

APPROVAL SHEET



WLAC294A Series
SMD Air Wound Coil Inductors

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

Features

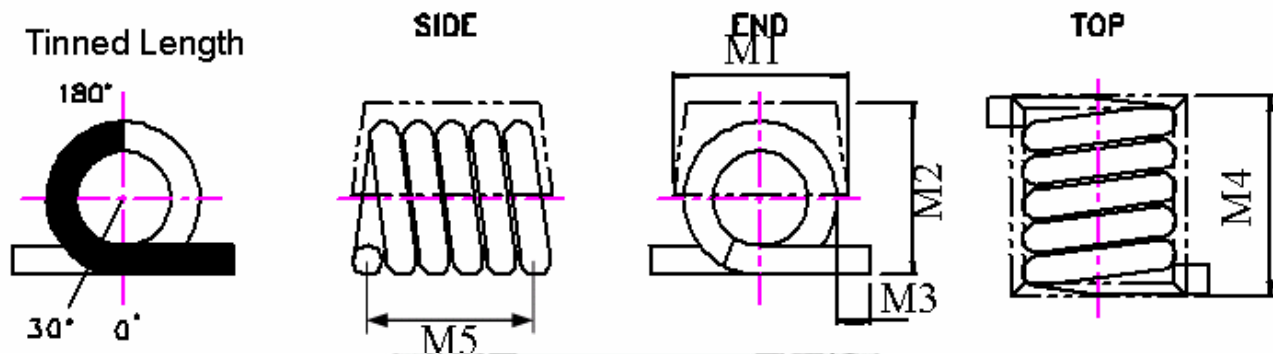
Acrylic jacket(WLAC294) provides a flat top for pick and place

1. Acrylic cap provides a flat top for pick and place machine for high productive manufacture.
2. Excellent Q and SRF characteristics for RF application, especially in subGHz band.
3. Narrow tolerance available for precise design requirements.

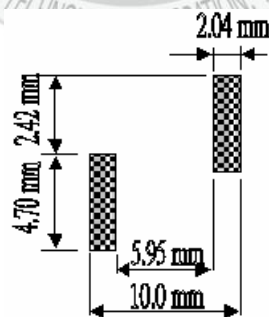
Applications

1. Communication system front-end circuit: GSM/3G/LTE, Wi-Fi, GPS.
2. Cabel/Terrestrial/BS Tuner, Bluetooth, Wireless Audio, Remote control.
3. M2M: ZigBee, Proprietary wireless.
4. EMI solution in high frequency circuits.

Shape and Dimension



Recommend Patterns



Unit: mm

Land Pattern

WLAC Series	M1	M2	M3	M4	M5
294A	6.35(Max)	5.9(Max)	1.02 ±0.39	10.55(Max.)	7.98±0.51

Ordering Information

WL	AC	294A	Z0	J	T09	L	B
Product Code WL: Inductor	Series Air wound coil inductor.	Dimensions 294A	Series Extension Z0:STD	Tolerance G: ± 2% J: ± 5% K: ± 10%	Value T09 = 9 Turns T15 = 15 Turns	Packing Code L=13" Reeled (Embossed reel)	B:STD

Electrical Characteristics

● WLAC294A series

Walsin Part Number	Turns	L(nH)	Tolerance	Q Min	Q Min @ Freq (MHz)	SRF Maximum (MHz)	RDC Maximum (mΩ)	Rated Current Maximum (A)
WLAC294AZ0□T09LB	9	90	G、J、K	95	50	1140	15	3.5
WLAC294AZ0□T10LB	10	111	G、J、K	87	50	1020	15	3.5
WLAC294AZ0□T11LB	11	130	G、J、K	87	50	900	20	3.0
WLAC294AZ0□T12LB	12	169	G、J、K	95	50	875	25	3.0
WLAC294AZ0□T13LB	13	206	G、J、K	95	50	800	30	3.0
WLAC294AZ0□T14LB	14	222	G、J、K	92	50	730	35	3.0
WLAC294AZ0□T15LB	15	246	G、J、K	95	50	685	35	3.0
WLAC294AZ0□T16LB	16	307	G、J、K	95	50	660	35	3.0
WLAC294AZ0□T17LB	17	380	G、J、K	95	50	590	50	2.5
WLAC294AZ0□T18LB	18	422	G、J、K	95	50	540	60	2.5
WLAC294AZ0□T19LB	19	491	G、J、K	95	50	535	65	2.0
WLAC294AZ0□T20LB	20	538	G、J、K	87	50	490	90	2.0

