Multilayer Metal Power Inductors MCOIL™ LBCN series for Telecommunications Infrastructure and Industrial Equipment

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

REFLOW

＊Operating Temp.: −40〜+125℃(Including self-generated heat)
＊Operating Temp.: −55〜+150℃(Including self-generated heat)

■PART NUMBER

L	B	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)	
LBCN	Multilayer metal power inductor for Telecommunications Infrastructure and Industrial Equipment

(1) Product Group

Code	
L	Inductors

(3) Type

Code	
C	Metal Multilayer

(2) Category

Code	Recommended equipment	Quality Grade
B	Telecommunications Infrastructure and Industrial Equipment	2

(4) Features, Characteristics

Code	
N	Standard Power choke

②Features

Code	Feature
F	5-surface electrode with polarity marking

⑤Packaging

Code	Packaging
T	Taping

③Dimensions (L×W)

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

⑥Nominal inductance

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

※R=Decimal point

④Thickness

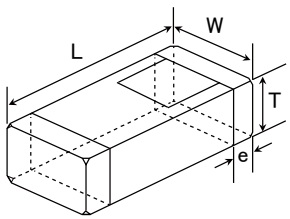
Code	Thickness [mm]
KK	1.0 max

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)

■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.
・The products are for Telecommunications infrastructure and Industrial equipment.
Please consult with TAIYO YUDEN's official sales channel for the details of the product specifications, 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.)				
LBCNF1608KKTR24MA	MCKK1608TR24M8C	RoHS	0.24	±20%	35	29	3.2	3.8	1	1.00
LBCNF1608KKTR33MA	MCKK1608TR33M8C	RoHS	0.33	±20%	46	38	2.8	3.3	1	1.00
LBCNF1608KKTR47MA	MCKK1608TR47M8C	RoHS	0.47	±20%	65	54	2.6	3.0	1	1.00

●1608 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.)				
LBCNF1608KKTR24MAD	MCKK1608TR24M8C D	RoHS	0.24	±20%	35	29	3.2	3.8	1	1.00
LBCNF1608KKTR33MAD	MCKK1608TR33M8C D	RoHS	0.33	±20%	46	38	2.8	3.3	1	1.00
LBCNF1608KKTR47MAD	MCKK1608TR47M8C 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.)				
LBCNF2012KKTR24MA	MCKK2012TR24M8C	RoHS	0.24	±20%	20	17	4.8	5.4	1	1.00
LBCNF2012KKTR33MA	MCKK2012TR33M8C	RoHS	0.33	±20%	30	25	4.4	4.5	1	1.00
LBCNF2012KKTR47MA	MCKK2012TR47M8C	RoHS	0.47	±20%	41	34	3.8	3.8	1	1.00
LBCNF2012KKT1R0MA	MCKK2012T1R0M8C	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.)				
LBCNF2012KKTR24MAD	MCKK2012TR24M8C D	RoHS	0.24	±20%	20	17	4.8	5.4	1	1.00
LBCNF2012KKTR33MAD	MCKK2012TR33M8C D	RoHS	0.33	±20%	30	25	4.4	4.5	1	1.00
LBCNF2012KKTR47MAD	MCKK2012TR47M8C D	RoHS	0.47	±20%	41	34	3.8	3.8	1	1.00
LBCNF2012KKT1R0MAD	MCKK2012T1R0M8C 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

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