APPROVAL SHEET

WQCW4532
SMD Wire Wound Ceramic Chip Inductors
AEC-Q200

RoHS COMPLIANT

Pb Pb-Free

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

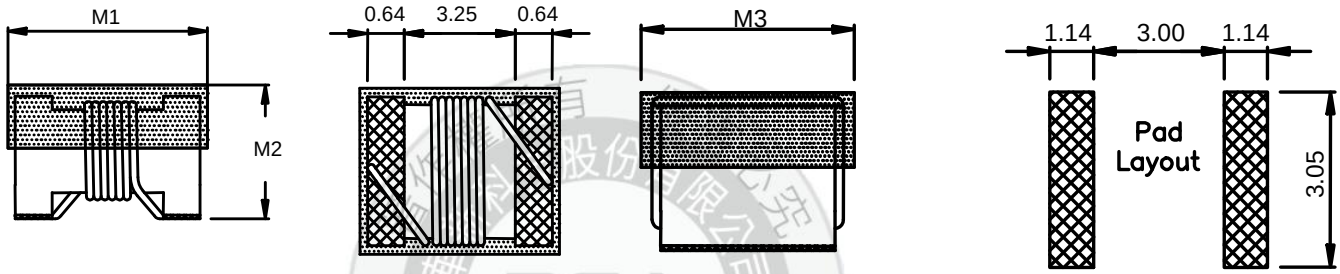
Features

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.
5. AEC-Q200

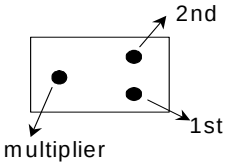
Applications

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

Shape and Dimension



Unit: mm



COLOR CODE

Example : WQCW4532Z0□R18PB

MARKING : Dots 1 and 2 indicate the inductance in nano Henries.
Example: DOTS 1：Brown=>1，DOTS 2：Gray=>8
Dots 3 indicates multiplier. Brown=>10*10¹

WQCW Series	M1	M2	M3
4532	4.55±0.40	3.23±0.20	3.61±0.20

Ordering Information

WQ	CW	4532	Z0	G	R18	P	B
Product Code WQ: Inductor AEC-Q200	**Series** SMD Wire Wound Ceramic Chip inductor.	**Dimensions** 4532 :EIA 1812	**Series extension** Z0:STD	**Tolerance** G: ± 2%	**Value** 82N = 82nH R18 =180nH 1R2 =1200nH	**Packing Code** P=7" Reeled (Embossed tape)	B:STD