TOLERANCE : G=±2%, J=±5%, K=±10%

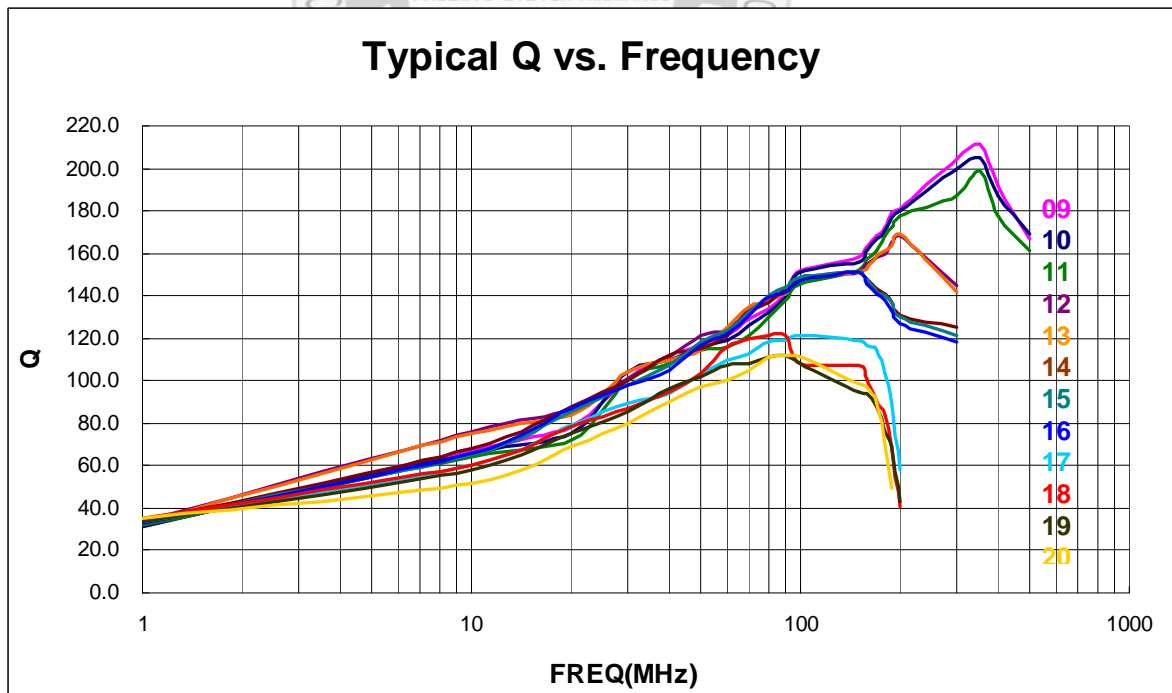
