Multilayer Metal Power Inductors MCOIL™ LCCN series for Automotive Body & Chassis and Infotainment

Code in front of Series have been extracted from Part number, which describes the segment of products, such as kinds and characteristics.

REFLOW

AEC-Q200

＊Operating Temp.：−40～+125℃(Including self-generated heat)

＊Operating Temp.：−55～+150℃(Including self-generated heat)

■PART NUMBER

L	C	C	N	F	2	0	1	2	K	K	T	1	R	0	M	A
①				②	③				④		⑤	⑥			⑦	⑧

①Series

Code (1)(2)(3)(4)	
LCCN	Multilayer metal power inductor for Automotive Body & Chassis and Infotainment

(1) Product Group

Code	
L	Inductors

(2) Category

Code	Recommended equipment	Quality Grade
C	Automotive Electronic Equipment (Body & Chassis, Infotainment)	2

(3) Type

Code	
C	Metal Multilayer

(4) Features, Characteristics

Code	
N	Standard Power choke

②Features

Code	Feature
F	5-surface electrode with polarity marking

③Dimensions (L×W)

Code	Type (inch)	Dimensions (L×W) [mm]
1608	1608 (0603)	1.6×0.8
2012	2012 (0805)	2.0×1.25

④Thickness

Code	Thickness [mm]
KK	1.0 max

⑤Packaging

Code	Packaging
T	Taping

⑥Nominal inductance

Code (example)	Nominal inductance [μH]
R24	0.24
R47	0.47
1R0	1.0

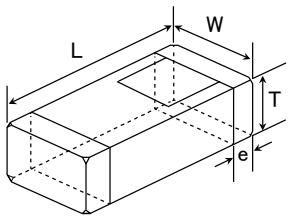
※R=Decimal point

⑦Inductance tolerance

Code	Inductance tolerance
M	±20%

⑧Internal code

■STANDARD EXTERNAL DIMENSIONS / STANDARD QUANTITY



Type	L	W	T	e	Standard quantity [pcs]	
					Paper tape	Embossed tape
1608KK (0603)	1.6±0.2 (0.063±0.008)	0.8±0.2 (0.031±0.008)	1.0 max (0.039 max)	0.3±0.2 (0.012±0.008)	−	3000
2012KK (0805)	2.0±0.2 (0.079±0.008)	1.25±0.2 (0.049±0.008)	1.0 max (0.039 max)	0.5±0.3 (0.02±0.012)	−	3000

Unit：mm (inch)

▸ This catalog contains the typical specification only due to the limitation of space. When you consider the purchase of our products, please check our specification.
For details of each product (characteristics graph, reliability information, precautions for use, and so on), see our Web site (http://www.ty-top.com/) .

■PART NUMBER

・All the Multilayer Metal Power Inductors of the catalog lineup are RoHS compliant.

Notes)
・The exchange of individual specifications is necessary depending on your application and/or circuit condition. Please contact TAIYO YUDEN's official sales channel.
・For Automotive (AEC-Q200 Qualified) products for BODY & CHASSIS, and INFOTAINMENT. Please check "Automotive Application Guide" for further details before using the products.
＜ AEC-Q200 ：AEC-Q200 qualified＞
All the Multilayer Metal Power Inductors for Automotive products are tested based on the test conditions and methods defined in AEC-Q200 by family item.
Please consult with TAIYO YUDEN's official sales channel for the details of the product specifications and AEC-Q200 test results, etc.,
and please review and approve the product specifications before ordering.

●1608 type

New part number	Old part number (for reference)	EHS	Nominal inductance [μH]	Inductance tolerance	DC Resistance [mΩ]		Rated current(Idc1) [A] (max.)	Rated current(Idc2) [A] (max.)	Measuring frequency [MHz]	Thickness [mm] (max.)
					(max.)	(typ.)				
LCCNF1608KKTR24MA	MCKK1608TR24MVC	RoHS	0.24	±20%	35	29	3.2	3.8	1	1.00
LCCNF1608KKTR33MA	MCKK1608TR33MVC	RoHS	0.33	±20%	46	38	2.8	3.3	1	1.00
LCCNF1608KKTR47MA	MCKK1608TR47MVC	RoHS	0.47	±20%	65	54	2.6	3.0	1	1.00

●1608 type ＊Operating Temp.：−55～+150℃(Including self-generated heat)

lew part number+A2A24:K2	Old part number (for reference)	EHS	Nominal inductance [μH]	Inductance tolerance	DC Resistance [mΩ]		Rated current(Idc1) [A] (max.)	Rated current(Idc2) [A] (max.)	Measuring frequency [MHz]	Thickness [mm] (max.)
					(max.)	(typ.)				
LCCNF1608KKTR24MAD	MCKK1608TR24MVC D	RoHS	0.24	±20%	35	29	3.2	3.8	1	1.00
LCCNF1608KKTR33MAD	MCKK1608TR33MVC D	RoHS	0.33	±20%	46	38	2.8	3.3	1	1.00
LCCNF1608KKTR47MAD	MCKK1608TR47MVC D	RoHS	0.47	±20%	65	54	2.6	3.0	1	1.00

●2012 type

New part number	Old part number (for reference)	EHS	Nominal inductance [μH]	Inductance tolerance	DC Resistance [mΩ]		Rated current(Idc1) [A] (max.)	Rated current(Idc2) [A] (max.)	Measuring frequency [MHz]	Thickness [mm] (max.)
					(max.)	(typ.)				
LCCNF2012KKTR24MA	MCKK2012TR24MVC	RoHS	0.24	±20%	20	17	4.8	5.4	1	1.00
LCCNF2012KKTR33MA	MCKK2012TR33MVC	RoHS	0.33	±20%	30	25	4.4	4.5	1	1.00
LCCNF2012KKTR47MA	MCKK2012TR47MVC	RoHS	0.47	±20%	41	34	3.8	3.8	1	1.00
LCCNF2012KKT1R0MA	MCKK2012T1R0MVC	RoHS	1.0	±20%	85	71	2.7	2.7	1	1.00

●2012 type ＊Operating Temp.：−55～+150℃(Including self-generated heat)

New part number	Old part number (for reference)	EHS	Nominal inductance [μH]	Inductance tolerance	DC Resistance [mΩ]		Rated current(Idc1) [A] (max.)	Rated current(Idc2) [A] (max.)	Measuring frequency [MHz]	Thickness [mm] (max.)
					(max.)	(typ.)				
LCCNF2012KKTR24MAD	MCKK2012TR24MVC D	RoHS	0.24	±20%	20	17	4.8	5.4	1	1.00
LCCNF2012KKTR33MAD	MCKK2012TR33MVC D	RoHS	0.33	±20%	30	25	4.4	4.5	1	1.00
LCCNF2012KKTR47MAD	MCKK2012TR47MVC D	RoHS	0.47	±20%	41	34	3.8	3.8	1	1.00
LCCNF2012KKT1R0MAD	MCKK2012T1R0MVC D	RoHS	1.0	±20%	85	71	2.7	2.7	1	1.00

※Idc1 is the DC value at which the initial L value is decreased within 30% by the application of DC bias. (at 20℃)
※Idc2 is the DC value at which the temperature of element is increased within 40℃ by the application of DC bias. (at 20℃)

■Derating of Rated Current

●LCCN series
Derating of current is necessary for LCCN series depending on ambient temperature.
Please refer to the chart shown below for appropriate derating of current.