MCLA1608V2

Automotive grade multilayer chip inductor

Product features

- AEC-Q200 qualified
- 0603 (1608 metric) package
- Multilayer monolithic construction yields high reliability
- Inductance range from 1.0 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)

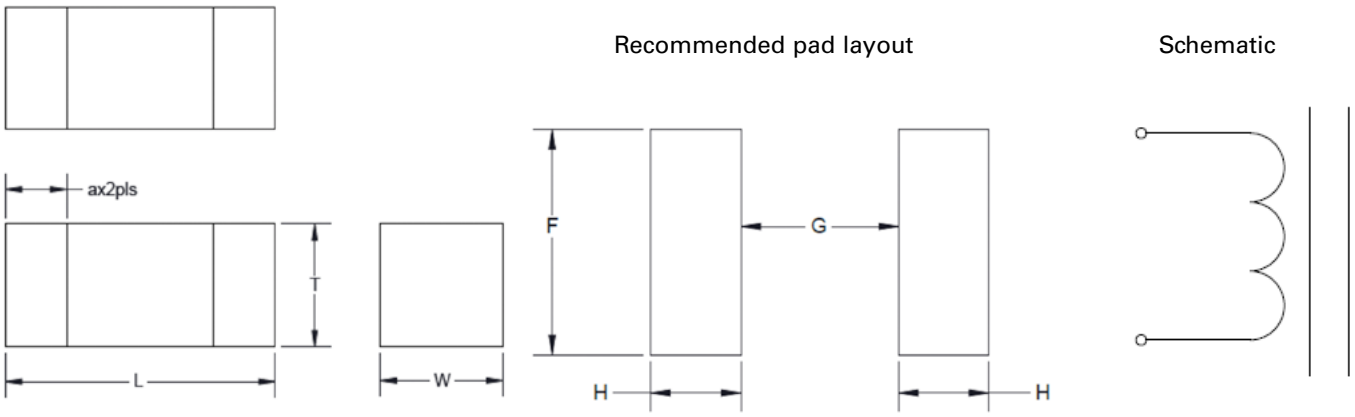
Powering Business Worldwide

Product specifications

Part number	OCL Tolerance	OCL (nH)	Q minimum	DCR@ (Ω) @ +25 °C maximum	Test frequency (MHz)	Test voltage (mV)	SRF (MHz) minimum	I Rated (mA)
MCLA1608V2-1R0-R	±0.3nH	1.0	8	0.05	100	50	10000	500
MCLA1608V2-1R2-R	±0.3nH	1.2	8	0.05	100	50	10000	500
MCLA1608V2-1R5-R	±0.3nH	1.5	8	0.1	100	50	6000	500
MCLA1608V2-1R8-R	±0.3nH	1.8	8	0.1	100	50	6000	500
MCLA1608V2-2R2-R	±0.3nH	2.2	8	0.1	100	50	6000	500
MCLA1608V2-2R7-R	±0.3nH	2.7	10	0.12	100	50	6000	500
MCLA1608V2-3R3-R	±0.3nH	3.3	10	0.15	100	50	6000	500
MCLA1608V2-3R9-R	±0.3nH	3.9	10	0.16	100	50	6000	500
MCLA1608V2-4R7-R	±0.3nH	4.7	10	0.2	100	50	6000	500
MCLA1608V2-5R6-R	±0.3nH	5.6	10	0.25	100	50	5000	500
MCLA1608V2-6R8-R	±5%	6.8	10	0.3	100	50	5000	500
MCLA1608V2-8R2-R	±5%	8.2	10	0.35	100	50	4500	500
MCLA1608V2-100-R	±5%	10	12	0.4	100	50	3500	300
MCLA1608V2-120-R	±5%	12	12	0.45	100	50	3000	300
MCLA1608V2-150-R	±5%	15	12	0.5	100	50	2300	300
MCLA1608V2-180-R	±5%	18	12	0.55	100	50	2200	300
MCLA1608V2-220-R	±5%	22	12	0.6	100	50	2000	300
MCLA1608V2-270-R	±5%	27	12	0.65	100	50	1700	300
MCLA1608V2-330-R	±5%	33	12	0.7	100	50	1500	300
MCLA1608V2-390-R	±5%	39	12	0.7	100	50	1400	300
MCLA1608V2-470-R	±5%	47	12	0.7	100	50	1200	300
MCLA1608V2-560-R	±5%	56	12	0.75	100	50	1100	300
MCLA1608V2-680-R	±5%	68	12	0.85	100	50	900	300
MCLA1608V2-820-R	±5%	82	8	1.0	100	50	800	300
MCLA1608V2-101-R	±5%	100	8	1.2	100	50	700	300
MCLA1608V2-121-R	±5%	120	8	1.4	50	50	600	200
MCLA1608V2-151-R	±5%	150	8	1.6	50	50	500	200
MCLA1608V2-181-R	±5%	180	8	1.9	50	50	400	200
MCLA1608V2-221-R	±5%	220	8	2.4	50	50	350	200
MCLA1608V2-271-R	±5%	270	8	2.6	50	50	350	150
MCLA1608V2-331-R	±5%	330	8	2.8	50	50	350	150
MCLA1608V2-391-R	±5%	390	8	3.2	50	50	300	150
MCLA1608V2-431-R	±5%	430	8	3.4	50	50	280	150
MCLA1608V2-471-R	±5%	470	8	3.6	50	50	250	150

