PSA 佳邦科技股份有限公司
INPAQ TECHNOLOGY CO., LTD.

WCA4532CP Series
Data Sheet

Product Name	WCA4532CP Series
Series	Chip Inductor
Size	EIAJ 4532
Version	A0

1. SCOPE:

1.1. Ceramic core wire wound construction.

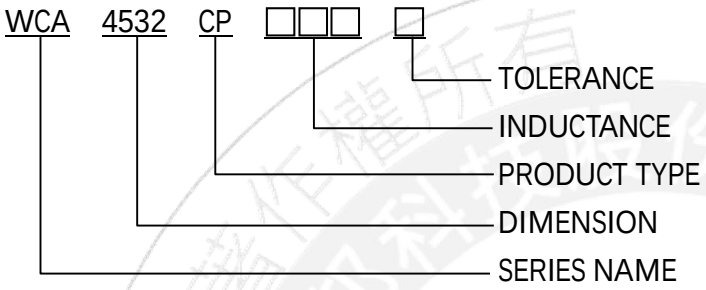
1.2. High Reliability due to wire wound type construction.

1.3. Inductance values from 82 to 1200 nH.

1.4. Exceptional Q and high SRF special for high frequency applications.

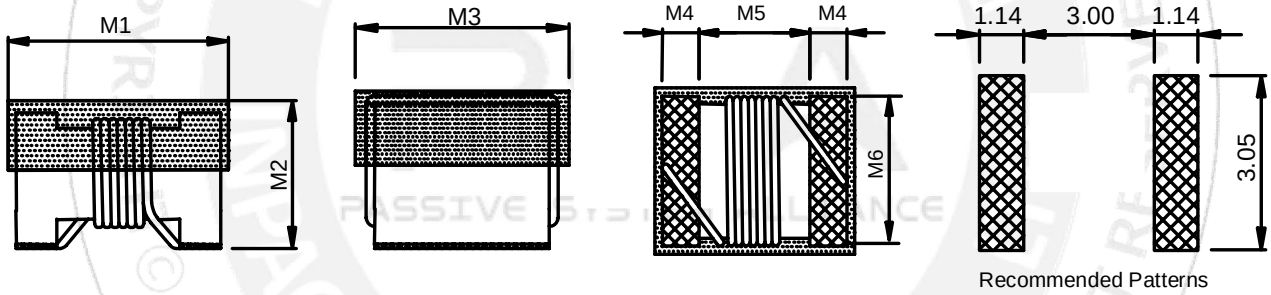
1.5. High reliability tests comply with AEC-Q200.

2. PART NUMBER IDENTIFICATION



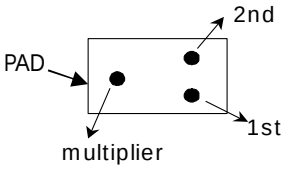
3. MECHANICAL DIMENSION

UNIT:mm



Series	M1	M2	M3	M4	M5	M6
WCA4532CP	4.95 MAX.	3.43 MAX.	3.81 MAX.	0.58±0.1	3.25±0.1	2.90±0.1

4. MARKING



COLOR CODE

Marking Direction: PAD on the left and right sides, color code 1st and 2nd on the right, color code 3 multiplier on the left.

Example : WCA4532CPR18G

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=>$10*10^1$

MARK COLOR CODE IN COMPOSITE ELECTRICAL SPECIFICATION.

5. ELECTRICAL SPECIFICATION

Part number	Inductance (nH) @50MHz	Inductance Tolerance	Q @50MHz TYP.	SRF (MHz) MIN.	DC Resistance (mΩ) MAX.	Irms (mA)	COLOR CODE		
							1st	2nd	multiplier
WCA4532CP82NG	82	G	70	800	60	1500	Gray	Red	Black
WCA4532CPR10G	100	G	70	850	110	1150	Brown	Black	Brown
WCA4532CPR12G	120	G	70	800	110	1150	Brown	Red	Brown
WCA4532CPR15G	150	G	75	860	110	1150	Brown	Green	Brown
WCA4532CPR18G	180	G	80	850	110	1150	Brown	Gray	Brown
WCA4532CPR22G	220	G	80	700	105	940	Red	Red	Brown
WCA4532CPR27G	270	G	85	730	120	940	Red	Violet	Brown
WCA4532CPR33G	330	G	80	600	135	850	Orange	Orange	Brown
WCA4532CPR39G	390	G	80	600	140	850	Orange	White	Brown
WCA4532CP1R2G	1200	G	62	230	1200	480	Brown	Red	Red

