

VLBUC12060120R07MF3 Datasheet

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DiGi Electronics Part Number	VLBUC12060120R07MF3-DG
Manufacturer	TDK Corporation
Manufacturer Product Number	VLBUC12060120R07MF3
Description	FIXED IND 70NH 155A 0.125MOHM SM
Detailed Description	70 nH Unshielded Wirewound Inductor 70 A 0.138m Ohm Max Nonstandard



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Purchase and inquiry

Manufacturer Product Number:

VLBUC12060120R07MF3

Series:

VLBUC

Type:

Wirewound

Inductance:

70 nH

Current Rating (Amps):

70 A

Shielding:

Unshielded

Q @ Freq:

-

Ratings:

-

Inductance Frequency - Test:

100 kHz

Mounting Type:

Surface Mount

Supplier Device Package:

-

Height - Seated (Max):

0.472" (12.00mm)

Manufacturer:

TDK Corporation

Product Status:

Active

Material - Core:

Ferrite

Tolerance:

±20%

Current - Saturation (Isat):

155A

DC Resistance (DCR):

0.138mOhm Max

Frequency - Self Resonant:

-

Operating Temperature:

-40°C ~ 125°C

Features:

-

Package / Case:

Nonstandard

Size / Dimension:

0.472" L x 0.236" W (12.00mm x 6.00mm)

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8504.50.4000

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

Inductors for power circuits

Wound ferrite

VLBUC series



VLBUC12060120 F3 type



FEATURES

- The VLBUC series is a dual coil power inductor developed for TLVR (*).
- Compatible with withstand voltage between coils DC100V
- It is a narrow width (6 mm) inductor for phase operation and fits the design of the server VR14 generation.
- Operating temperature range: -40 to +125°C (including self-temperature rise)
 - * TLVR (= Trans-Inductor Voltage Regulators) is a circuit configuration that improves the load response of voltage regulators in Server applications, etc.

APPLICATION

- Trans-Inductor Voltage Regulators (TLVR)

PART NUMBER CONSTRUCTION

VLBUC	12060120	R07	M	F3
Series name	L×W×H dimensions 12.0×6.0×12.0mm max.	Inductance (nH)	Inductance tolerance	Internal code

CHARACTERISTICS SPECIFICATION TABLE

L		Measuring frequency	DC resistance		Rated current*		Part No.	
(nH)		(kHz)	(mΩ)		Isat(A typ.)	Itemp(A typ.)		
Primary coil	Secondary coil		Primary coil	Secondary coil	Primary coil	Secondary coil	Primary coil	
1-4 Line	2-3 Line		1-4 Line	2-3 Line	1-4 Line	2-3 Line	1-4 Line	
(2-3 open)	(1-4 open)		(2-3 open)	(1-4 open)	(2-3 open)	(1-4 open)	(2-3 open)	
70±20%	60±20%	100	0.125±10%	0.45±10%	155	155	70	VLBUC12060120R07MF3
75±20%	65±20%	100	0.125±10%	0.45±10%	148	148	70	VLBUC12060120R08MF3
90±15%	90±15%	100	0.125±10%	0.45±10%	138	138	70	VLBUC12060120R09LF3
105±15%	105±15%	100	0.125±10%	0.45±10%	125	125	70	VLBUC12060120R10LF3
120±15%	120±15%	100	0.125±10%	0.45±10%	106	106	70	VLBUC12060120R12LF3
150±15%	150±15%	100	0.125±10%	0.45±10%	82	82	70	VLBUC12060120R15LF3
170±15%	170±15%	100	0.125±10%	0.45±10%	70	70	70	VLBUC12060120R17LF3
200±15%	200±15%	100	0.125±10%	0.45±10%	58	58	70	VLBUC12060120R20LF3

* Rated current: smaller value of either Isat or Itemp.

