APPROVAL SHEET

WQAC291A Series
WQAC291B Series
SMD Air Wound Coil Inductors
AEC-Q200

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Features

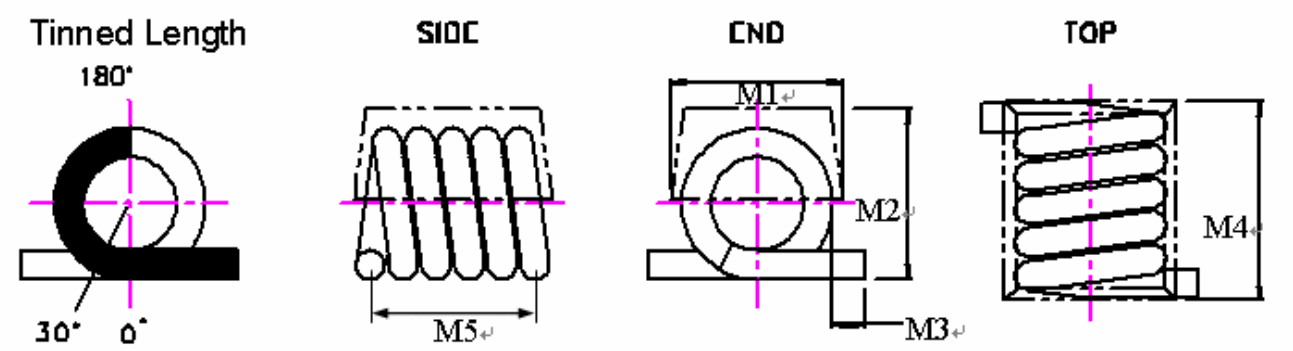
Acrylic jacket(WQAC291) provides a flat top for pick and place

1. Acrylic cap provides a flat top for pick and place mechine for high productive manufacture.
2. Excellent Q and SRF characteristics for RF application, escipally in subGHz band.
3. Narrow tolerance available for precise design requirements.
4. AEC-Q200

Applications

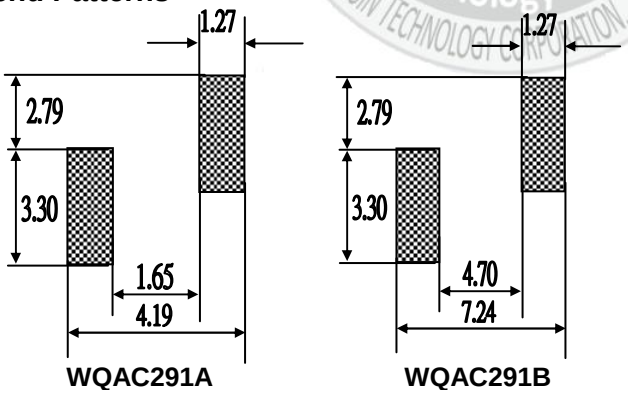
1. Communication system front-end circuit: GSM/3G/LTE, Wi-Fi, GPS.
2. Cabel/Terrestrial/BS Tuner, Bluetooth, Wireless Audio, Remote control.
3. M2M: ZigBee, Proprietary wilreless.
4. EMI solustion in high frequency circuits.
5. Automotive

Shape and Dimension

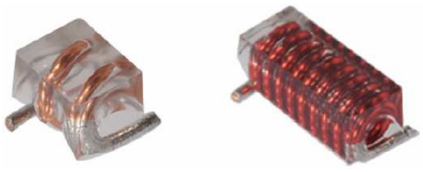


TINNED LENGTH BETWEEN 30° AND 180°

Recommend Patterns



WQAC291A **WQAC291B**



WQAC291A **WQAC291B**

Unit: mm

WQAC Series	M1	M2	M3	M4	M5
291A	3.05 (Max)	3.18 (Max)	0.58±0.38	3.68 (Max)	2.92±0.25
291B	3.05 (Max)	3.18 (Max)	0.58±0.38	6.86 (Max)	5.84±0.25

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Ordering Information

WQ	AC	291A	Z0	K	T01	P	B
Product Code WQ: Inductor AEC-Q200	**Series** Air wound coil inductor.	**Dimensions** 291A 291B	**Series Extension** Z0:STD	**Tolerance** G: ± 2% J: ± 5% K: ± 10%	**Turns** T01=1 Turns T03=3 Turns T10=10 Turns	**Packing Code** P=7" Reeled (Embossed reel)	B:STD