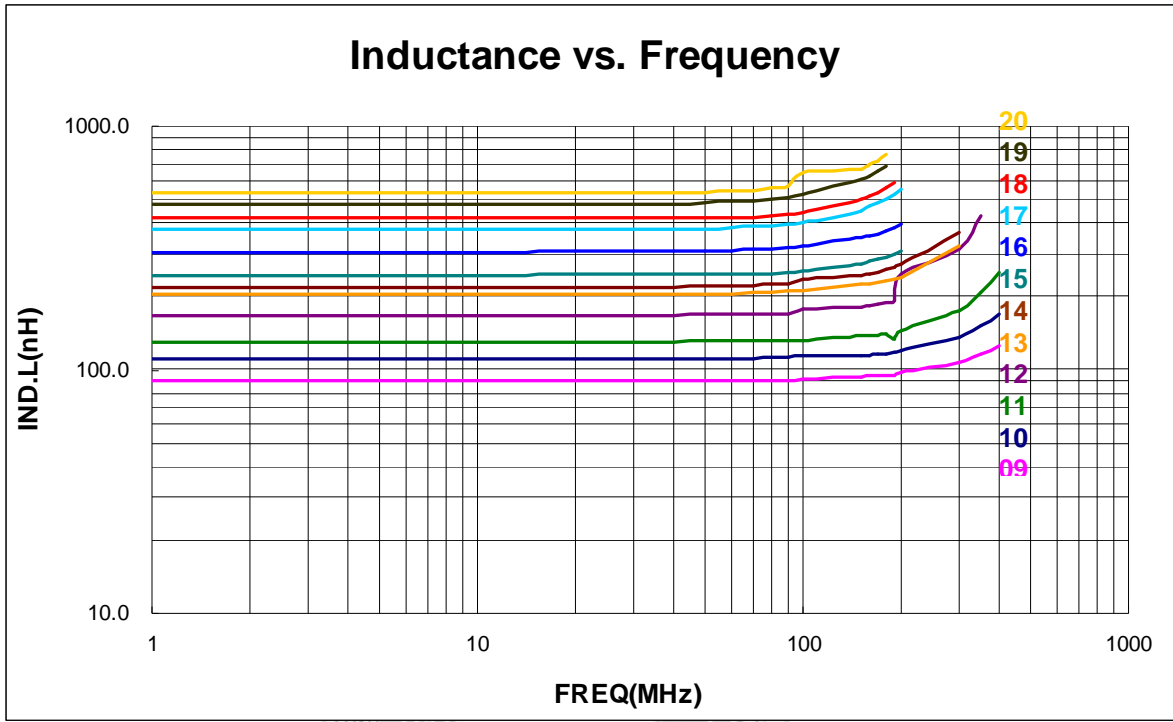
※TEST INSTRUMENT: HP4291B、FIXTURE HP16193A、HP8753E、CHROMA16502

