MCLA3216V1

Automotive grade multilayer inductor

Product features

- AEC-Q200 qualified
- 1206 (3216 metric) package
- Multilayer monolithic construction yields high reliability
- Inductance range from 0.047 uH to 12 uH
- 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)

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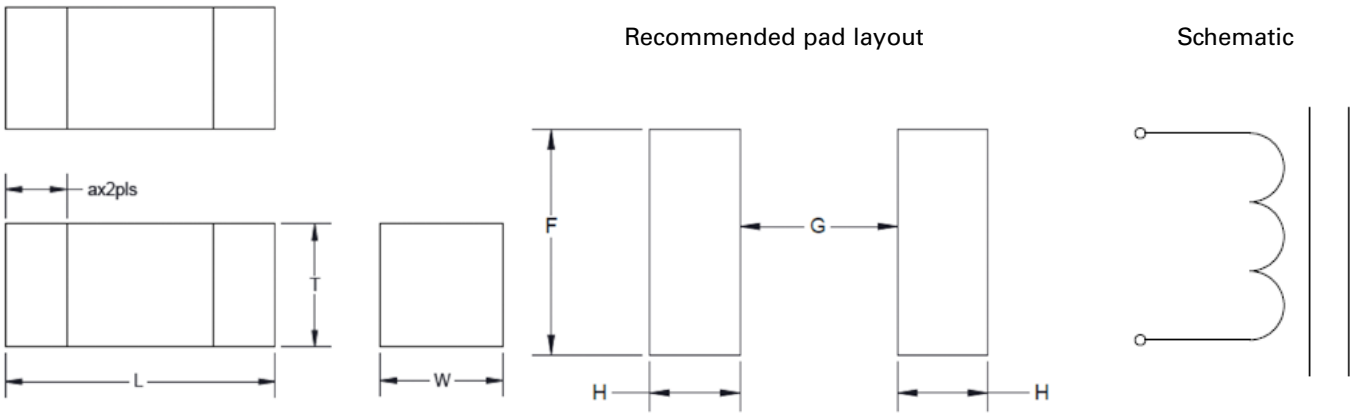
Product specifications

Part number	OCL Tolerance (%)	OCL (µH)	Q minimum	DCR@ (Ω) @ +25 °C maximum	Test frequency (MHz)	Test voltage (mV)	SRF (MHz) minimum	I Rated (mA)
MCLA3216V1-R047-R	±10	0.047	30	0.15	50	50	320	300
MCLA3216V1-R056-R	±10	0.056	30	0.2	50	50	320	300
MCLA3216V1-R068-R	±10	0.068	30	0.25	50	50	280	300
MCLA3216V1-R082-R	±10	0.082	30	0.25	50	50	280	300
MCLA3216V1-R100-R	±10	0.1	25	0.25	25	50	235	250
MCLA3216V1-R120-R	±10	0.12	25	0.25	25	50	220	250
MCLA3216V1-R150-R	±10	0.15	25	0.25	25	50	200	250
MCLA3216V1-R180-R	±10	0.18	25	0.3	25	50	185	250
MCLA3216V1-R220-R	±10	0.22	25	0.3	25	50	170	250
MCLA3216V1-R270-R	±10	0.27	25	0.3	25	50	150	250
MCLA3216V1-R330-R	±10	0.33	25	0.3	25	50	145	250
MCLA3216V1-R390-R	±10	0.39	30	0.5	25	50	135	200
MCLA3216V1-R470-R	±10	0.47	30	0.5	25	50	125	200
MCLA3216V1-R560-R	±10	0.56	30	0.5	25	50	115	150
MCLA3216V1-R680-R	±10	0.68	30	0.5	25	50	105	150
MCLA3216V1-R820-R	±10	0.82	30	0.6	25	50	100	150
MCLA3216V1-1R0-R	±10	1.0	35	0.3	10	50	75	100
MCLA3216V1-1R2-R	±10	1.2	35	0.4	10	50	65	100
MCLA3216V1-1R5-R	±10	1.5	35	0.4	10	50	60	50
MCLA3216V1-1R8-R	±10	1.8	35	0.4	10	50	55	50
MCLA3216V1-2R2-R	±10	2.2	35	0.5	10	50	50	50
MCLA3216V1-2R7-R	±10	2.7	35	0.5	10	50	45	50
MCLA3216V1-3R3-R	±10	3.3	35	0.5	10	50	41	50
MCLA3216V1-3R9-R	±10	3.9	35	0.6	10	50	38	50
MCLA3216V1-4R7-R	±10	4.7	35	0.65	10	50	35	25
MCLA3216V1-5R6-R	±10	5.6	35	0.8	4	50	32	25
MCLA3216V1-6R8-R	±10	6.8	35	0.8	4	50	29	25
MCLA3216V1-8R2-R	±10	8.2	35	0.8	4	50	26	25
MCLA3216V1-100-R	±10	10	35	0.8	2	50	24	25
MCLA3216V1-120-R	±10	12	35	0.9	2	50	22	15

