

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)



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

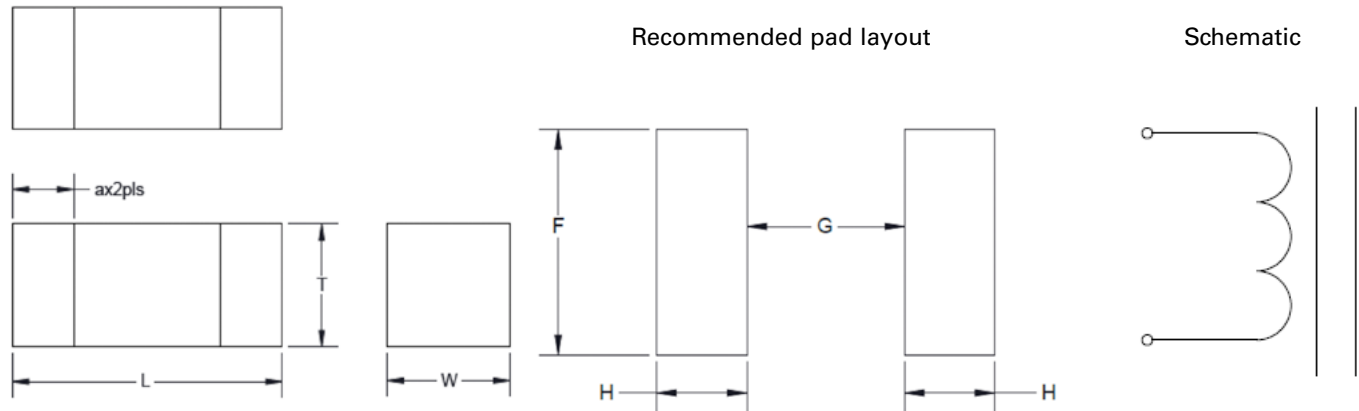
MCLA3216V1 = Product code and size

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)