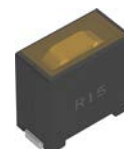
Isat: When based on the inductance change rate (20% below the initial value, under an environment of 20°C)

Itemp: When based on the temperature increase (temperature increase of 40°C by self heating)

Measurement equipment

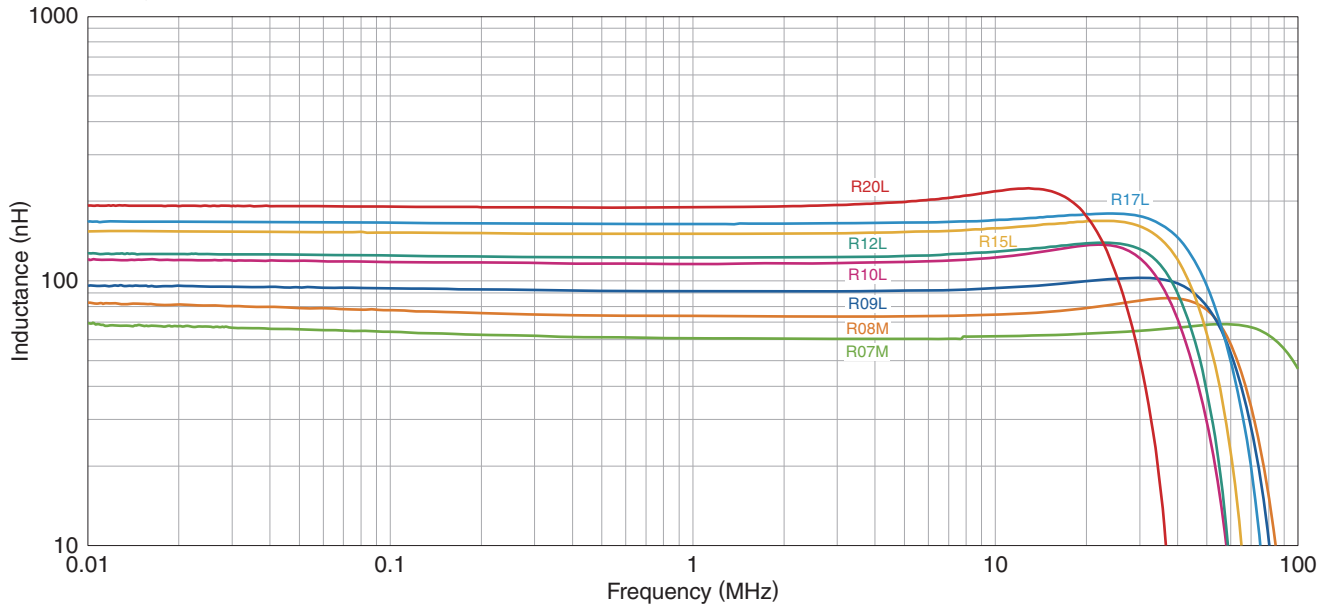
Measurement item	Product No.	Manufacturer
L	IM3536	HIOKI
DC resistance	RM3545	HIOKI
Rated current Isat	3260+3265B	Wayne Kerr Electronics

* Equivalent measurement equipment may be used.