1. Test frequency and 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 40 °C or less.
3. Part Number Definition: MCLA3216V1-xxx-R
   MCLA32162V1 = Product code and size
   xxx= inductance value in µH, 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)



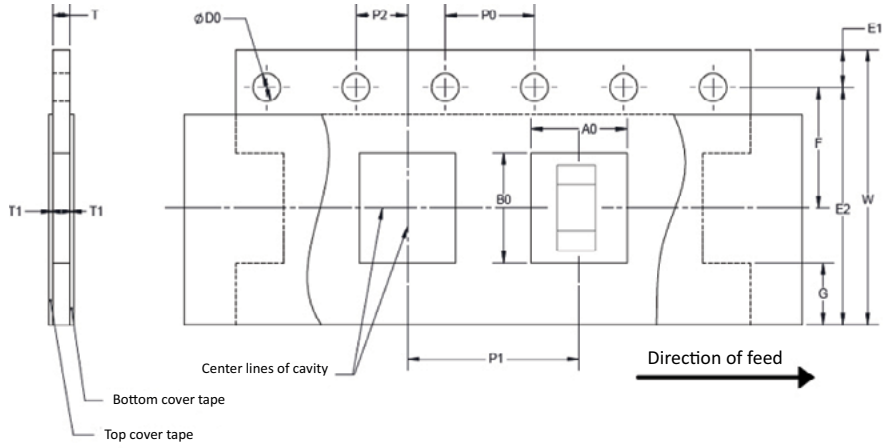
Part Number	L	W	T	a	F	G	H
MCLA3216V1-xxx-R	3.20±0.20	1.60±0.20	0.90±0.20	0.50±0.30	2.00 ref	1.40 ref	1.20 ref

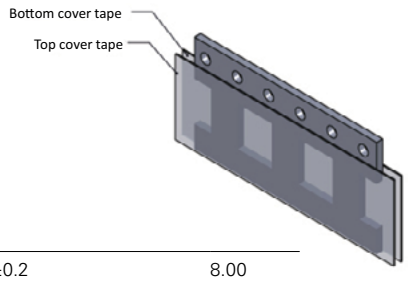
Part marking: No marking
All soldering surfaces to be coplanar within 0.1 millimeters
Tolerances are ±0.1 millimeters unless stated otherwise
Pad layout dimensions are reference only
Traces or vias underneath the inductor is not recommended

Packaging information (mm)