1. Test frequency and voltage are 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: MCLA1608V2-xxx-R
   MCLA1608V2 = 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

Mechanical parameters, schematic, pad layout (mm)



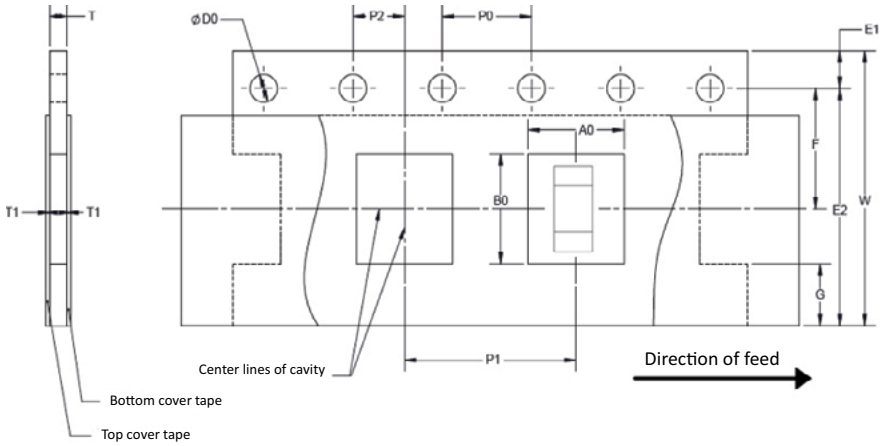
Part Number	L	W	T	a	F	G	H
MCLA1608V2-xxx-R	1.60±0.20	0.80±0.20	0.80±0.20	0.30±0.20	1.20 ref	0.40 ref	0.90 ref

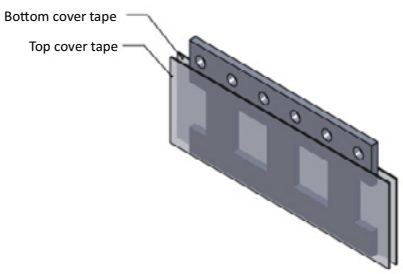
Part marking: No marking
All soldering surfaces to be coplanar within 0.1 millimeters
Tolerances are ±0.1 millimeters unless stated otherwise
Pad layout dimensions are reference only
Traces or vias underneath the inductor is not recommended

Packaging information (mm)

Drawing not to scale

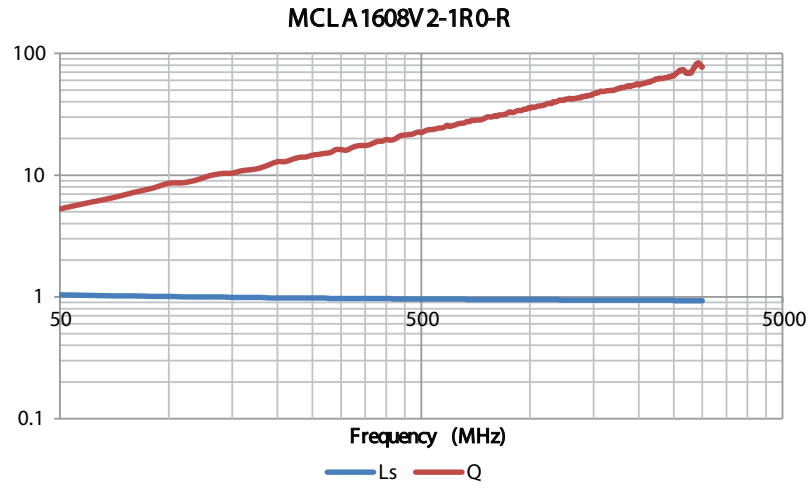
Supplied in tape and reel packaging, 4000 parts per 7" diameter reel