Electrical Characteristics

● WQAC291A series

Walsin Part Number	L(nH)	Tolerance	Turns	Q Min	Typical Q @ Frequency (MHz)	SRF Typical (GHz)	RDC Maximum (mΩ)	Rated Current (A)
WQAC291AZ0□T01PB	2.5	K	1	145	150	12.5	1.1	4.0
WQAC291AZ0□T02PB	5.0	G,J	2	140	150	6.5	1.8	4.0
WQAC291AZ0□T03PB	8.0	G,J	3	140	150	5.0	2.6	4.0
WQAC291AZ0□T04PB	12.5	G,J	4	137	150	3.3	3.4	4.0
WQAC291AZ0□T05PB	18.5	G,J	5	132	150	2.5	3.9	4.0

● WQAC291B series

Walsin Part Number	L(nH)	Tolerance	Turns	Q Min	Typical Q @ Frequency (MHz)	SRF Typical (GHz)	RDC Maximum (mΩ)	Rated Current (A)
WQAC291BZ0□T06PB	17.5	G,J	6	100	150	2.2	4.5	4.0
WQAC291BZ0□T07PB	22.0	G,J	7	102	150	2.1	5.2	4.0
WQAC291BZ0□T08PB	28.0	G,J	8	105	150	1.8	6.0	4.0
WQAC291BZ0□T09PB	35.5	G,J	9	112	150	1.5	6.8	4.0
WQAC291BZ0□T10PB	43.0	G,J	10	106	150	1.2	7.9	4.0

⊙ TOLERANCE：G＝±2%、J＝±5%、K＝±10%
⊙ L AND Q MEASURED AN AGILENT 4291B IMPEDANCE ANALYZER WITH AN AGILENT/HP16193A TEST FIXTURE.
⊙ SRF MEASURED USING AN AGILENT/HP 5071C NETWORK ANALYZER AND A PDC TEST FIXTURE.
⊙ DCR MESASURED USING A MICRO-OHMMETER.
⊙ CURRENT THAT CAUSES A 15℃ TEMPERATURE RISE FROM 25℃ AMBIENT.
⊙ ELECTRICAL SPECIFICATIONS AT 25℃.
⊙ OPERATING TEMPERATURE : -40℃ ~ +150℃
⊙ STORAGE TEMPERATURE COMPONENT: –40℃ to +100℃. TAPE AND REEL PACKAGIN G: –40℃ to +80℃.
⊙ MEAN TIME BETWEEN FAILURES (MTBF) 1 BILLION HOURS
⊙ MOISTURE SENSITIVITY LEVEL (MSL) 1 (UNLIMITED FLOOR LIFE AT < 30℃ / 85% RELATIVE HUMIDITY)
⊙ GRAPHIC IS ONLY FOR DIMENSIONALLY APPLICATION.
⊙ THIS IS A RoHS AND REACH COMPLLIANT PRODUCT WHOSE RELATED DOCUMENTSS ARE AVAILABLE ON REQUEST.

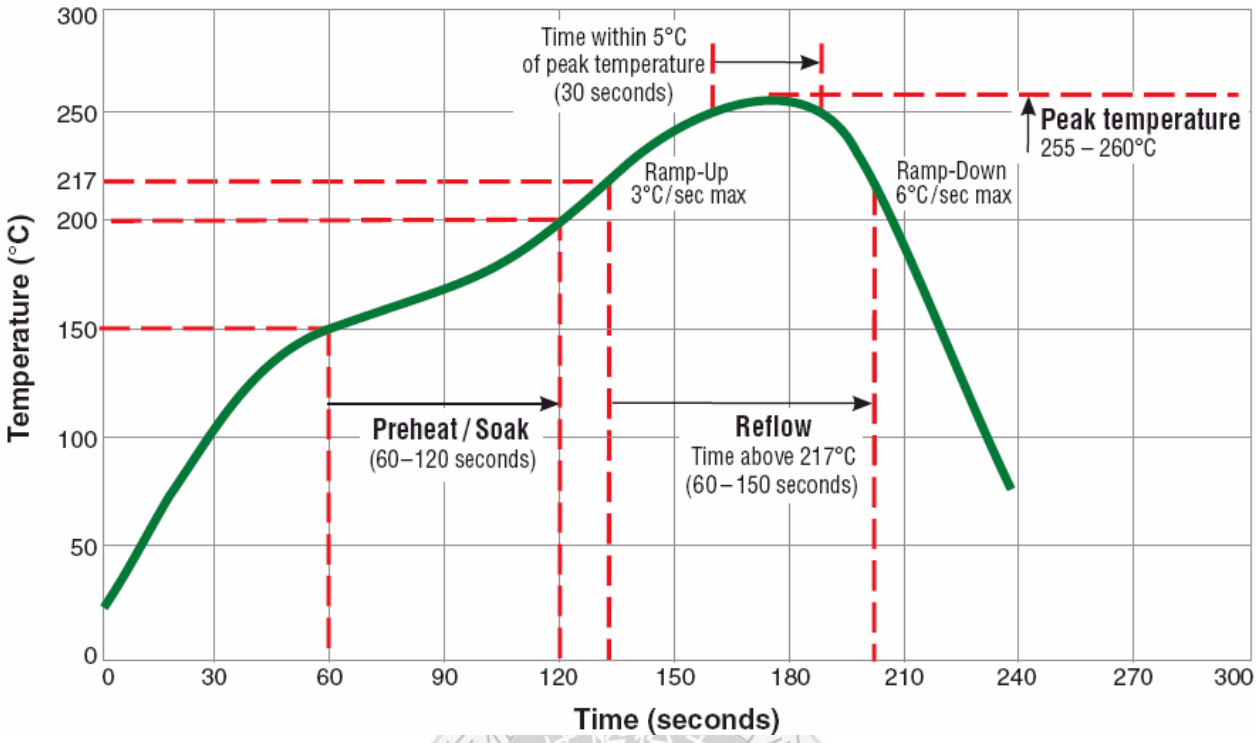
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RELIABILITY PERFORMANCE

