

APPROVAL SHEET



WLAC293A Series
SMD Air Wound Coil Inductors

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

Features

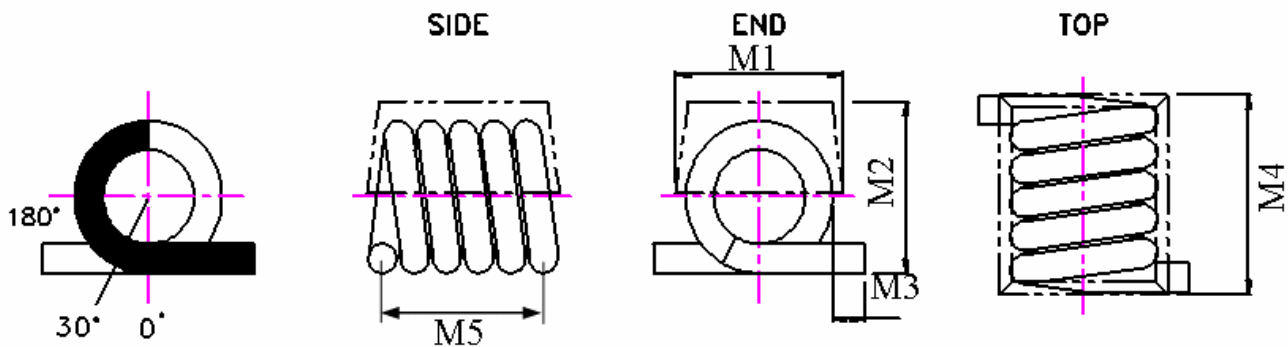
Acrylic jacket(WLAC293) provides a flat top for pick and place

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.

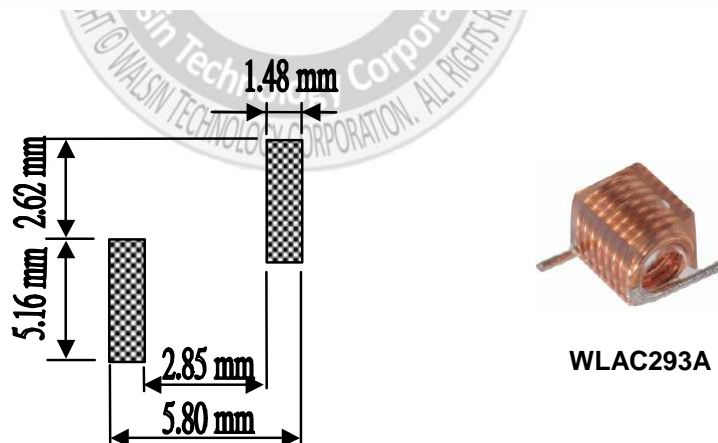
Applications

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
293A	3.81(Max)	4.2 (Max.)	1.53±0.39	4.83(Max.)	4.32±0.39

Ordering Information

WL	AC	293A	Z0	K	22N	L	B
Product Code	Series	Dimensions	Series Extension	Tolerance	Value	Packing Code	
WL: Inductor	Air wound coil inductor.	293A	Z0:STD	G: ± 2% J: ± 5% K: ± 10%	22N=22nH R10=100nH	L=13" Reeled (Embossed reel)	B:STD

Electrical Characteristics

● WLAC293A series

Walsin Part Number	L(nH)	Tolerance	Q Min	Typical Q @ Frequency (MHz)	SRF Maximum (GHz)	RDC Maximum (mΩ)	Rated Current Maximum (A)
WLAC293AZ0□22NLB	22	G、J、K	100	150	3.2	4.2	3.0
WLAC293AZ0□27NLB	27	G、J、K	100	150	2.7	4.0	3.5
WLAC293AZ0□33NLB	33	G、J、K	100	150	2.5	4.8	3.0
WLAC293AZ0□39NLB	39	G、J、K	100	150	2.1	4.4	3.0
WLAC293AZ0□47NLB	47	G、J、K	100	150	2.1	5.6	3.0
WLAC293AZ0□56NLB	56	G、J、K	100	150	1.5	6.2	3.0
WLAC293AZ0□68NLB	68	G、J、K	100	150	1.5	8.2	2.5
WLAC293AZ0□82NLB	82	G、J、K	100	150	1.3	9.4	2.5
WLAC293AZ0□R10LB	100	G、J、K	100	150	1.2	12.3	1.7
WLAC293AZ0□R12LB	120	G、J、K	100	150	1.1	17.3	1.5

