150PB	15000	J、K	2.52	15	7.96	0.015	11.50	120	Brown	Green	Orange

Tolerance : K : $\pm 10\%$ 、J : $\pm 5\%$ 、G : $\pm 2\%$
 OPERATING TEMPERATURE : $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$
 ※MSL : LEVEL 1
 L、Q TEST BY HP4291B
 SRF TEST BY HP 8753E
 DCR TEST BY ZENTECH 502BC

RELIABILITY PERFORMANCE

Reliability Experiment For Electrical

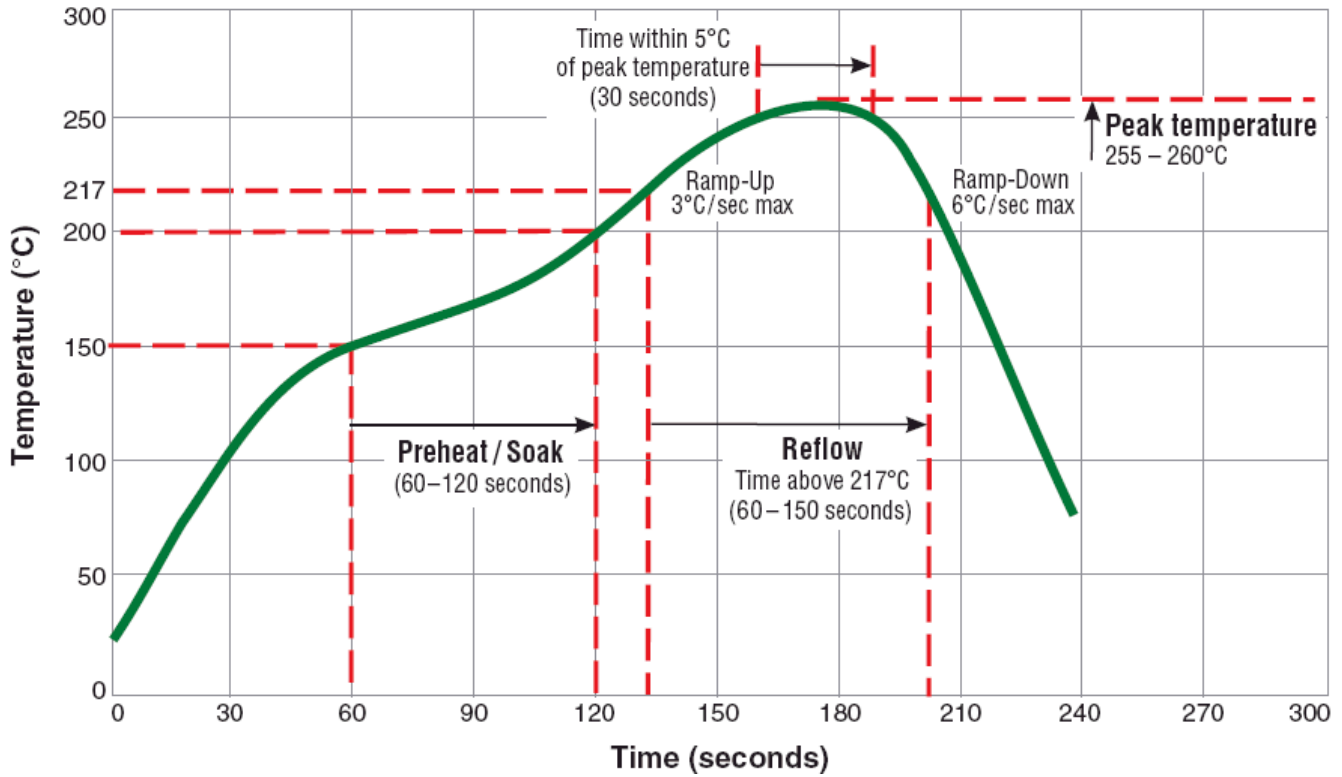
Test Item	Test Condition	Standard Source
Humidity Test	+40°C ± 2°C, humidity of 90% ± 5% (total 96 hours).	MIL-STD-202G Method 103B Test Condition B
High Temperature Test	1. Temperature: +125°C ± 2°C 2. Test time: 48 ± 2hrs	IEC 68-2 Test Condition B
Low Temperature Test	1. Temperature: -40°C ± 2°C 2. 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