PASSIVE SYSTEM ALLIANCE
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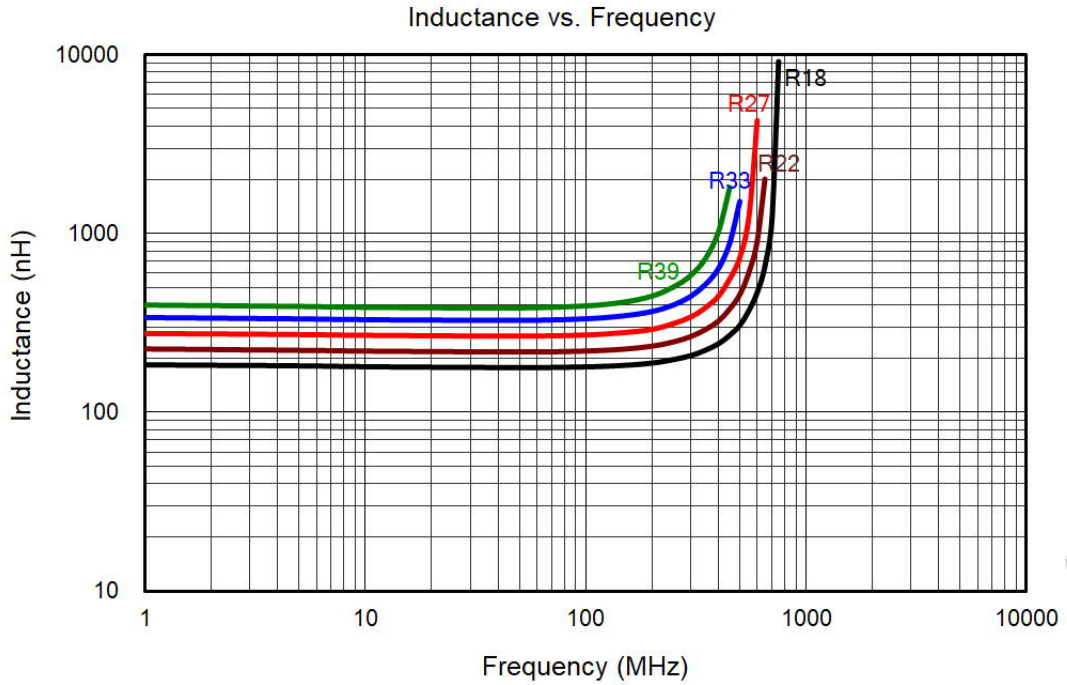
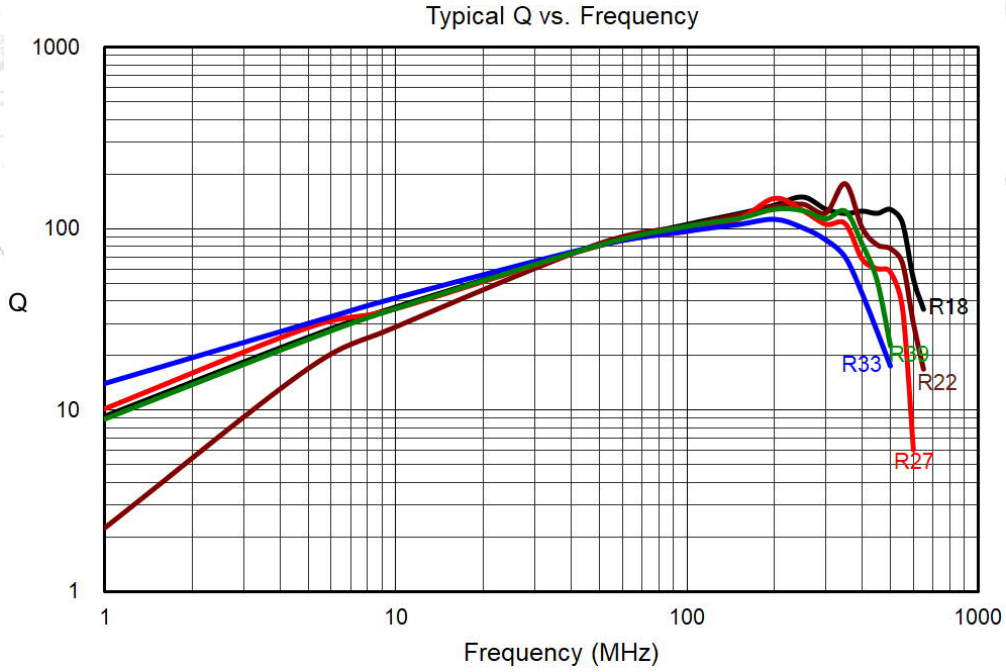
6. ELECTRICAL CURVE