TOLERANCE : G=±2%, J=±5%, K=±10%

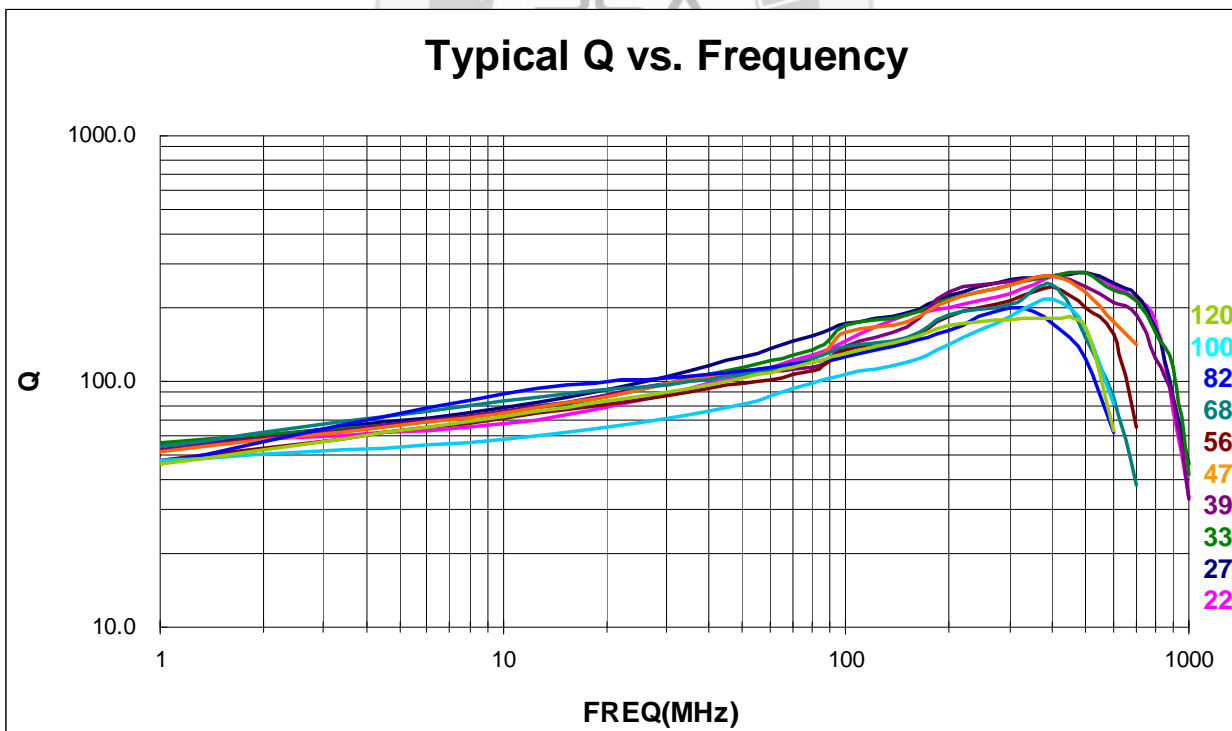
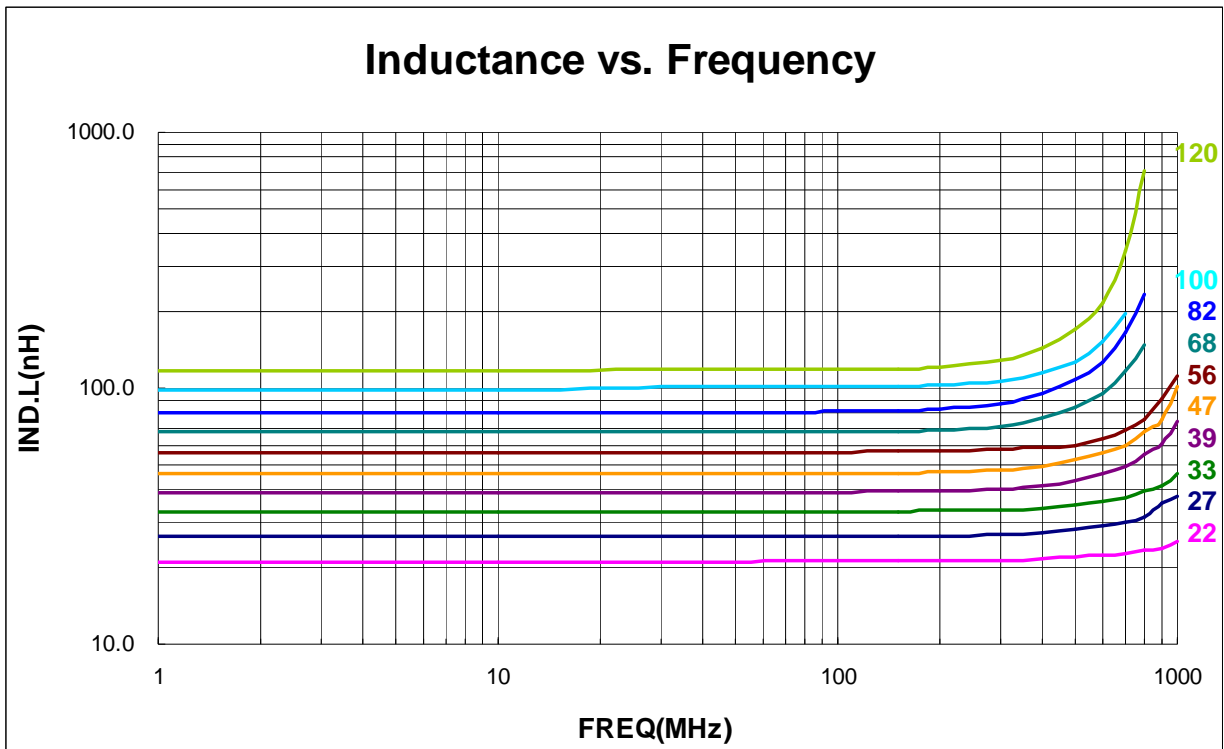
※TEST INSTRUMENT: HP4291B、HP8753E、CHROMA16502

