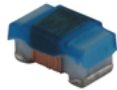


WCLA1608V1

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)



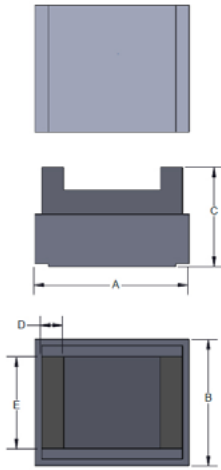
Product specifications

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

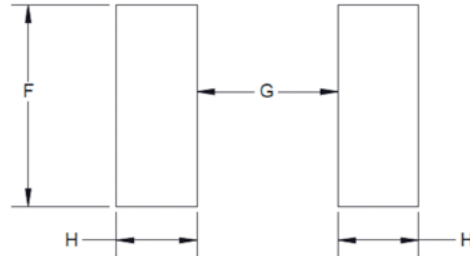
1. Test voltage is for open circuit inductance (OCL) and Q at +25 °C
2. Rated I: When rated I is applied to the product, self-temperature rise will be 20 °C or less.

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

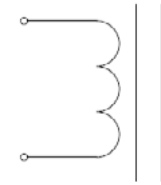
Dimensions (mm)



Recommended pad layout



Schematic



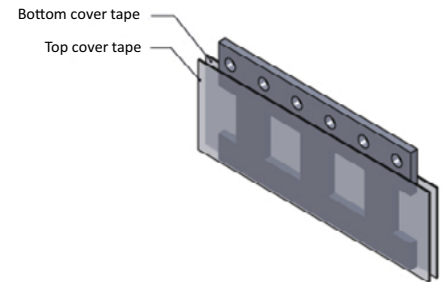
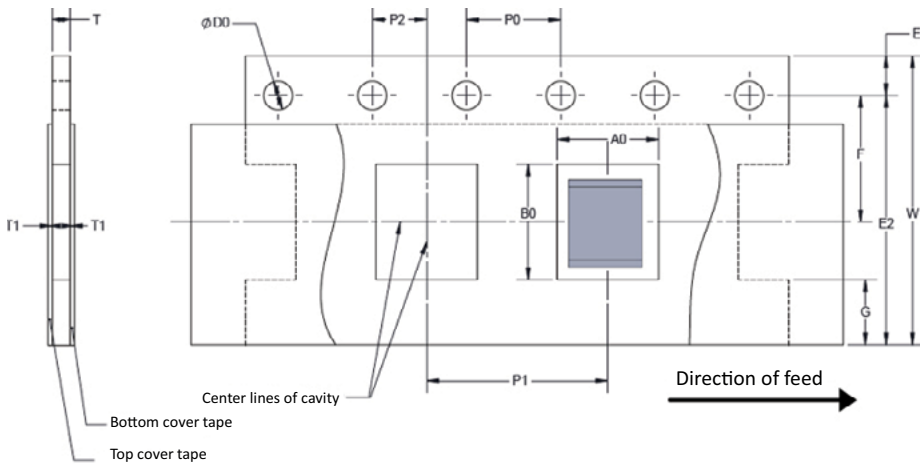
Part Number	A	B	C	D	E	F	G	H
WCLA1608V1-xxx-R	1.78 max	1.10 max	0.95 max	0.30 ref	0.76 ref	1.02 ref	0.64 ref	0.64 ref

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

Packaging information (mm)

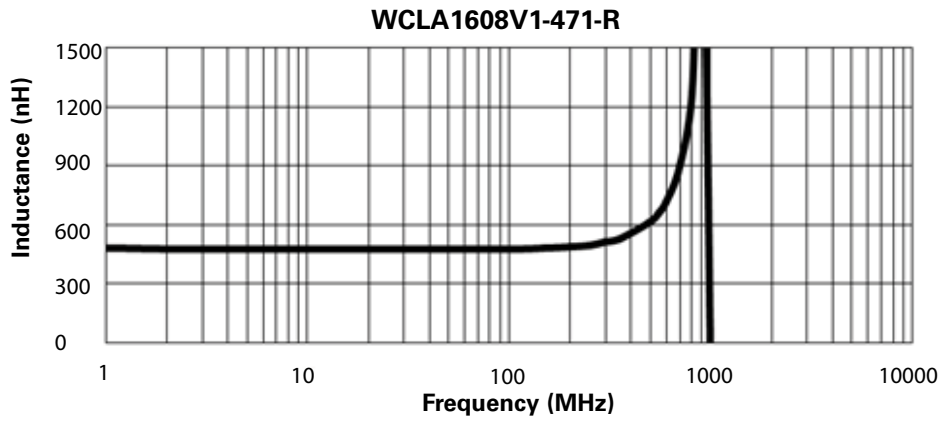
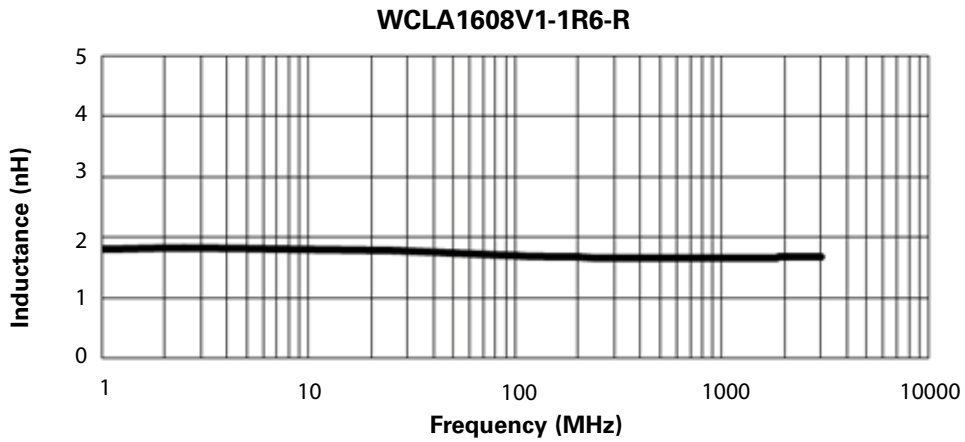
Drawing not to scale