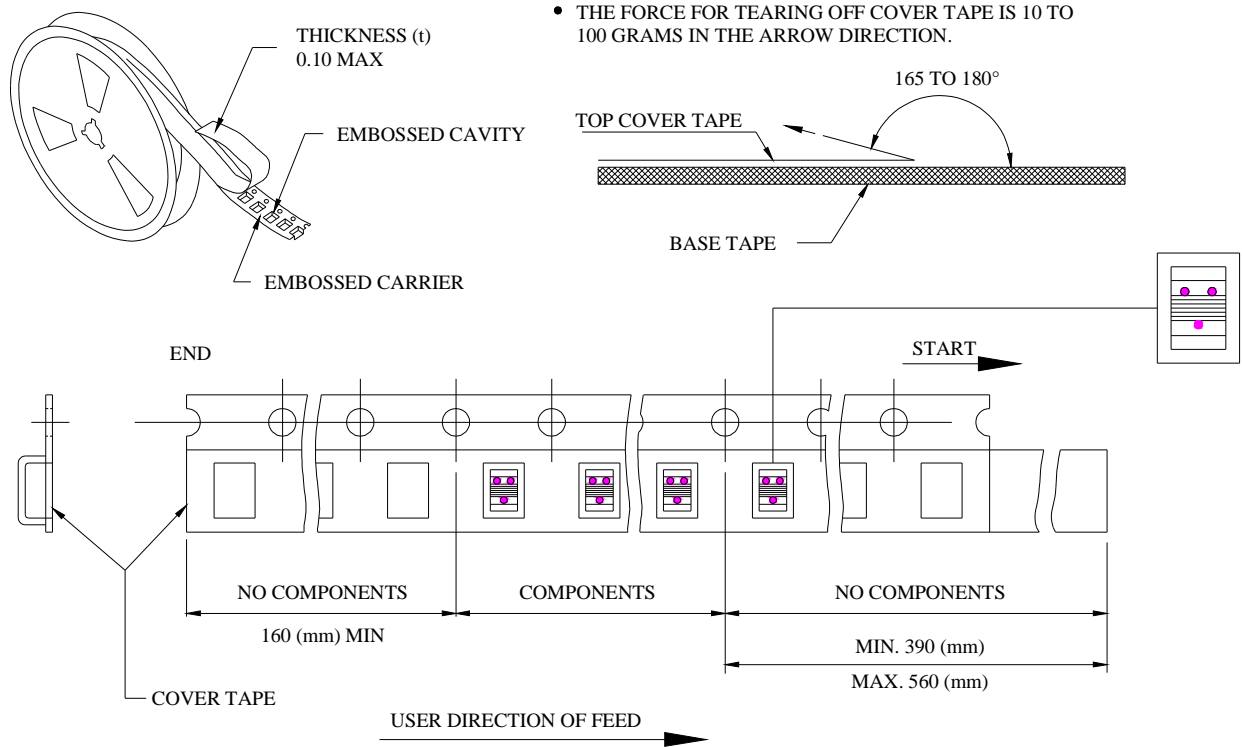
Test Item	Test Condition	Standard Source
Vibration Test	10-55-10HZ, amplitude: 1.5mm, direction: X, Y, Z axes, each axis 2 hours (total 6 hours).	MIL-STD-202G Method 201A
Solder Heat Resistance Test	IR/convection reflow: Peak Temp 250 ± 5°C for 5Sec in air, Through 2 Cycle. Temperature Ramp: +1 ~ 4°C/sec; 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

Typical RoHS Reflow Profile



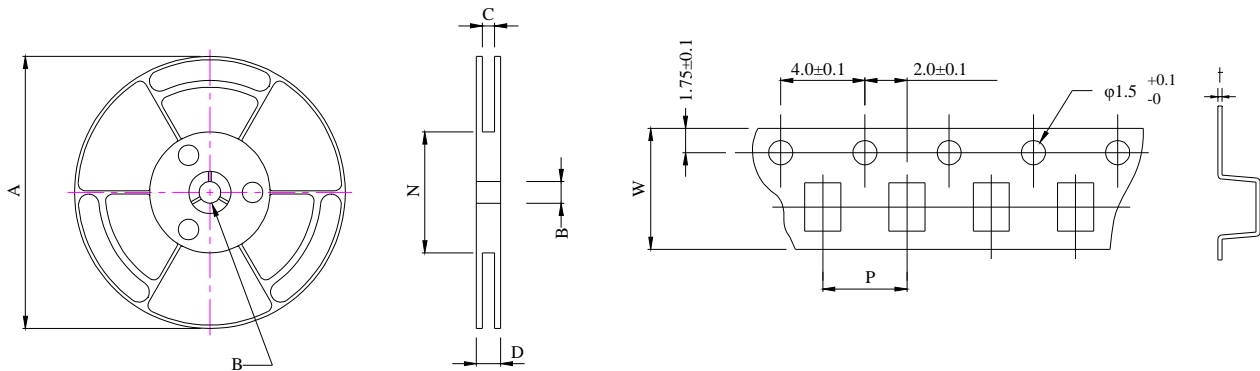
Packaging Specification



■ 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	+1.0-0	MAX	MIN	±0.1	±0.2	±0.05

Quantity per reel : 2K pcs