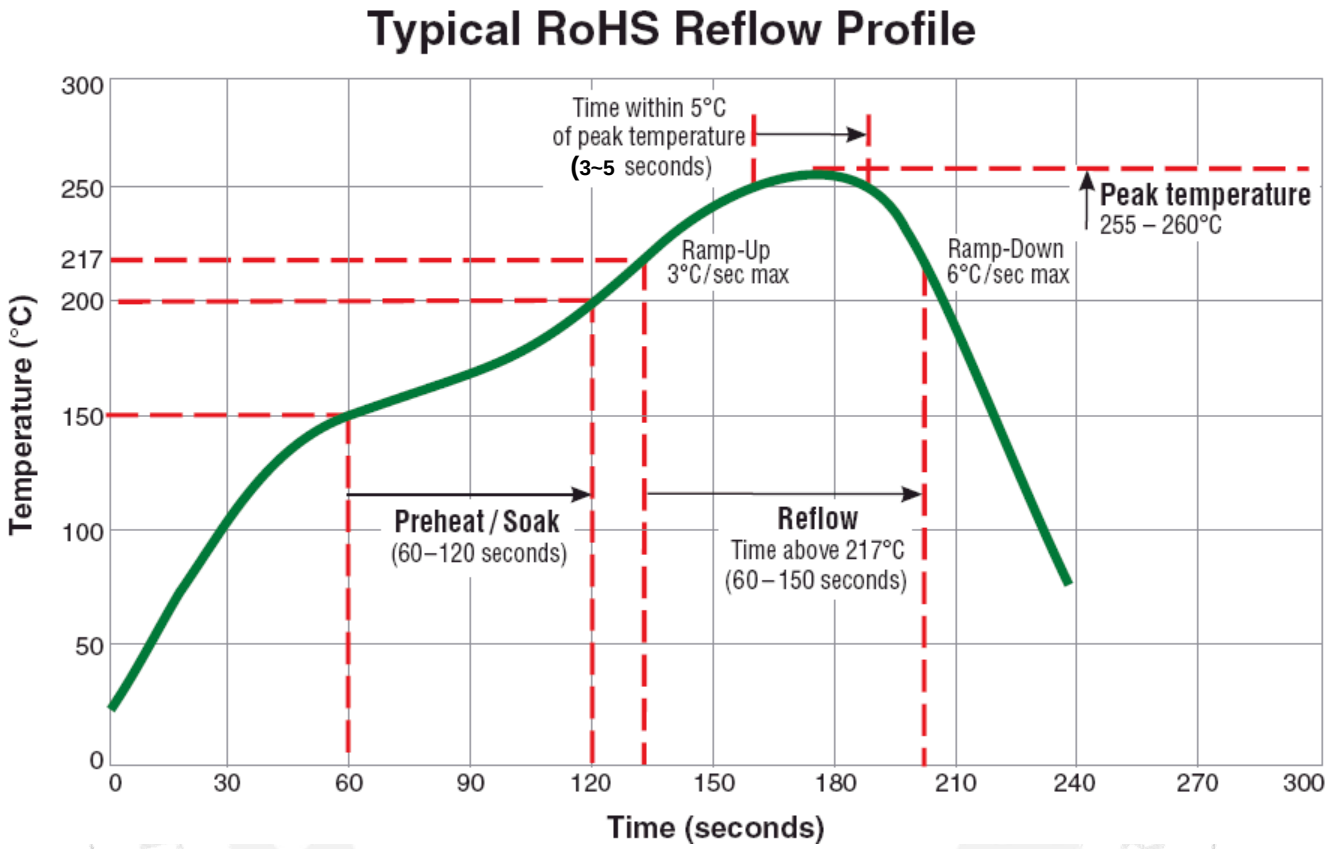




7. RELIABILITY PERFORMANCE

Test Item	Accept criteria	Test Condition	Standard Source
High Temperature Exposure (Storage)	1.Change from an initial value L:within±5% 2.no visible damage.	1000 hrs. at rated operating temperature (e.g. 125°C part can be stored for 1000 hrs. @ 125°C. Same applies for 105°C and 85°C. Unpowered. Measurement at 24±4 hours after test conclusion.	AEC-Q200 RevD Table 5
Temperature Cycling	1.Change from an initial value L:within±5% 2.no visible damage.	1000 cycles (-40°C to +125°C). Note: If 85°C part or 105°C 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.	AEC-Q200 RevD Table 5
Biased Humidity	1.Change from an initial value L:within±5% 2.no visible damage.	1000 hours 85°C/85%RH. Unpowered. Measurement at 24±4 hours after test conclusion.	AEC-Q200 RevD Table 5
Operational Life	1.Change from an initial value L:within±5% 2.no visible damage.	1000 hrs. @ 105°C. If 85°C or 125°C part will be tested at that temperature. Measurement at 24±4 hours after test conclusion.	AEC-Q200 RevD Table 5
