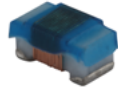


# WCLA1608V1

## Automotive grade wire wound chip inductor



### Product features

- AEC-Q200 qualified
- 0603 (1608 metric) package
- High Q value
- Tight inductance tolerance
- Inductance range from 1.6 nH to 470 nH
- Moisture sensitivity level (MSL): 1

### Applications

- ADAS
- Infotainment
- Wireless communications
- Wifi, bluetooth, satellite
- Antenna tuning
- On board computer

### Environmental data

- Operating temperature range: -40 °C to +125 °C (ambient plus self-temperature rise)



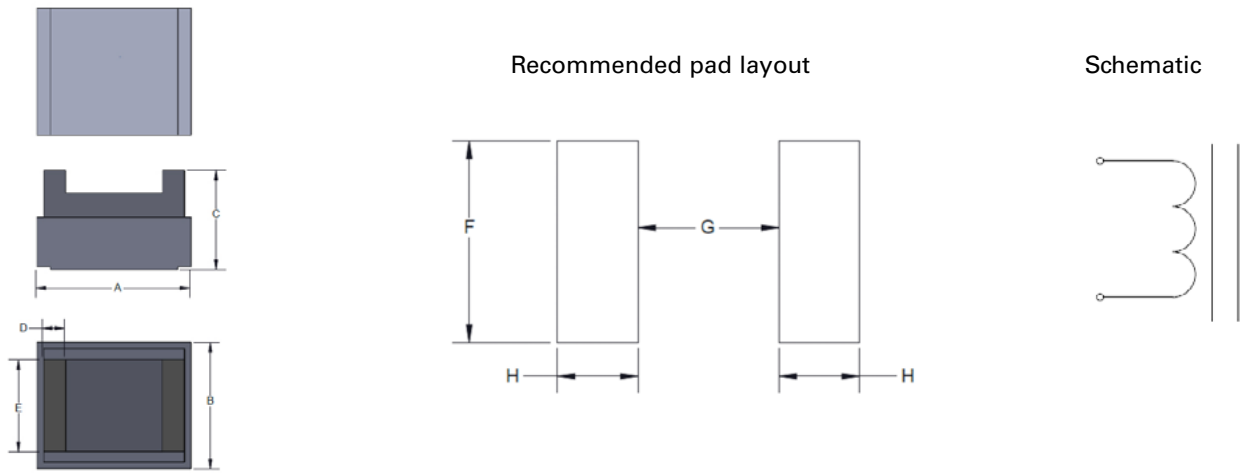
**Product specifications**

Part number	OCL Tolerance (%)	OCL (nH)	OCL Test frequency (MHz)	Q minimum	Q Test frequency (MHz)	DCR@ (Ω) @ +25 °C maximum	Test voltage (mV)	SRF (MHz) minimum	I Rated (mA)
WCLA1608V1-1R6-R	±10	1.6	250	18	250	0.04	500	12500	700
WCLA1608V1-1R8-R	±10	1.8	250	16	250	0.045	500	12500	700
WCLA1608V1-2R2-R	±10	2.2	250	12	250	0.09	500	10000	700
WCLA1608V1-3R3-R	±10	3.3	250	20	250	0.075	500	5900	700
WCLA1608V1-3R9-R	±5	3.9	250	22	250	0.08	500	6900	700
WCLA1608V1-4R7-R	±5	4.7	250	20	250	0.116	500	5800	700
WCLA1608V1-5R6-R	±10	5.6	250	18	250	0.2	500	5700	700
WCLA1608V1-6R8-R	±5	6.8	250	27	250	0.11	500	5800	700
WCLA1608V1-7R5-R	±5	7.5	250	28	250	0.11	500	4800	700
WCLA1608V1-8R2-R	±5	8.2	250	28	250	0.12	500	4700	700
WCLA1608V1-100-R	±5	10	250	31	250	0.13	500	4800	700
WCLA1608V1-120-R	±5	12	250	35	250	0.13	500	4000	700
WCLA1608V1-150-R	±5	15	250	30	250	0.15	500	4000	700
WCLA1608V1-180-R	±5	18	250	35	250	0.17	500	3100	700
WCLA1608V1-220-R	±5	22	250	38	250	0.19	500	3000	700
WCLA1608V1-270-R	±5	27	250	36	250	0.22	500	2800	600
WCLA1608V1-330-R	±5	33	250	36	250	0.22	500	2300	600
WCLA1608V1-390-R	±5	39	250	40	250	0.25	500	2200	600
WCLA1608V1-470-R	±5	47	200	36	200	0.28	500	2000	600
WCLA1608V1-560-R	±5	56	200	38	200	0.28	500	1900	600
WCLA1608V1-680-R	±5	68	200	36	200	0.34	500	1700	600
WCLA1608V1-820-R	±5	82	150	34	150	0.55	500	1700	400
WCLA1608V1-101-R	±5	100	150	30	150	0.63	500	1400	400
WCLA1608V1-121-R	±5	120	150	32	150	0.73	500	1300	300
WCLA1608V1-151-R	±5	150	150	28	150	0.8	500	990	280
WCLA1608V1-181-R	±5	180	100	25	100	1.45	500	990	240
WCLA1608V1-221-R	±5	220	100	25	100	2.1	500	900	200
WCLA1608V1-271-R	±5	270	100	24	100	2.3	500	900	170
WCLA1608V1-331-R	±5	330	100	25	100	3.89	500	900	100
WCLA1608V1-391-R	±5	390	100	25	100	4.35	500	800	100
WCLA1608V1-471-R	±5	470	100	25	100	7	500	700	75

1. Test voltage is for open circuit inductance (OCL) and Q at +25 °C
2. Rated I: When rated I is applied to the product, self-temperature rise will be 20 °C or less.