Electrical Characteristics

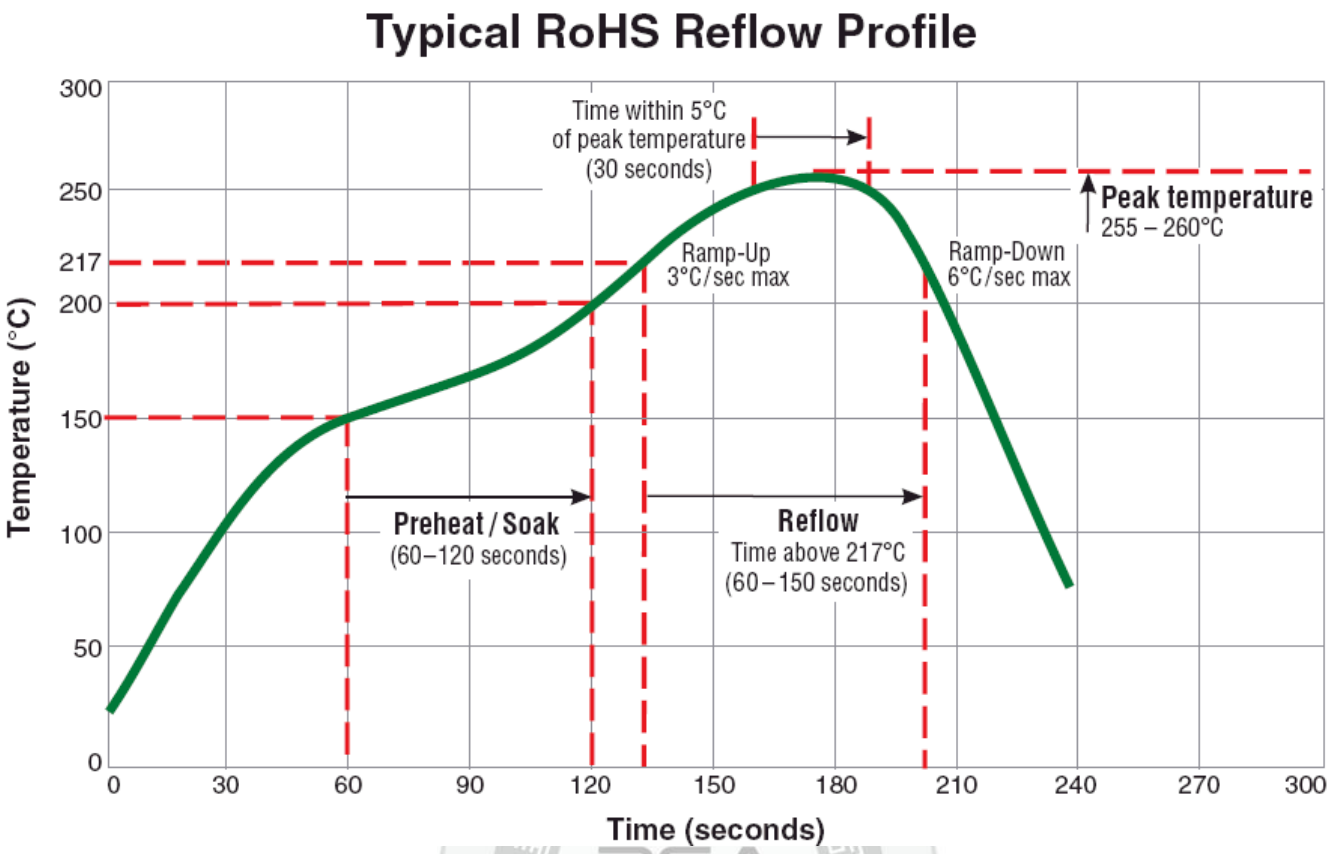
Walsin Part Number	L (nH) @50MHz	Tolerance	Q @50MHz Typical	SRF MHz Min.	DCR mOHM Max.	Irms (mA)	Color Code		
							1st	2nd	multiplier
WQCW4532Z0□82NPB	82	G	70	800	60	1500	Gray	Red	Black
WQCW4532Z0□R10PB	100	G	70	850	110	1150	Brown	Black	Brown
WQCW4532Z0□R12PB	120	G	70	800	110	1150	Brown	Red	Brown
WQCW4532Z0□R15PB	150	G	75	860	110	1150	Brown	Green	Brown
WQCW4532Z0□R18PB	180	G	80	850	110	1150	Brown	Gray	Brown
WQCW4532Z0□R22PB	220	G	80	700	105	940	Red	Red	Brown
WQCW4532Z0□R27PB	270	G	85	730	120	940	Red	Violet	Brown
WQCW4532Z0□R33PB	330	G	80	600	135	850	Orange	Orange	Brown
WQCW4532Z0□R39PB	390	G	80	600	140	850	Orange	White	Brown
WQCW4532Z0□1R2PB	1200	G	62	230	1200	480	Brown	Red	Red

- TOLERANCE：G = ±2%
- 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.