VLBUC12060120 F3 type

■ L FREQUENCY CHARACTERISTICS

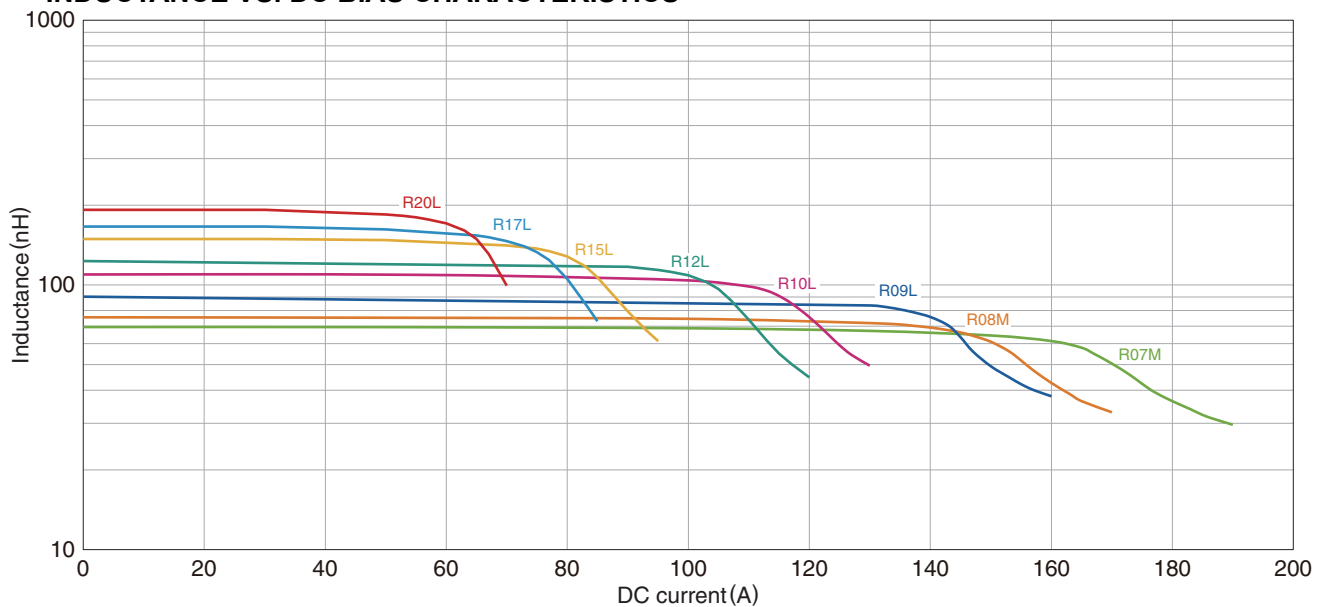


□ 測定器

Product No.	Manufacturer
4294A	Keysight Technologies

* Equivalent measurement equipment may be used.

■ INDUCTANCE VS. DC BIAS CHARACTERISTICS



□ 測定器

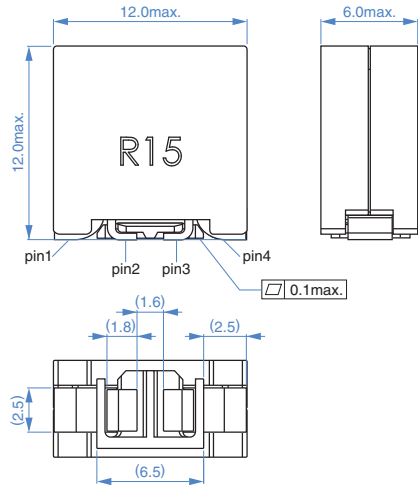
Product No.	Manufacturer
3260B+3265B	Wayne Kerr Electronics

* Equivalent measurement equipment may be used.