3. Part Number Definition: WCLA1608V1-xxx-R  
WCLA1608V1 = Product code and size  
xxx= inductance value in nH, R= decimal point,  
If no R is present then last character equals number of zeros  
-R suffix = RoHS compliant

**Dimensions (mm)**

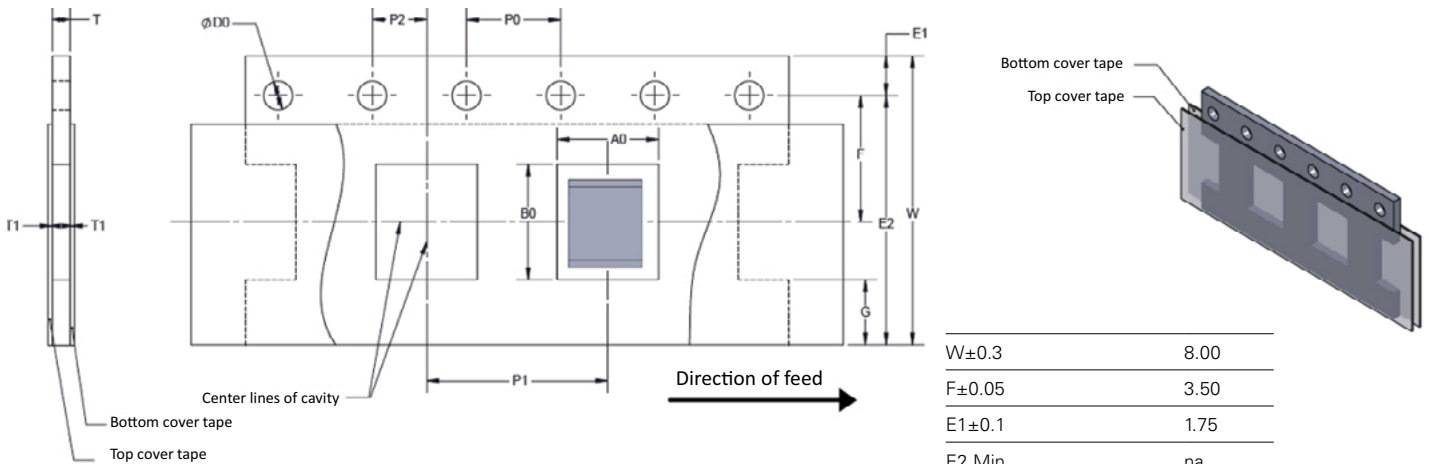


Part Number	A	B	C	D	E	F	G	H
WCLA1608V1-xxx-R	1.78 max	1.10 max	0.95 max	0.30 ref	0.76 ref	1.02 ref	0.64 ref	0.64 ref

Park marking: No marking  
 All soldering surfaces to be coplanar within 0.1 millimeters  
 Tolerances are  $\pm 0.1$  millimeters unless stated otherwise  
 Pad layout dimensions are reference only  
 Traces or vias underneath the inductor is not recommended

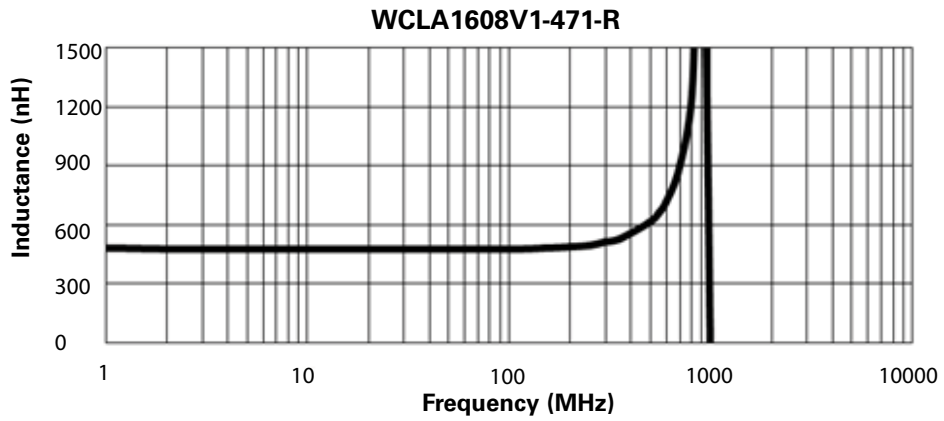
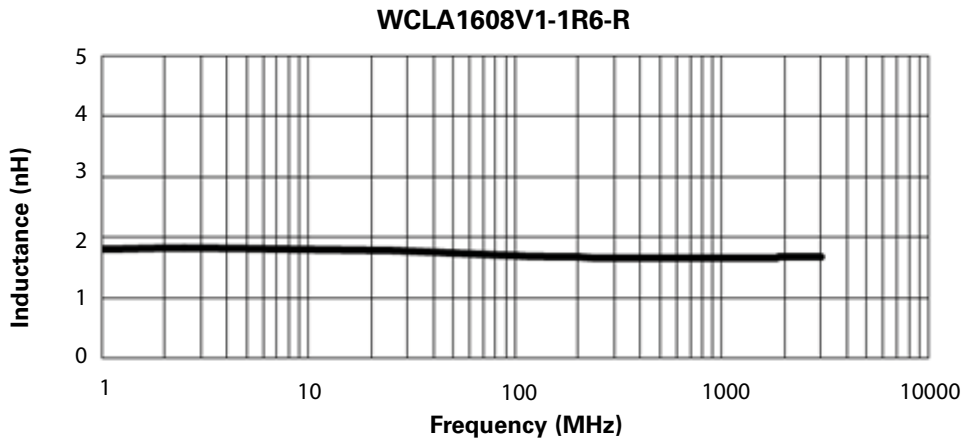
**Packaging information (mm)**