NOTE :

1. Inductance & SRF measured on the HP4291B. With HP16193 test fixture.
2. Operating temp. : -40°C to +125°C
3. For temperature rise : 15°C
4. SRF measured using the HP8753E
5. MSL : LEVEL 1

Characteristic Curve

● WLAC294A series



RELIABILITY PERFORMANCE

Reliability Experiment For Electrical

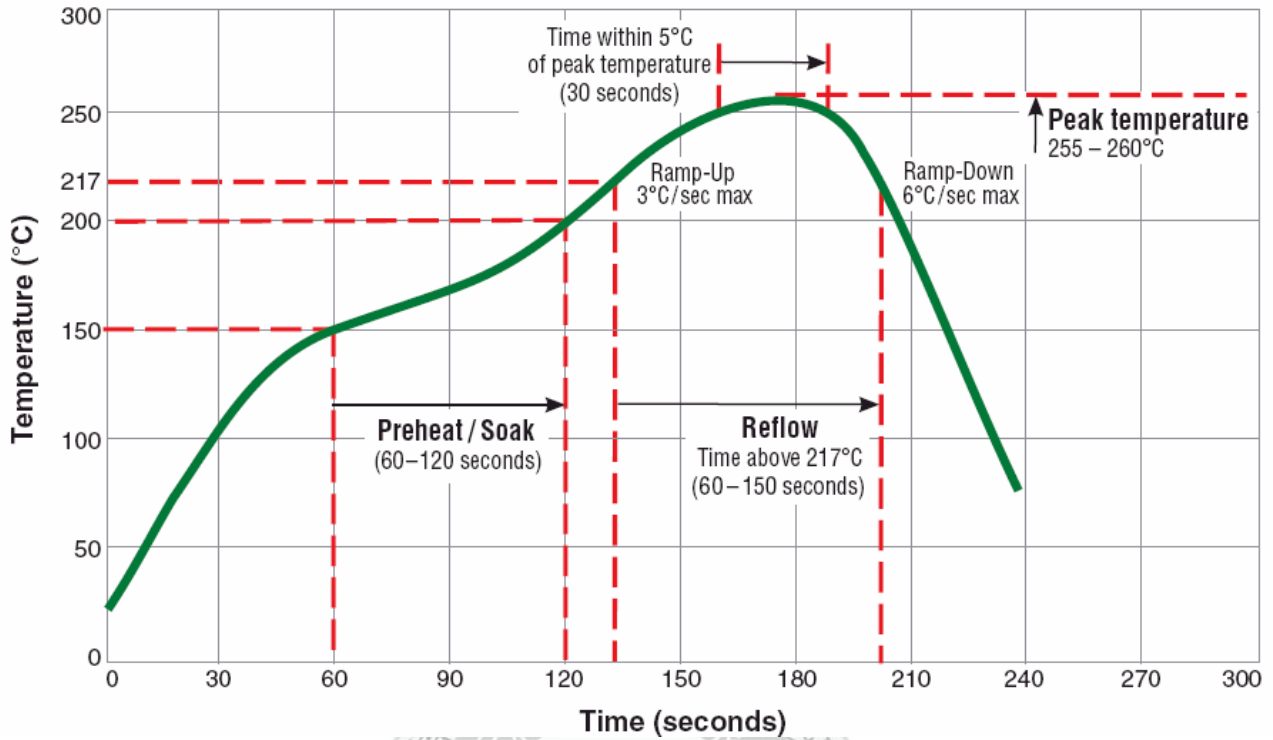
Test Item	Test Condition	Standard Source
Humidity Test	+40°C ± 2°C, humidity of 90% ± 5% (total 96 hours).	MIL-STD-202G Method 103B Test Condition B
High Temperature Test	1.Temperature: +125°C ± 2°C 2.Test time: 48 ± 2hrs	IEC 68-2 Test Condition B
Low Temperature Test	1.Temperature: -40°C ± 2°C 2.Test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