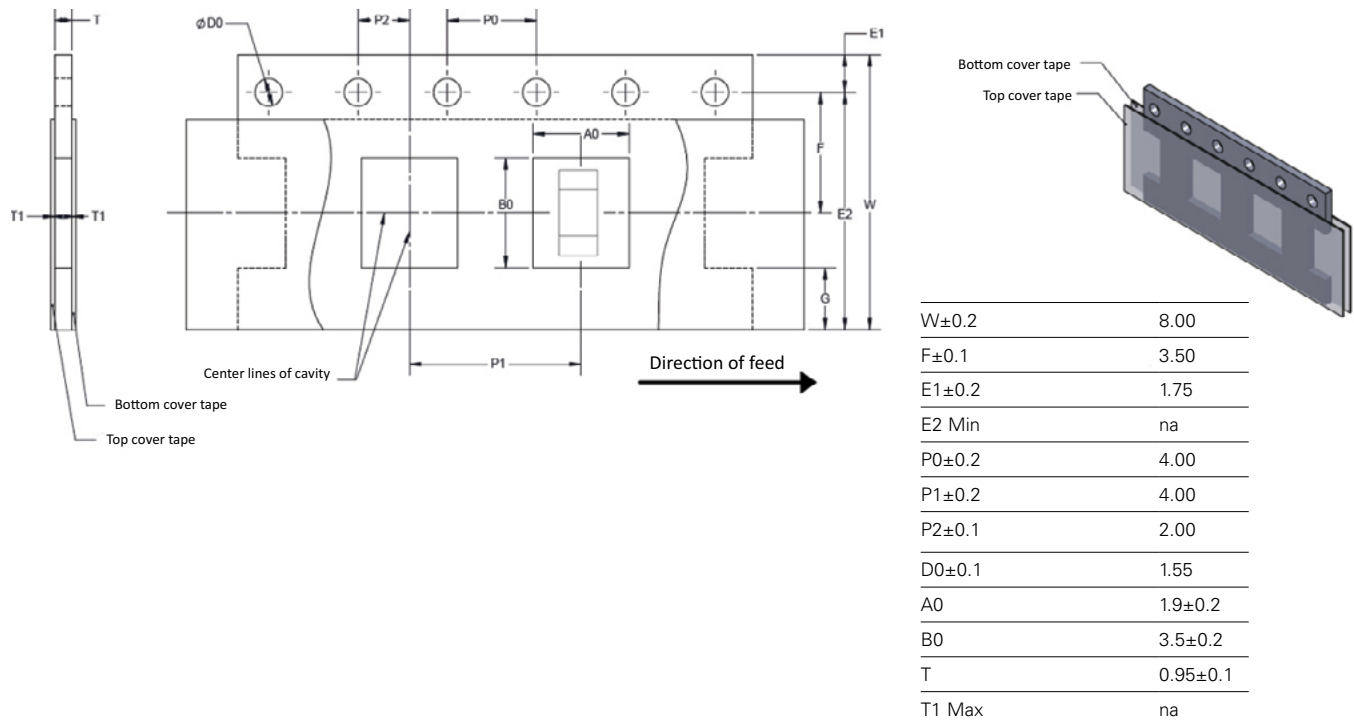


Part Number	L	W	T	a	F	G	H
MCLA3216V1-xxx-R	3.20±0.20	1.60±0.20	0.90±0.20	0.50±0.30	2.00 ref	1.40 ref	1.20 ref

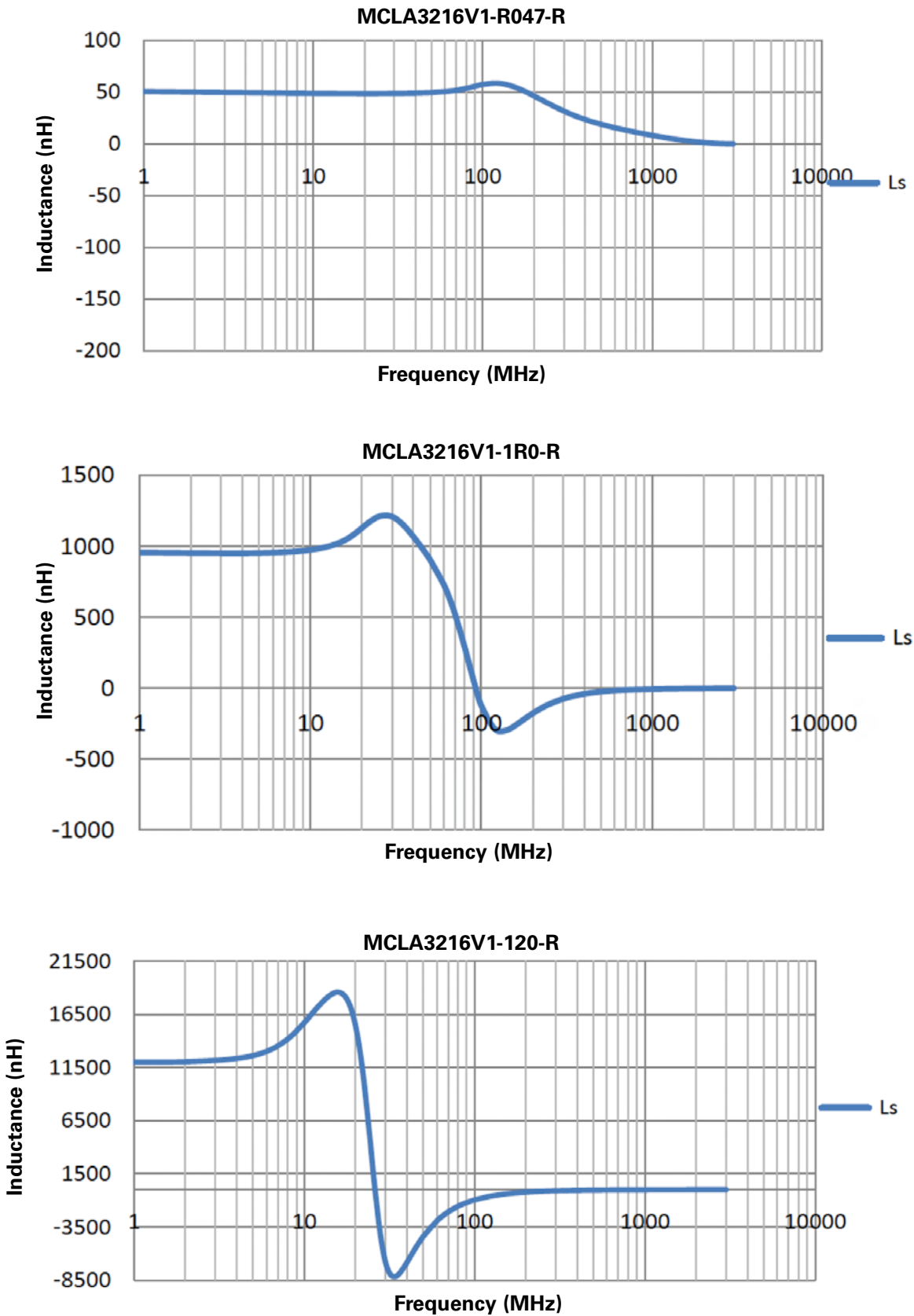
Part marking: No marking
All soldering surfaces to be coplanar within 0.1 millimeters
Tolerances are ±0.1 millimeters unless stated otherwise
Pad layout dimensions are reference only
Traces or vias underneath the inductor is not recommended