Drawing not to scale  
 Supplied in tape and reel packaging, 4000 parts per 7" diameter reel

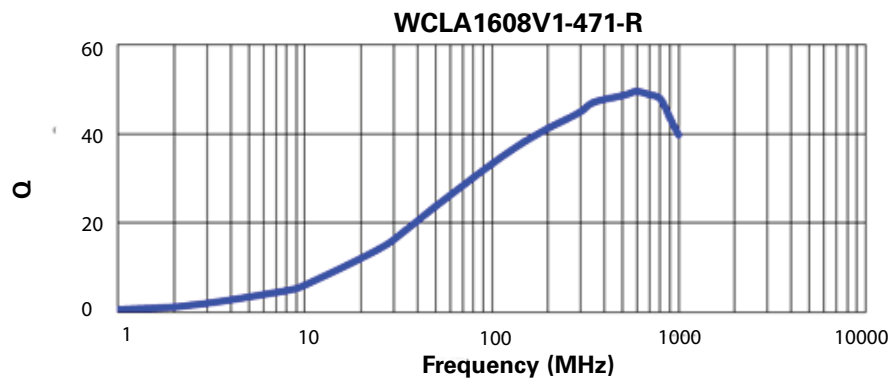
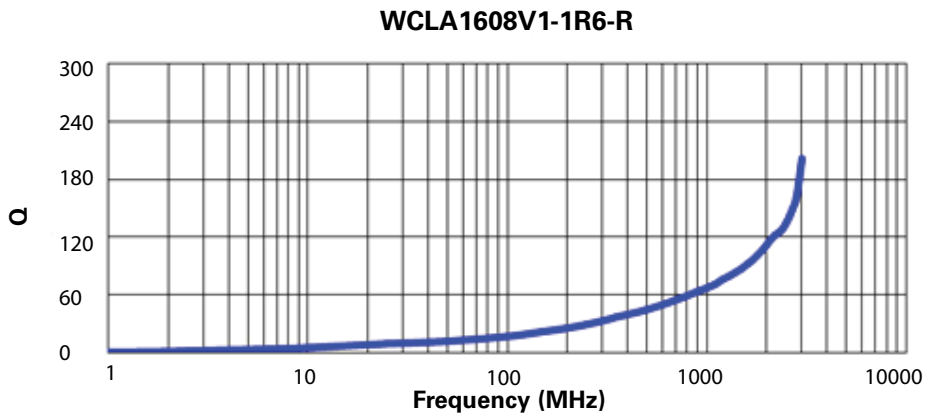


W $\pm 0.3$	8.00
F $\pm 0.05$	3.50
E1 $\pm 0.1$	1.75
E2 Min	na
P0 $\pm 0.1$	4.00
P1 $\pm 0.05$	4.00
P2 $\pm 0.05$	2.00
D0 $+0.1-0.0$	1.55
A0	1.20
B0	1.85
T	1.0
T1	na

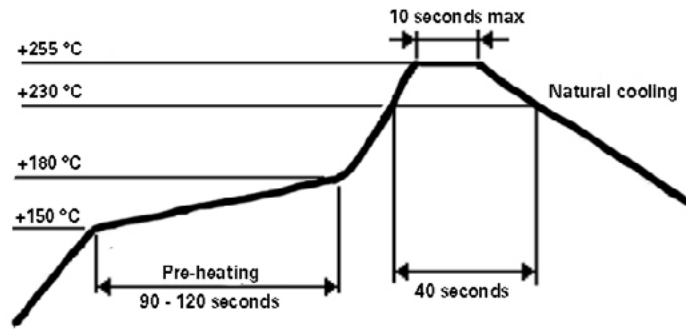
**Inductance vs frequency**



**Q vs frequency**



**Solder reflow profile**



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