Wire-wound Metal Power Inductors MCOIL™ LBEN 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

■PART NUMBER

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

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

①Series

Code (1)(2)(3)(4)	
LBEN	Wire-wound Metal Power Inductor for Telecommunications Infrastructure and Industrial Equipment

(1) Product Group

Code	
L	Inductors

(2) Category

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

(3) Type

Code	
E	Metal Wire-wound (High filling type)

(4) Features, Characteristics

Code	
N	Standard Power choke

②Features

Code	Feature
A	5-surface electrode (Ag-resin × Sn-plate)

③Dimensions (L × W)

Code	Dimensions (L × W) [mm]
2016	2.0 × 1.6
2520	2.5 × 2.0

④Dimensions (T)

Code	Dimensions (T) [mm]
MK	1.2

⑤Packaging

Code	Packaging
T	Taping

⑥Nominal inductance

Code (example)	Nominal inductance [μH]
R47	0.47
1R0	1.0
4R7	4.7

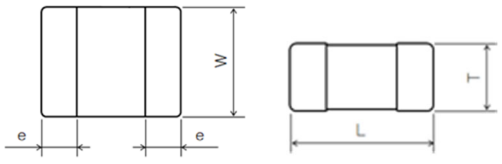
※R=Decimal point

⑦Inductance tolerance

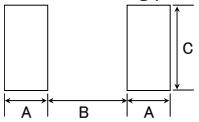
Code	Inductance tolerance
M	±20%

⑧Internal code

■STANDARD EXTERNAL DIMENSIONS / STANDARD QUANTITY



Recommended Land Patterns
Surface Mounting
・Mounting and soldering conditions should be checked beforehand.
・Applicable soldering process to these products is reflow soldering only.



Type	A	B	C
2016	0.8	0.8	1.8
2520	0.85	1.2	2.2

Unit: mm

Type	L	W	T	e	Standard quantity [pcs] Taping
2016MK	2.0±0.2 (0.079±0.008)	1.6±0.2 (0.063±0.008)	1.2 max (0.047 max)	0.5±0.2 (0.020±0.008)	3000
2520MK	2.5±0.2 (0.098±0.008)	2.0±0.2 (0.079±0.008)	1.2 max (0.047 max)	0.6±0.3 (0.020±0.012)	3000

Unit: mm (inch)

■PART NUMBER

・All the Wire-wound 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.

●2016MK type 【Thickness:1.2mm max.】

New part number	Old part number (for reference)	Nominal inductance [μH]	Inductance tolerance	Self-resonant frequency [MHz] (min.)	DC Resistance [Ω] (max.)	Rated current ※) [mA] (max.)			Measuring frequency [MHz]
						Saturation current Idc1	Temperature rise current① Idc2	Temperature rise current② Idc2	
LBENA2016MKTR24M0NK	MEMK2016TR24MGNK8	0.24	±20%	–	0.018	6,800	3,500	5,500	1
LBENA2016MKTR33M0NK	MEMK2016TR33MGNK8	0.33	±20%	–	0.022	5,400	3,000	4,900	1
LBENA2016MKTR47M0NK	MEMK2016TR47MGNK8	0.47	±20%	–	0.025	4,800	2,900	4,700	1
LBENA2016MKT1R0M0NK	MEMK2016T1R0MGNK8	1.0	±20%	–	0.045	3,100	2,000	3,200	1
LBENA2016MKT2R2M0NK	MEMK2016T2R2MGNK8	2.2	±20%	–	0.120	2,200	1,100	1,800	1

●2520MK type 【Thickness:1.2mm max.】

New part number	Old part number (for reference)	Nominal inductance [μH]	Inductance tolerance	Self-resonant frequency [MHz] (min.)	DC Resistance [Ω] (max.)	Rated current ※) [mA] (max.)			Measuring frequency [MHz]
						Saturation current Idc1	Temperature rise current① Idc2	Temperature rise current② Idc2	
LBENA2520MKTR15M0NK	MEMK2520TR15MGNK8	0.15	±20%	–	0.009	10,200	4,900	6,700	1
LBENA2520MKTR33M0NK	MEMK2520TR33MGNK8	0.33	±20%	–	0.015	7,000	4,000	5,600	1
LBENA2520MKTR47M0NK	MEMK2520TR47MGNK8	0.47	±20%	–	0.020	5,900	3,700	5,000	1
LBENA2520MKT1R0M0NK	MEMK2520T1R0MGNK8	1.0	±20%	–	0.042	4,400	2,400	3,200	1
LBENA2520MKT1R5M0NK	MEMK2520T1R5MGNK8	1.5	±20%	–	0.057	3,300	2,100	2,800	1
LBENA2520MKT2R2M0NK	MEMK2520T2R2MGNK8	2.2	±20%	–	0.077	3,000	1,700	2,400	1
LBENA2520MKT3R3M0NK	MEMK2520T3R3MGNK8	3.3	±20%	–	0.131	2,300	1,300	1,800	1
LBENA2520MKT4R7M0NK	MEMK2520T4R7MGNK8	4.7	±20%	–	0.185	2,100	1,100	1,500	1

※) The saturation current value (Idc1) is the DC current value having inductance decrease down to 30%. (at 20℃)
※) The temperature rise current value (Idc2)① is the DC current value having temperature increase up to 20℃. (at 20℃)
※) The temperature rise current value (Idc2)② is the DC current value having temperature increase up to 40℃. (at 20℃)
※) The rated current is the DC current value that satisfies both of current value saturation current value and temperature rise current value.
※) Idc2 Measurement board data
Material:FR4
Board dimensions:100×50×1.6t mm
Pattern dimensions:43×59.2 mm
Pattern thickness:50μm

■Derating of Rated Current

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