Mechanical Shock	1.Change from an initial value L:within±5% 2.no visible damage.	Peak Value: 100g's, Duration: 6ms, Waveform: Half-sine Velocity Change: 12.3ft/sec.	MIL-STD-202 Method 213 Condition C
Vibration	1.Change from an initial value L:within±5% 2.no visible damage.	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.	AEC-Q200 RevD Table 5
Resistance to Soldering Heat	1.no visible damage.	Condition K: Reflow temp:250±5℃, Peak time: 30±5sec, Temp ramp: 1°C/s-4°C/s; time above 183°C, 90 s - 120 s, Cycles: 3.	MIL-STD-202 Method 210
ESD	1.Change from an initial value L:within±5% 2.no visible damage.	Passive Component Human Body Model (HBM) direct contact discharge 8KV.	AEC-Q200-002 Or ISO/DIS10605
Solder ability	1. Lead must have 95% above coverage.	SMD: a) Method B, 4hrs@155℃ dry heat, @235℃	AEC-Q200 RevD Table 5
Flammability	1.Meet UL-94 V0 or V1 request	V-0 or V-1 Acceptable.	UL-94
Board Flex	1.Change from an initial value L:within±5% 2.no visible damage.	100mmX40mm board mechanical means to apply a force which will bend the board (D) x = 2 mm minimum, applied forces shall be 60 (+ 5) Sec.	AEC-Q200-005
Terminal Strength (SMD)	1.Component can't drop 2.no visible damage.	1.8Kg force, applied for 60 second.	AEC-Q200-006