Drawing not to scale

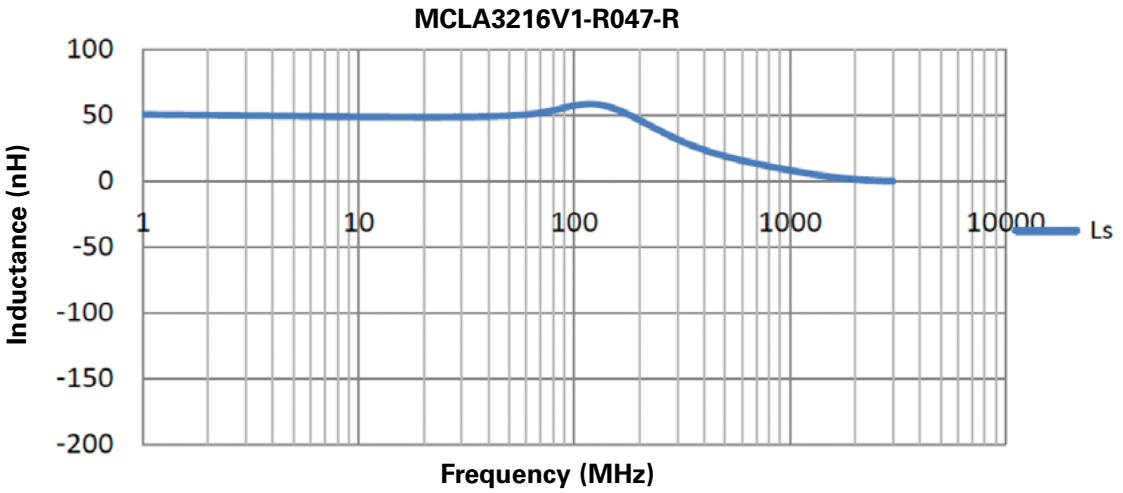
Supplied in tape and reel packaging, 4000 parts per 7" diameter reel