Test Item	Test Condition	Standard Source
High Temperature Exposure (Storage)	1000 hrs. at rated operating temperature (e.g. 125°C part can be stored for 1000 hrs. @ 125℃. Same applies for 105℃ and 85℃. Unpowered. Measurement at 24±4 hours after test conclusion.	MIL-STD-202 Method 108
Temperature Cycling	1000 cycles (-40℃ to +125℃). Note: If 85℃ part o r 105℃ part the 1000 cycles will be at that temperature. Measurement at 24±4 hours after test conclusion. 30min maximum dwell time at each temperature extreme. 1 min. maximum transition time.	JESD22 Method JA-104
Biased Humidity	1000 hours 85℃/85%RH. Unpowered. Measurement at 24±4 hours after test conclusion.	MIL-STD-202 Method 103
Operational Life	1000 hrs. @ 105℃. If 85℃ or 125℃ part will be tested at that temperature. Measurement at 24±4 hours after test conclusion.	MIL-PRF-27
Mechanical Shock	Method 213. Condition C, Peak Value: 100g's, Duration: 6ms, Waveform: Half-sine Velocity Change: 12.3ft/sec	MIL-STD-202 Method 213
Vibration	5g's for 20 minutes, 12 cycles each of 3 orientations. Note: Use 8"X5" PCB, .031" thick, 7 secure points on one long side and 2 secure points at corners of opposite sides. Parts mounted within 2" from any secure point. Test from 10-2000 Hz.	MIL-STD-202 Method 204
Resistance to Soldering Heat	Condition B No pre-heat of samples. Note: Single Wave Solder - Procedure 2 for SMD and Procedure 1 for Leaded with solder within 1.5mm of device body.	MIL-STD-202 Method 210
ESD	Passive Component Human Body Model (HBM) Electrostatic Discharge (ESD) Test. Only direct contact discharge, record the voltage value what the sample can pass.	AEC-Q200-002 Or ISO/DIS10605
Solderability	For both Leaded & SMD. Electrical Test not required. Magnification 50X. Conditions: Leaded: Method A @ 235℃, category 3. SMD: a) Method B, 4 hrs @ 155℃ dry heat @ 235℃ b) Method B @ 215℃ category 3. c) Method D category 3 @ 260℃.	J-STD-002
Flammability	V-0 or V-1 Acceptable	UL-94
Board Flex	60 sec minimum holding time.	AEC-Q200-005
Terminal Strength (SMD)	Force of 1.8kg for 60 seconds.	AEC-Q200-006