Packaging information (mm)

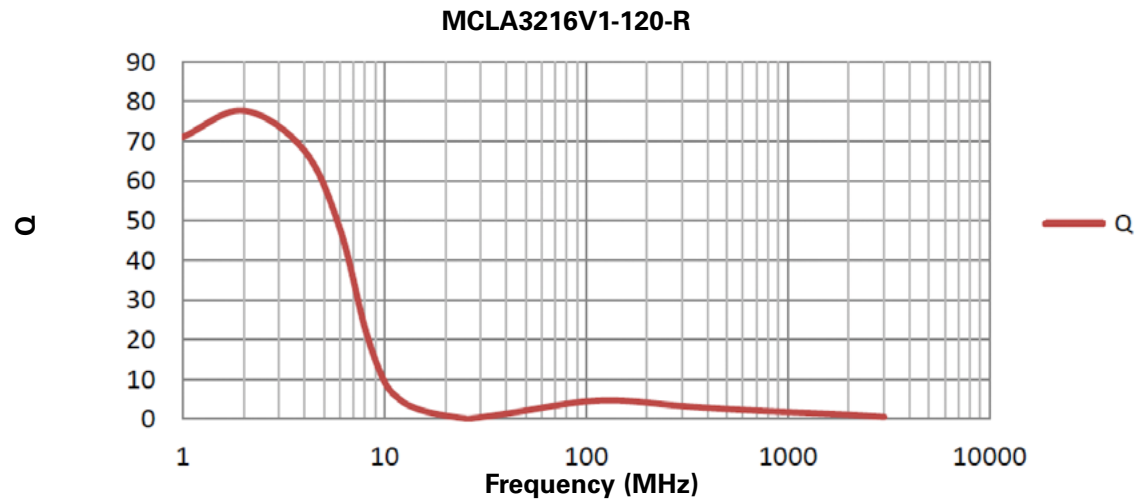
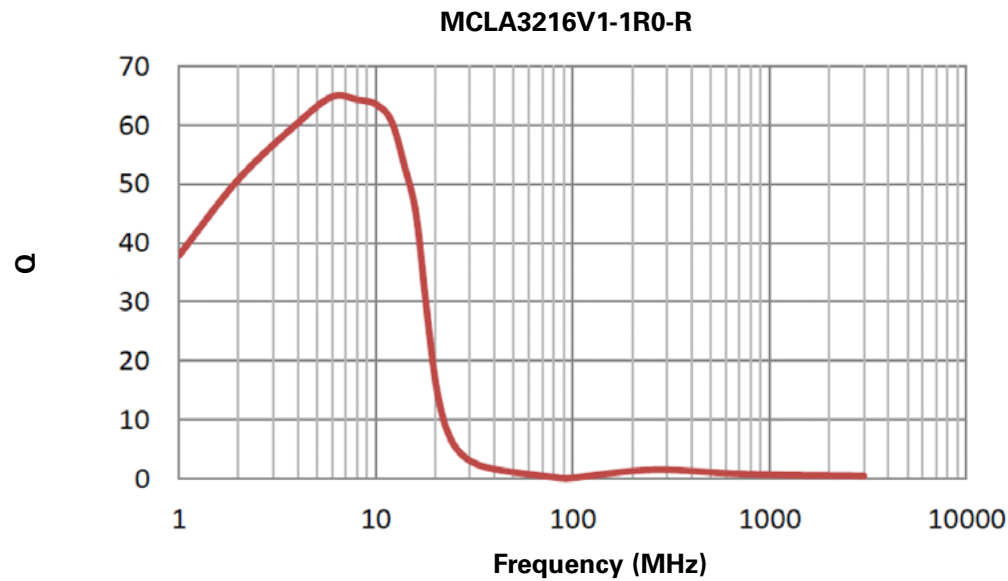
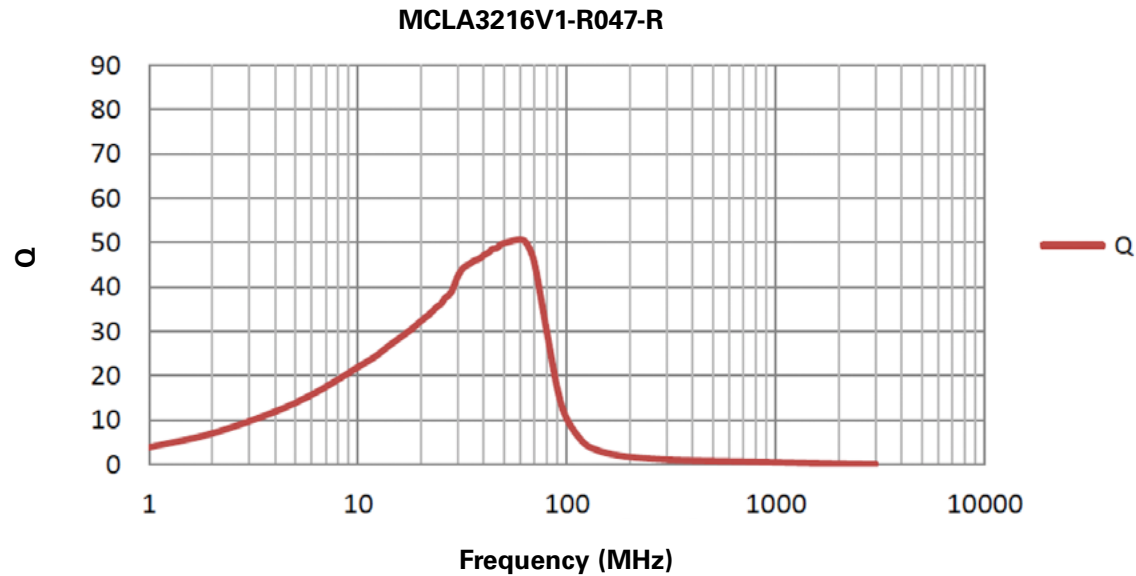
Drawing not to scale
Supplied in tape and reel packaging, 4000 parts per 7" diameter reel