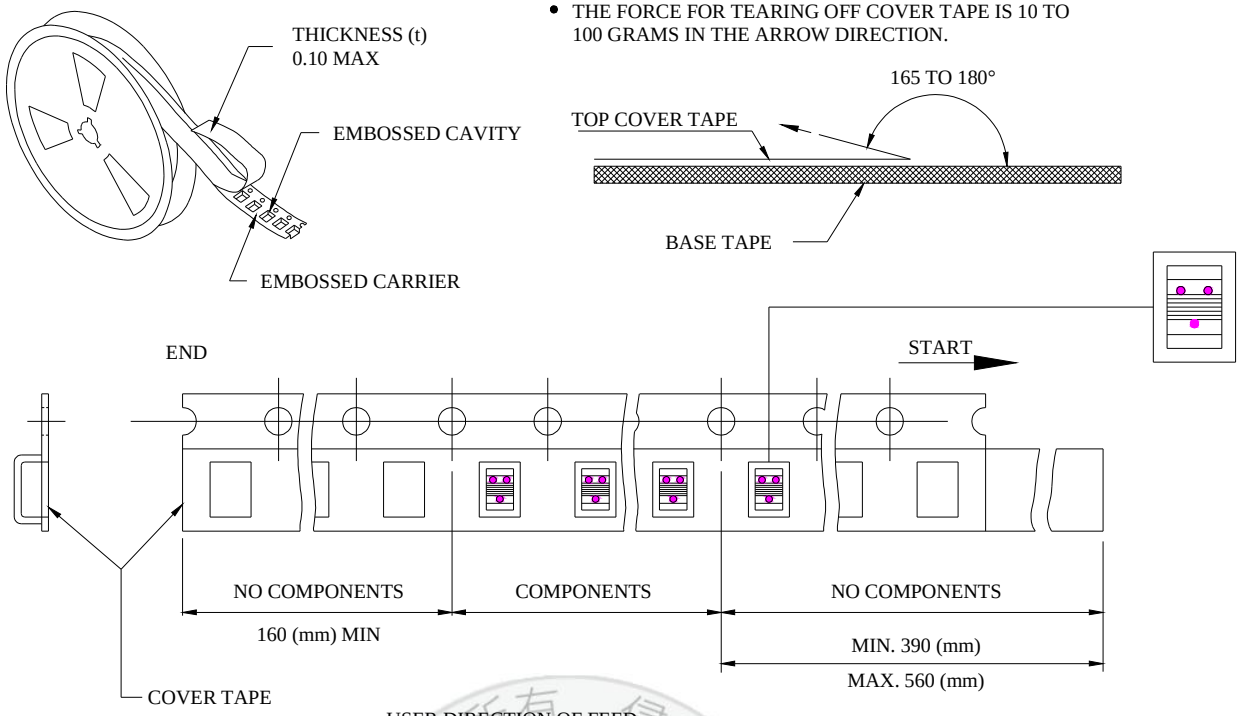
RELIABILITY PERFORMANCE

Test Item	Test Condition	Standard Source
High Temperature Exposure (Storage)	1000 hours. at rated operating temperature (e.g. 125℃ 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 hours. 105℃. If 85℃ or 125℃ part will be te sted 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

Typical RoHS Reflow Profile

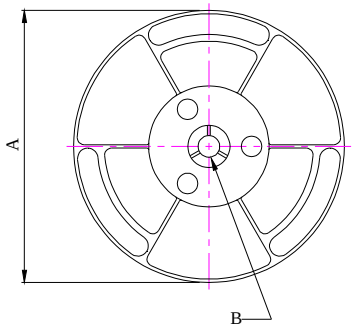


Packaging Specification

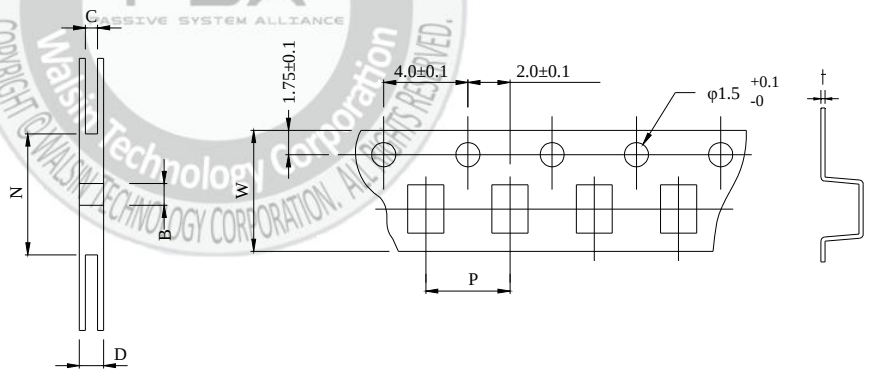


■ CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC



■ DIMENSIONS OF CARRIER TAPE (mm)



	A	B	C	D	N	P	W	t
DIM.	178	13.0	12.5	16.4	50	8.0	12.0	0.25
TOL.	MAX.	+0.5–0.2	+1.5–0	+1.5–0	MIN.	±0.1	±0.2	±0.05

Quantity per reel：0.6K pcs