Supplied in tape and reel packaging, 4000 parts per 7" diameter reel

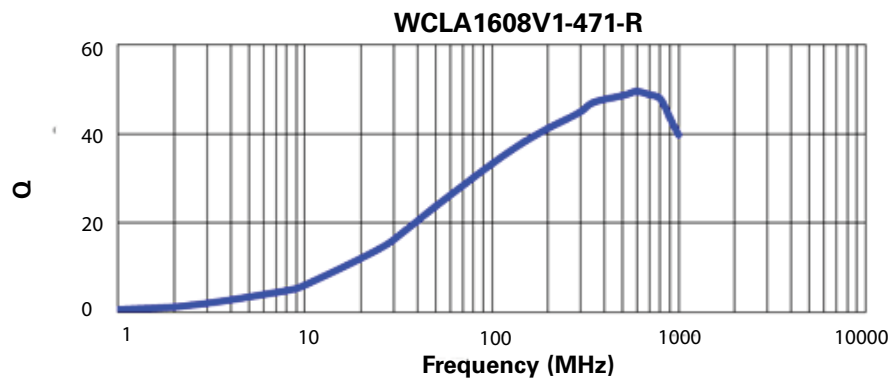
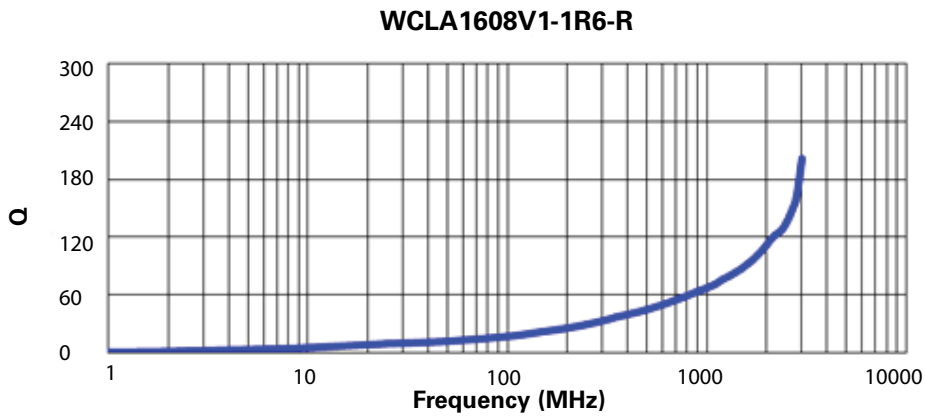


W ± 0.3	8.00
F ± 0.05	3.50
E1 ± 0.1	1.75
E2 Min	na
P0 ± 0.1	4.00
P1 ± 0.05	4.00
P2 ± 0.05	2.00
D0 $+0.1-0.0$	1.55
A0	1.20
B0	1.85
T	1.0
T1	na

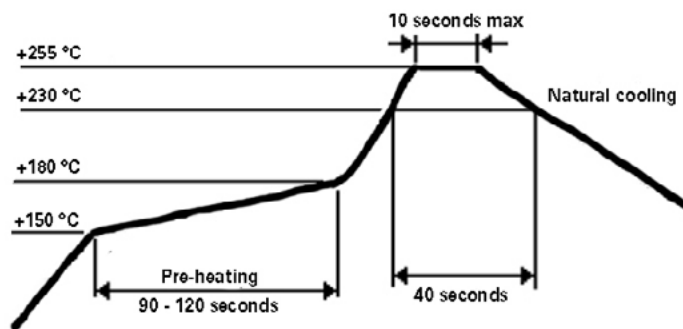
Inductance vs frequency



Q vs frequency



Solder reflow profile



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