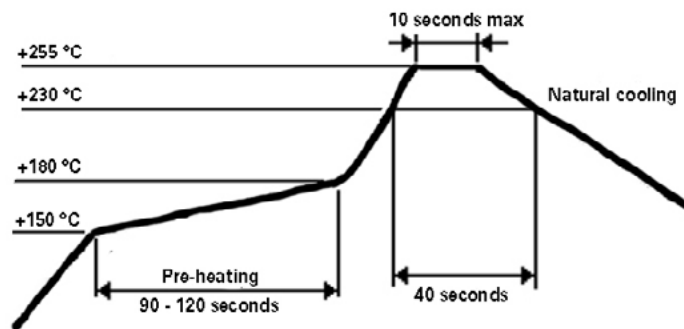
Inductance vs frequency



Q vs frequency



Solder reflow profile



Life Support Policy: Eaton does not authorize the use of any of its products for use in life support devices or systems without the express written approval of an officer of the Company. Life support systems are devices which support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

Eaton reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Eaton also reserves the right to change or update, without notice, any technical information contained in this bulletin.

Eaton
Electronics Division
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com/electronics

© 2019 Eaton
All Rights Reserved
Printed in USA
Publication No. 10978 BU-MC19106
November 2019

Eaton is a registered trademark.

All other trademarks are property
of their respective owners.

Follow us on social media to get the
latest product and support information.



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Eaton:

[MCLA3216V1-R047-R](#) [MCLA3216V1-R056-R](#) [MCLA3216V1-R470-R](#) [MCLA3216V1-R680-R](#) [MCLA3216V1-1R2-R](#)
[MCLA3216V1-R082-R](#) [MCLA3216V1-R120-R](#) [MCLA3216V1-120-R](#) [MCLA3216V1-3R3-R](#) [MCLA3216V1-4R7-R](#)
[MCLA3216V1-R220-R](#) [MCLA3216V1-1R5-R](#) [MCLA3216V1-R330-R](#) [MCLA3216V1-1R0-R](#) [MCLA3216V1-2R2-R](#)
[MCLA3216V1-R390-R](#) [MCLA3216V1-R560-R](#) [MCLA3216V1-100-R](#) [MCLA3216V1-R100-R](#) [MCLA3216V1-3R9-R](#)
[MCLA3216V1-5R6-R](#) [MCLA3216V1-R068-R](#) [MCLA3216V1-R180-R](#) [MCLA3216V1-R270-R](#) [MCLA3216V1-6R8-R](#)
[MCLA3216V1-8R2-R](#) [MCLA3216V1-R820-R](#) [MCLA3216V1-1R8-R](#) [MCLA3216V1-2R7-R](#) [MCLA3216V1-R150-R](#)