NOTE :

1. Inductance & SRF measured on the HP4291B.
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

● WLAC293 series



RELIABILITY PERFORMANCE

Reliability Experiment For Electrical

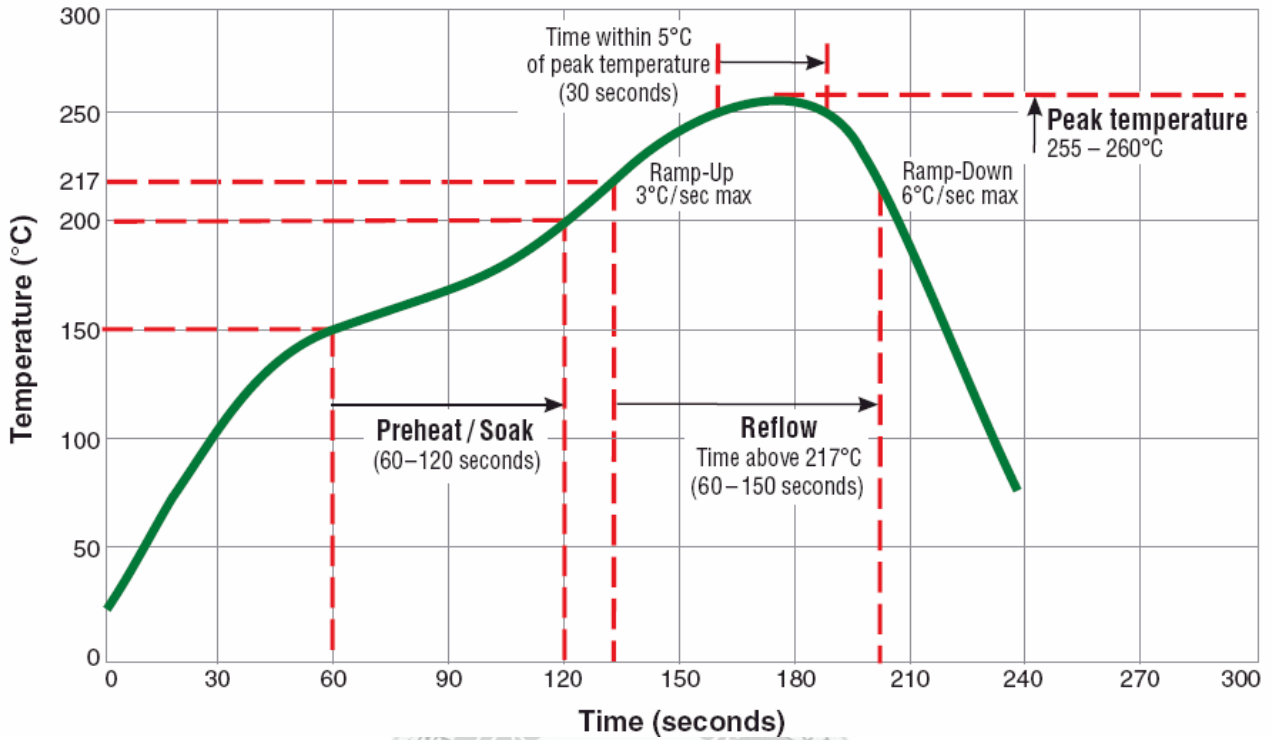
Test Item	Test Condition	Standard Source
Humidity Test	+40°C ± 2°C, humidity of 90% ± 5% (total 96 hours).	MIL-STD-202G Method 103B Test Condition B
High Temperature Test	1.Temperature: +125°C ± 2°C 2.Test time: 48 ± 2hrs	IEC 68-2 Test Condition B
Low Temperature Test	1.Temperature: -40°C ± 2°C 2.Test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