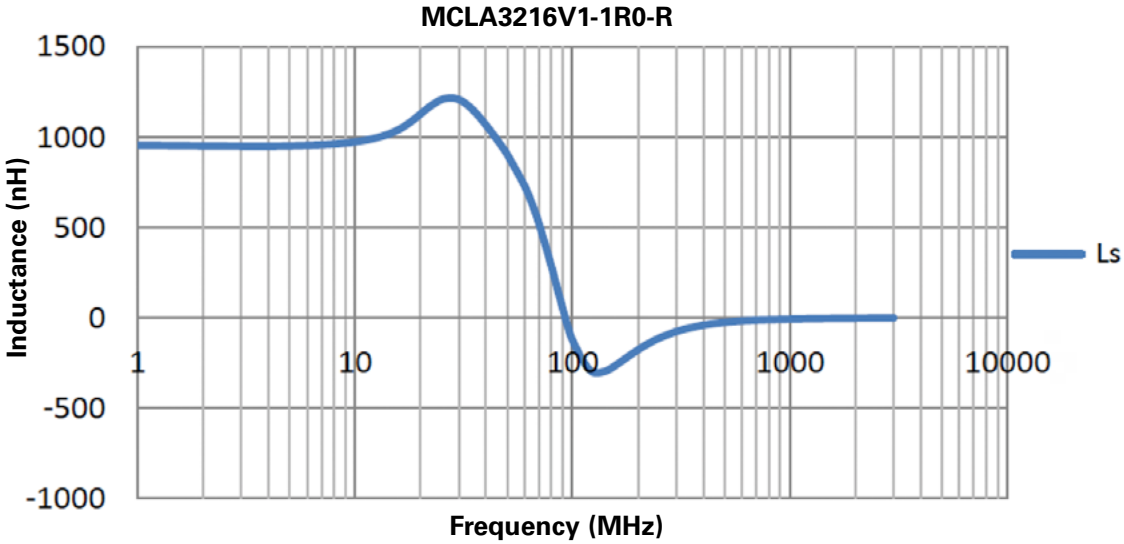


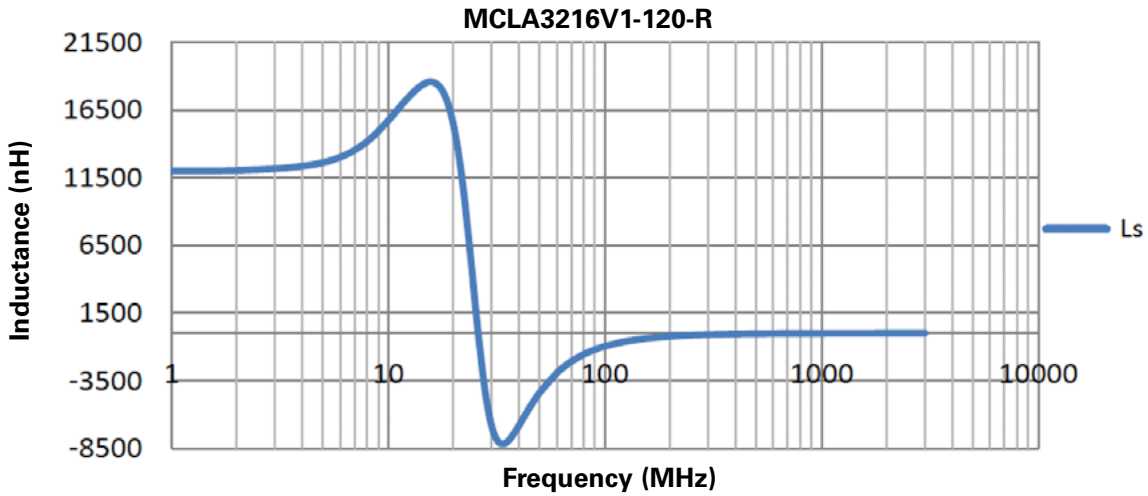


W±0.2	8.00
F±0.1	3.50
E1±0.2	1.75
E2 Min	na
P0±0.2	4.00
P1±0.2	4.00
P2±0.1	2.00
D0±0.1	1.55
A0	1.9±0.2
B0	3.5±0.2
T	0.95±0.1
T1 Max	na