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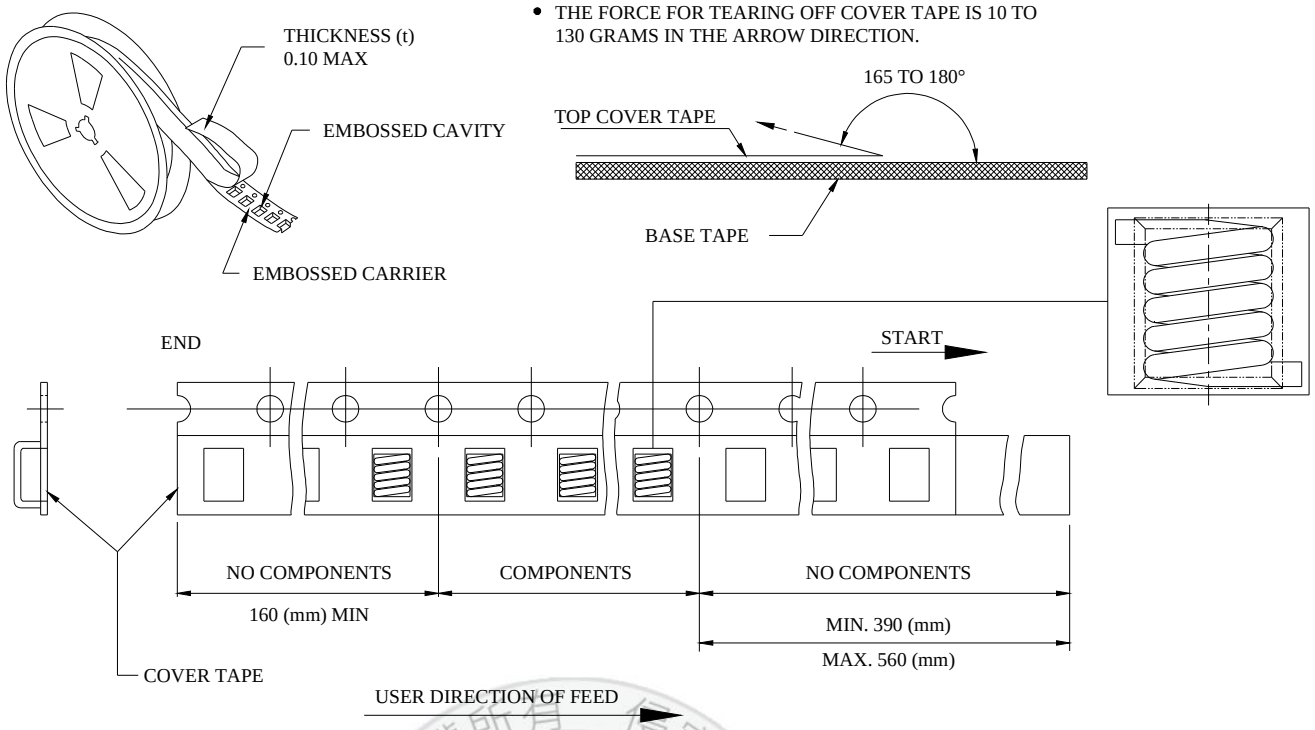
Typical RoHS Reflow Profile



PSA
PASSIVE SYSTEM ALLIANCE
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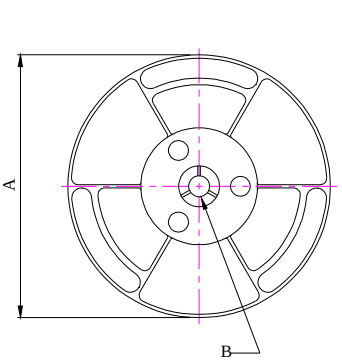
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Packaging Specification

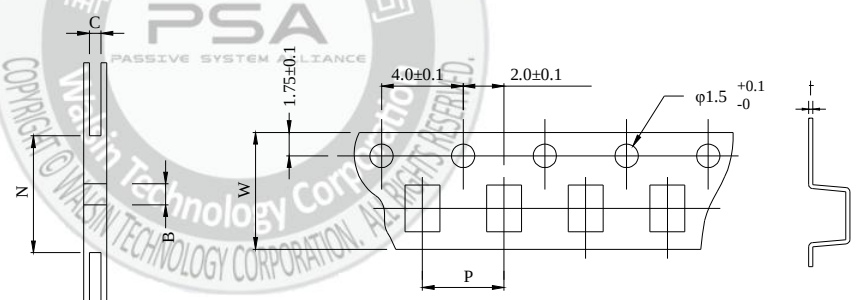


■ CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC



■ DIMENSIONS OF CARRIER TAPE (mm)



UNIT:mm

291A	A	B	C	D	N	P	W	t
DIM.	178	15	12.5	16.4	75	8	12	0.25
TOL.	±2.0	±0.5	+1.5-0	+1.5-0	±2.0	±0.1	±0.2	±0.05

291B	A	B	C	D	N	P	W	t
DIM.	178	15	16.5	20.4	75	8	16	0.25
TOL.	±2.0	±0.5	+1.5/-0	+1.5/-0	±2.0	±0.1	±0.2	±0.05

Quantity per reel：500 pcs

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