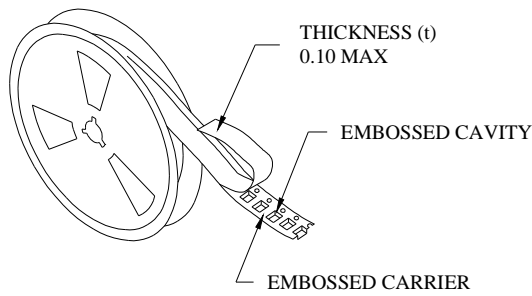
Test Item	Test Condition	Standard Source
Vibration Test	10-55-10HZ, amplitude: 1.5mm, direction: X, Y, Z axes, each axis 2 hours (total 6 hours).	MIL-STD-202G Method 201A
Solder Heat Resistance Test	IR/convection reflow: Peak Temp 250 ± 5°C for 5Sec in air, Through 2 Cycle. Temperature Ramp: +1~4°C/sec;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

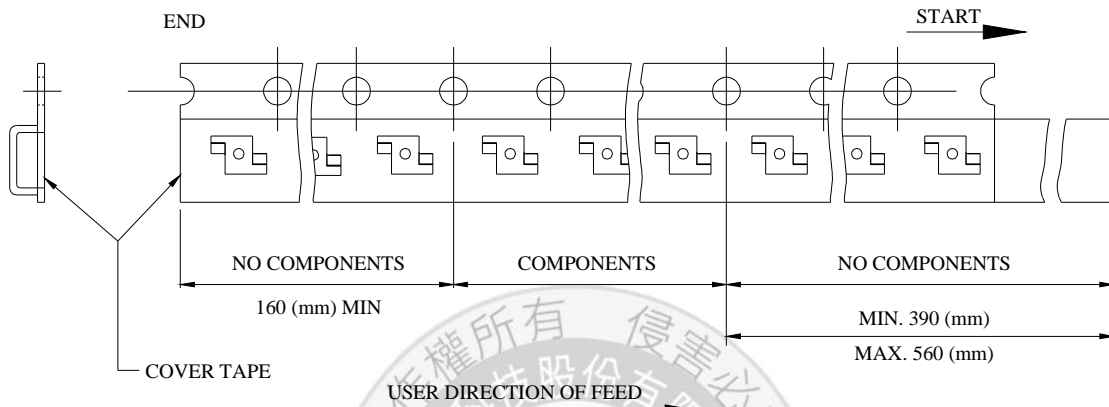
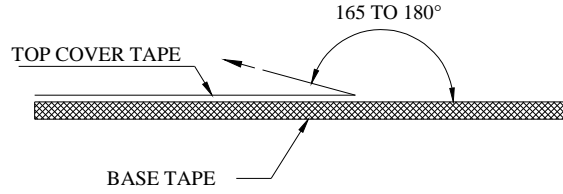
Typical RoHS Reflow Profile



Packaging Specification



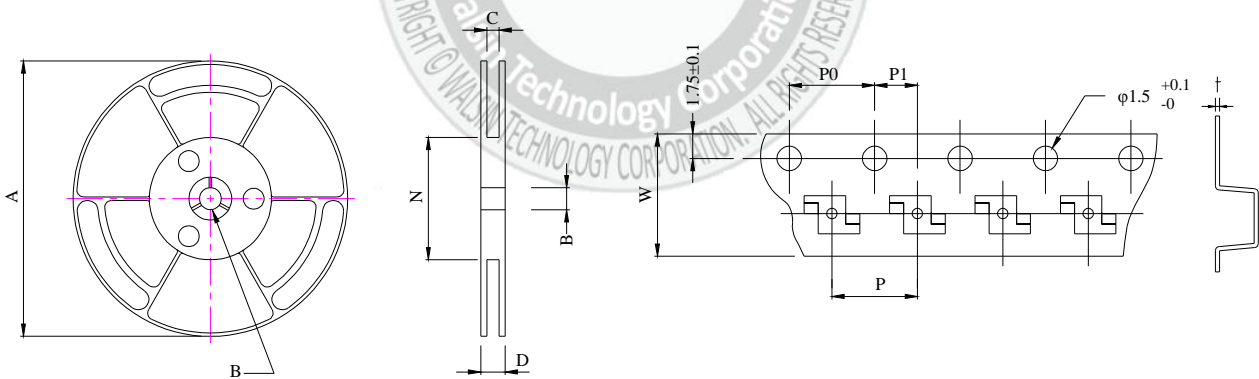
- THE FORCE FOR TEARING OFF COVER TAPE IS 10 TO 130 GRAMS IN THE ARROW DIRECTION.



■ 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	16.5	25.5	100	16.0	12.0	4.0	2.0	0.4
TOL.	MAX	±0.5	±0.5	±0.5	REF	±0.30	±0.10	±0.10	±0.10	±0.05

Quantity per reel : 1K pcs