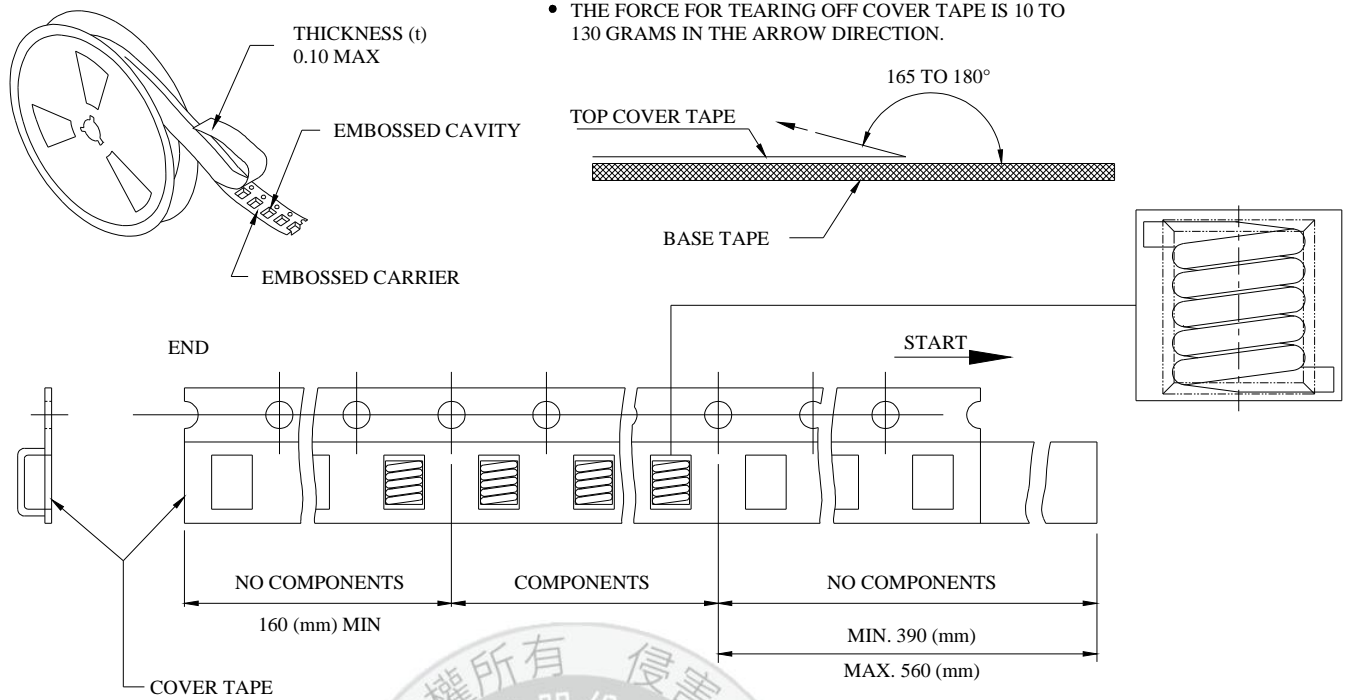
Test Item	Test Condition	Standard Source
Vibration Test	10-55-10HZ, amplitude: 1.5mm, direction: X, Y, Z axes, each axis 2 hours (total 6 hours).	MIL-STD-202G Method 201A
Solder Heat Resistance Test	IR/convection reflow: Peak Temp 250 ± 5°C for 5Sec in air, Through 2 Cycle. Temperature Ramp: +1~4°C/sec;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



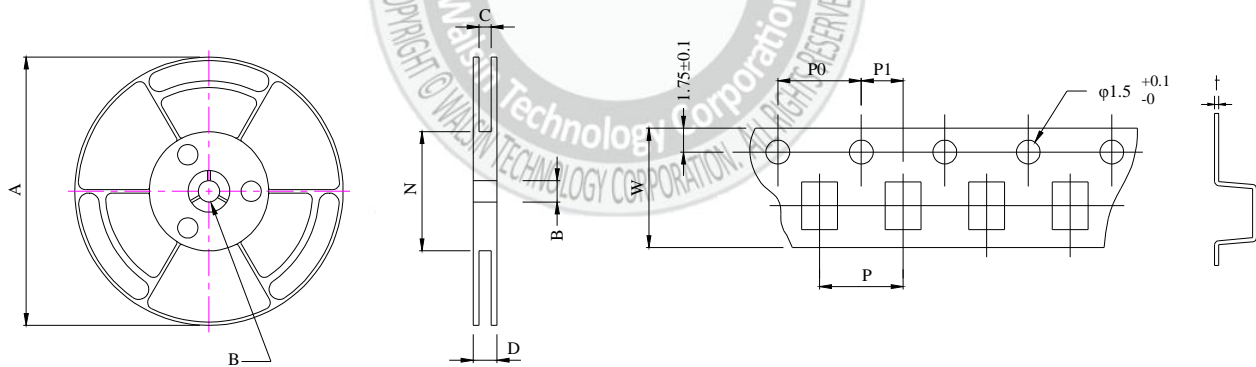
Packaging Specification



■ CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC

■ DIMENSIONS OF CARRIER TAPE (mm)



UNIT: mm

	A	B	C	D	N	W	P	P0	P1	t
DIM.	340	13.0	24.5	30.4	100	24.0	12.0	4.0	2.0	0.35
TOL.	MAX	±0.5	±0.5	±0.5	REF	±0.30	±0.10	±0.10	±0.10	±0.05

Quantity per reel : 1K pcs