INDUCTORS TDK

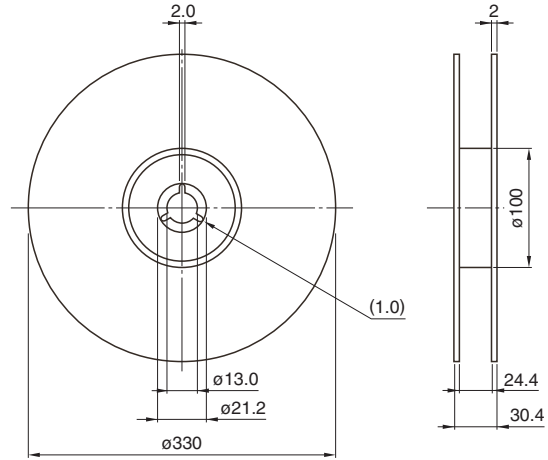
VLBUC12060120 F3 type

■ SHAPE & DIMENSIONS



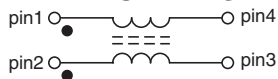
■ PACKAGING STYLE

□ REEL DIMENSIONS

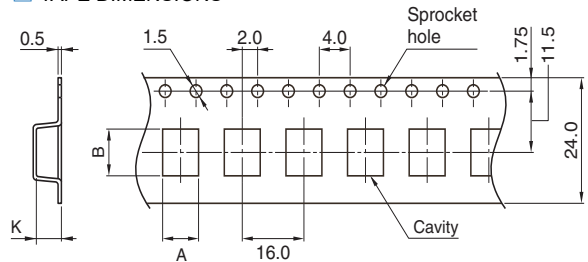


Dimensions in mm

■ CIRCUIT DIAGRAM

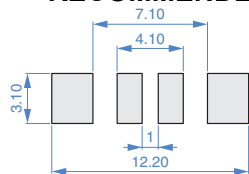


□ TAPE DIMENSIONS



Dimensions in mm

■ RECOMMENDED LAND PATTERN

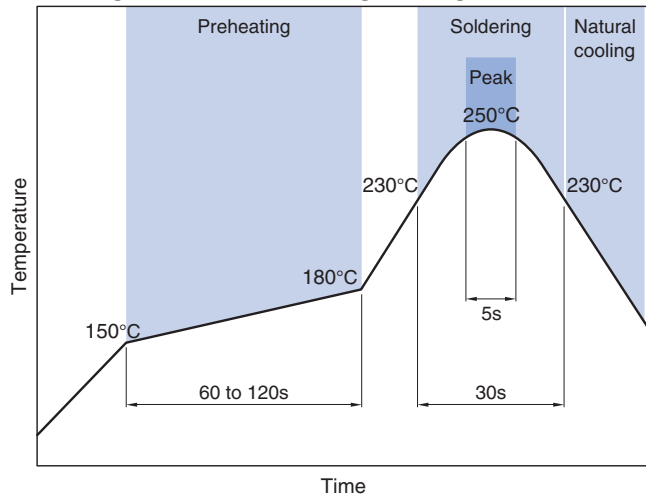


Type	A	B	K
VLBUC12060120 F3	(6.1)	(12.1)	(12.2)

□ PACKAGE QUANTITY

Package quantity	300 pcs/reel
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■ RECOMMENDED REFLOW PROFILE



■ TEMPERATURE RANGE, INDIVIDUAL WEIGHT

Operating temperature range *	Storage temperature range **	Individual weight
-40 to +125 °C	-40 to +125 °C	4.02 g

* Operating temperature range includes self-temperature rise.

** The storage temperature range is for after the assembly.

REMINDERS FOR USING THESE PRODUCTS

Before using these products, be sure to request the delivery specifications.

SAFETY REMINDERS

Please pay sufficient attention to the warnings for safe designing when using this products

REMINDERS

- The storage period is within 6 months. Be sure to follow the storage conditions (temperature: 5 to 30°C, humidity: 10 to 75% RH or less). If the storage period elapses, the soldering of the terminal electrodes may deteriorate.
- Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).
- Before soldering, be sure to preheat components.
The preheating temperature should be set so that the temperature difference between the solder temperature and chip temperature does not exceed 150°C.
- Soldering corrections after mounting should be within the range of the conditions determined in the specifications.
If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.
- When embedding a printed circuit board where a chip is mounted to a set, be sure that residual stress is not given to the chip due to the overall distortion of the printed circuit board and partial distortion such as at screw tightening portions.
- Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
- Carefully lay out the coil for the circuit board design of the non-magnetic shield type.
A malfunction may occur due to magnetic interference.
- Use a wrist band to discharge static electricity in your body through the grounding wire.
- Do not expose the products to magnets or magnetic fields.
- Do not use for a purpose outside of the contents regulated in the delivery specifications.
- The products listed on this catalog are intended for use in general electronic equipment (AV equipment, telecommunications equipment, home appliances, amusement equipment, computer equipment, personal equipment, office equipment, measurement equipment, industrial robots) under a normal operation and use condition.
The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property.
If you intend to use the products in the applications listed below or if you have special requirements exceeding the range or conditions set forth in the each catalog, please contact us.

- (1) Aerospace/aviation equipment
- (2) Transportation equipment (cars, electric trains, ships, etc.)
- (3) Medical equipment
- (4) Power-generation control equipment
- (5) Atomic energy-related equipment
- (6) Seabed equipment

- (7) Transportation control equipment
- (8) Public information-processing equipment
- (9) Military equipment
- (10) Electric heating apparatus, burning equipment
- (11) Disaster prevention/crime prevention equipment
- (12) Safety equipment
- (13) Other applications that are not considered general-purpose applications

When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.

OUR CERTIFICATE

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