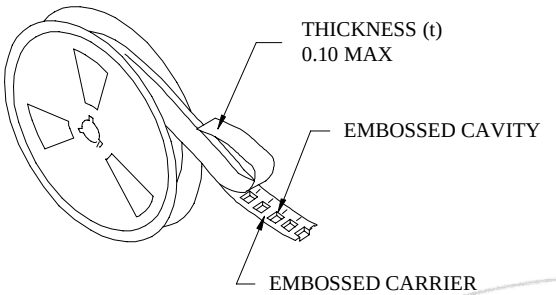
8. REFLOW CHART



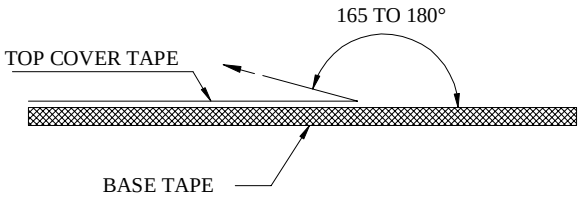
9. NOTE

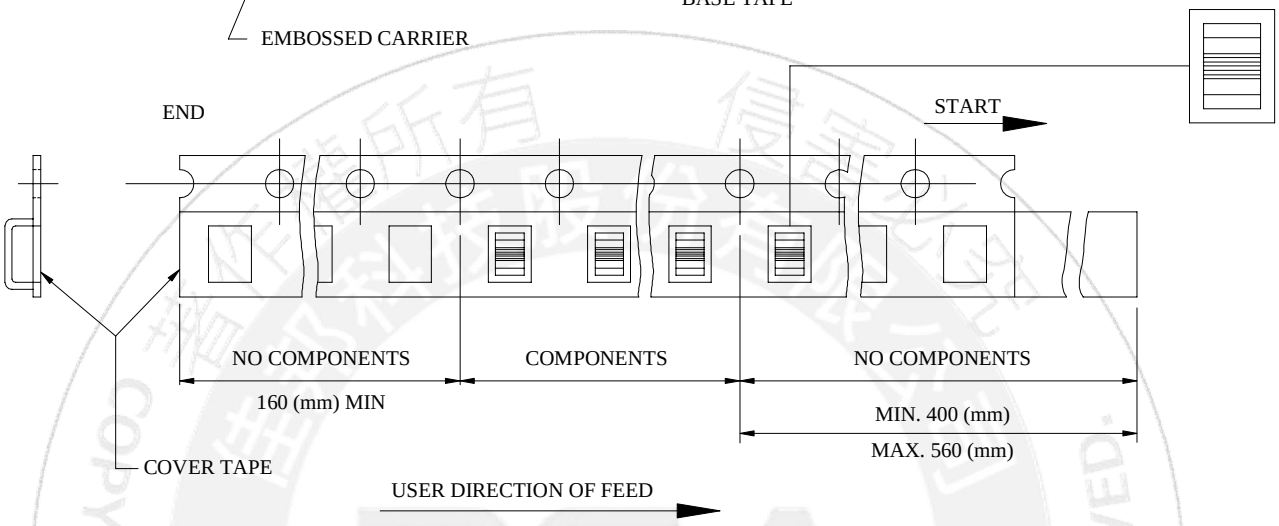
- TOLERANCE: G = ±2%
- INDUCTANCE AND Q MEASURED AN KEYSIGHT HP4991B OR EQUIVALENT.
- SRF MEASURED USING AN KEYSIGHT 5071C NETWORK ANALYZER AND A INPAQ TEST FIXTURE OR EQUIVALENT.
- DC RESISTANCE MESASURED USING A MICRO-OHM METER.
- CURRENT THAT CAUSES A 15°C TEMPERATURE RISE FROM 25°C AMBIENT.
- ELECTRICAL SPECIFICATIONS AT 25°C.
- OPERATING TEMPERATURE RANGE : -40°C TO +125°C.
- STORAGE TEMPERATURE RANGE:COMPONENT: -40°C TO +125°C.
  TAPE AND REEL PACKAGING: -40°C TO +80°C.
- MEAN TIME BETWEEN FAILURES (MTBF) 1 BILLION HOURS.
- MOISTURE SENSITIVITY LEVEL (MSL) 1 (UNLIMITED FLOOR LIFE AT < 30°C / 85% RELATIVE HUMIDITY).
- GRAPHIC IS ONLY FOR DIMENSIONALLY APPLICATION.
- THIS IS A RoHS AND REACH COMPLLIANT PRODUCT WHOSE RELATED DOCUMENTSS ARE AVAILABLE ON REQUEST.

10. PACKING



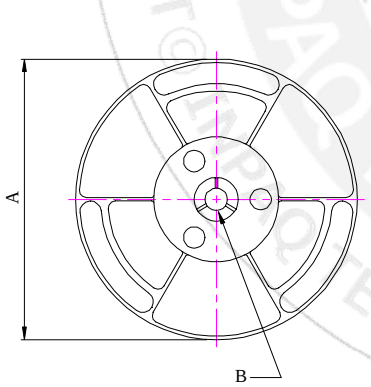
* THE FORCE FOR TEARING OFF COVER TAPE IS 10 TO 100 GRAMS IN THE ARROW DIRECTION.



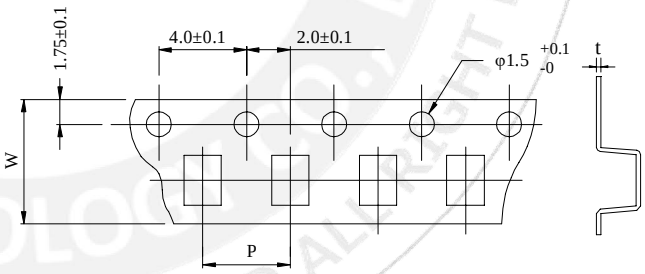


■ CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC



■ DIMENSIONS OF CARRIER TAPE (mm)



UNIT: 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 : 600 Pcs/Reel