Inductance vs frequency

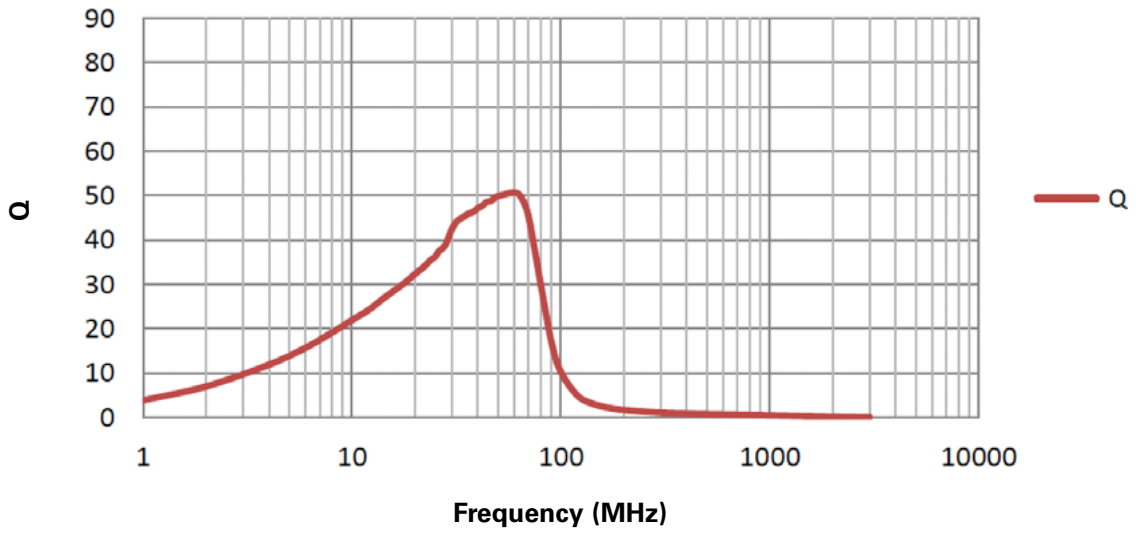






Q vs frequency

MCLA3216V1-R047-R



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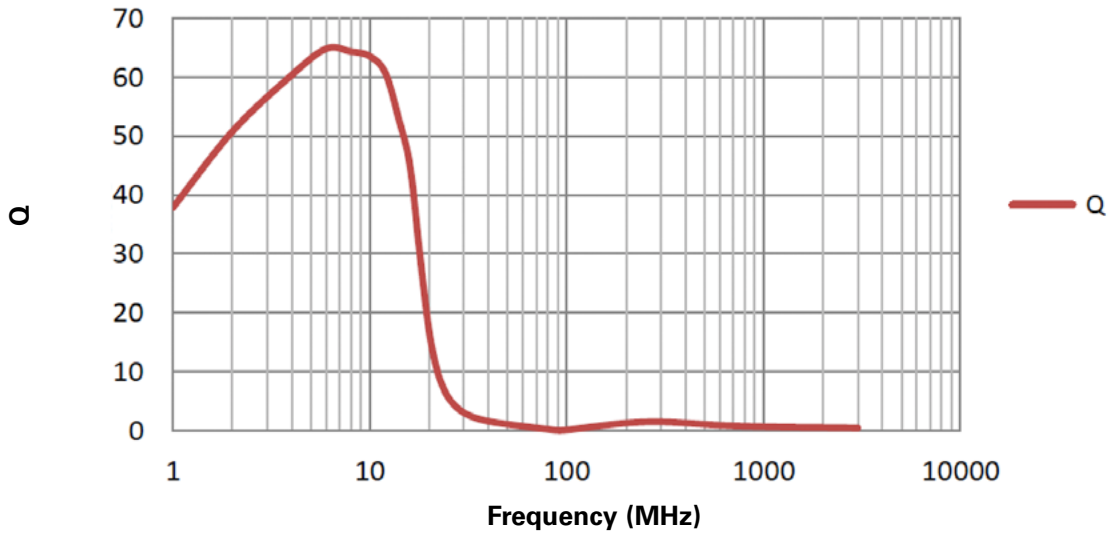

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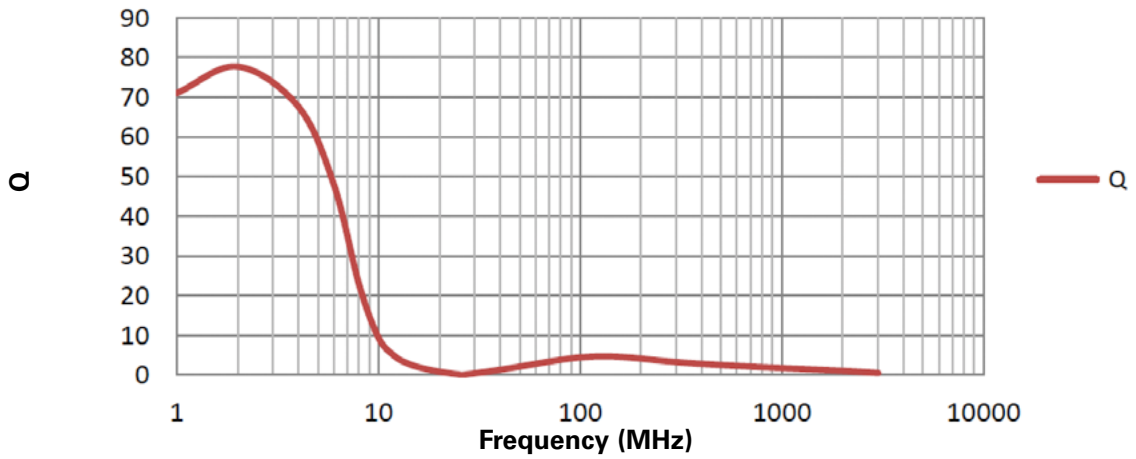
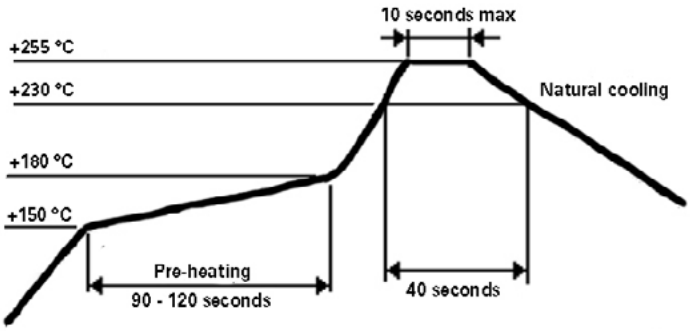


Solder reflow profile



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