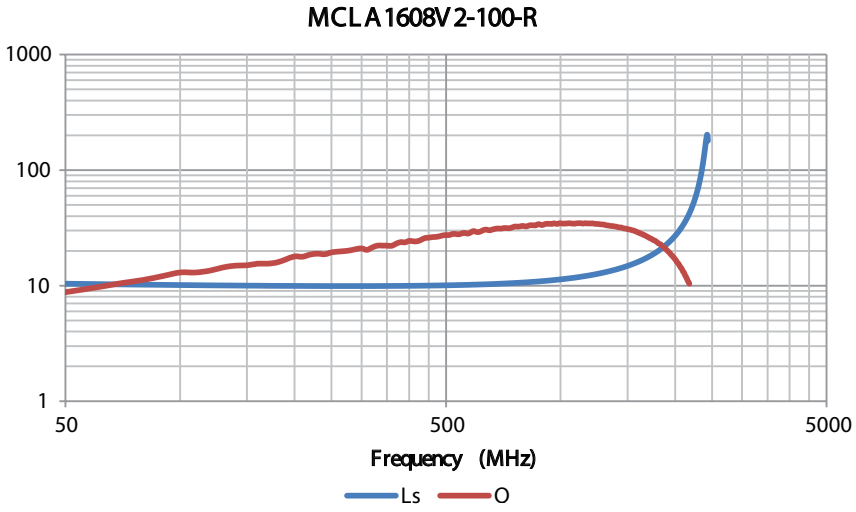


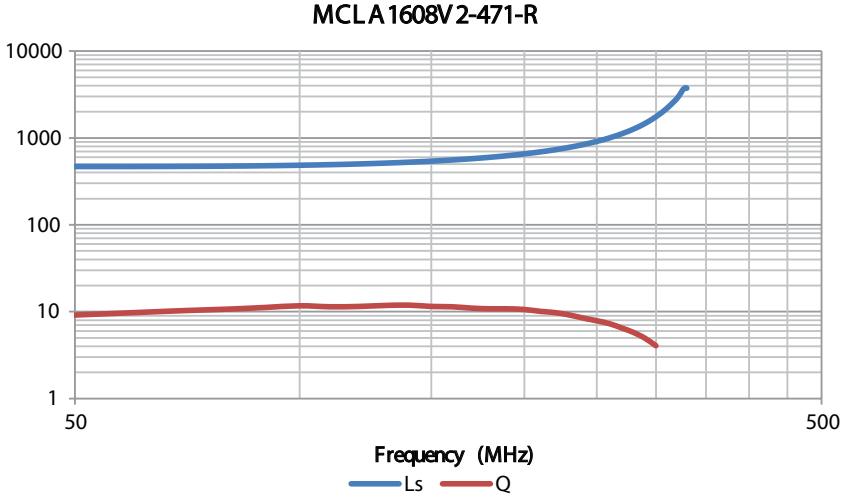


W±0.2	8.00
F±0.1	3.50
E1±0.2	1.75
E2 Min	na
P0±0.2	4.00
P1±0.2	4.00
P2±0.1	2.00
D0±0.1	1.55
A0	1.1±0.2
B0	1.9±0.2
T	0.95±0.1
T1 Max	na

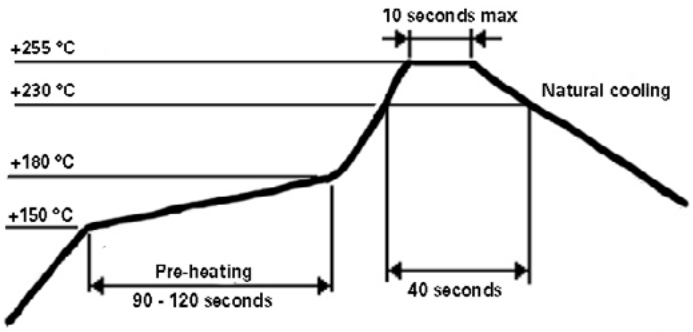
Inductance and Q vs frequency







Solder reflow profile



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Printed in USA
Publication No. 10976 BU-MC19104
Novemeber 2019

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