VLF3010AT-3R3MR87 Datasheet

DiGi Electronics Part Number	VLF3010AT-3R3MR87-DG
Manufacturer	TDK Corporation
Manufacturer Product Number	VLF3010AT-3R3MR87
Description	FIXED IND 3.3UH 870MA 170MOHM SM
Detailed Description	3.3 µH Shielded Drum Core, Wirewound Inductor 870 mA 170mOhm Max Nonstandard

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Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
VLF3010AT-3R3MR87	TDK Corporation
Series:	Product Status:
VLF	Obsolete
Type:	Material - Core:
Drum Core, Wirewound	Ferrite
Inductance:	Tolerance:
3.3 µH	±20%
Current Rating (Amps):	Current - Saturation (Isat):
870 mA	870mA
Shielding:	DC Resistance (DCR):
Shielded	170mOhm Max
Q @ Freq:	Frequency - Self Resonant:
-	-
Ratings:	Operating Temperature:
-	-40°C ~ 105°C
Inductance Frequency - Test:	Mounting Type:
100 kHz	Surface Mount
Package / Case:	Supplier Device Package:
Nonstandard	-
Size / Dimension:	Height - Seated (Max):
0.110" L x 0.102" W (2.80mm x 2.60mm)	0.039" (1.00mm)

Environmental & Export classification

Moisture Sensitivity Level (MSL):	REACH Status:
1 (Unlimited)	REACH Unaffected
ECCN:	HTSUS:
EAR99	8504.50.4000

TDK

SMD Inductors(Coils)
For Power Line(Wound, Magnetic Shielded)

Conformity to RoHS Directive

VLF Series VLF3010A

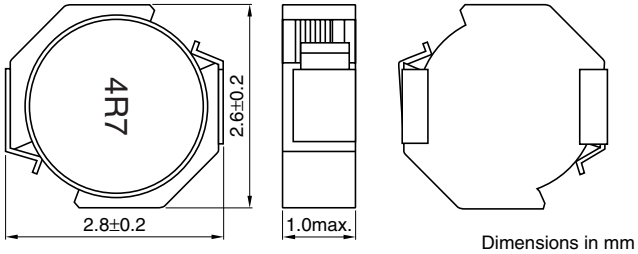
FEATURES

- These are compact inductors for power line measuring at L2.6× W2.8mm and 1mm in height, considerably smaller compared to inductors with comparable characteristics.
- They feature low coil resistance, making them suitable for large currents (e.g. 0.7A at 0.24Ω).
- They offer an excellent shielding effect.
- The products do not contain lead and support lead-free soldering.
- This product does not contain regulated substances that are slated to be included in RoHS.

APPLICATIONS

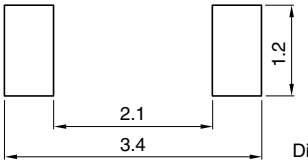
For mobile phones, hard disk drives and DSCs.

SHAPES AND DIMENSIONS



Dimensions in mm

RECOMMENDED PC BOARD PATTERN



Dimensions in mm

ELECTRICAL CHARACTERISTICS

Part No.	Inductance (μH)	Inductance tolerance	Test frequency (kHz)	DC resistance(Ω)		Rated current*(A)	
				max.	typ.	Based on inductance change max.	Based on temperature rise typ.
VLF3010AT-1R5N1R2	1.5	±30%	100	0.078	0.068	1.2	1.5
VLF3010AT-2R2M1R0	2.2	±20%	100	0.12	0.10	1.0	1.2
VLF3010AT-3R3MR87	3.3	±20%	100	0.17	0.15	0.87	1.0
VLF3010AT-4R7MR70	4.7	±20%	100	0.28	0.24	0.70	0.82
VLF3010AT-6R8MR61	6.8	±20%	100	0.39	0.34	0.61	0.68
VLF3010AT-100MR49	10.0	±20%	100	0.67	0.58	0.49	0.52
VLF3010AT-150MR40	15.0	±20%	100	0.86	0.75	0.40	0.46
VLF3010AT-220MR33	22.0	±20%	100	1.5	1.3	0.33	0.35

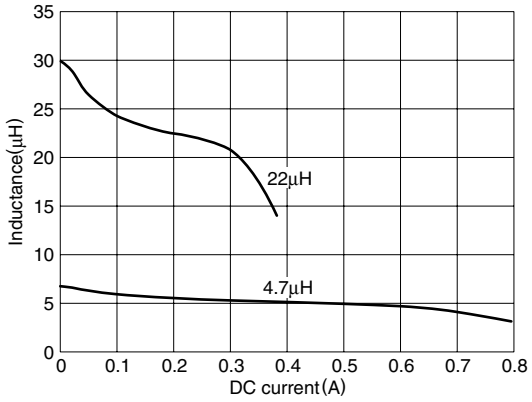
* Rated current:The rated current is the smaller of the values given based on the rate of inductance change (30% decrease from the initial value) or the temperature rise (temperature rise of 40°C caused by the heat generated by the product itself).

• Operating temperature range: –40 to +105°C (Including self-temperature rise)

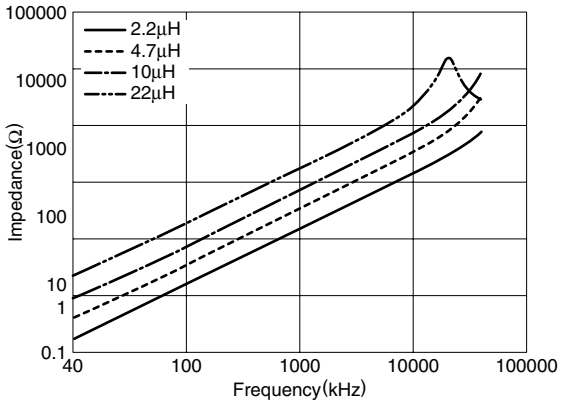
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

TYPICAL ELECTRICAL CHARACTERISTICS

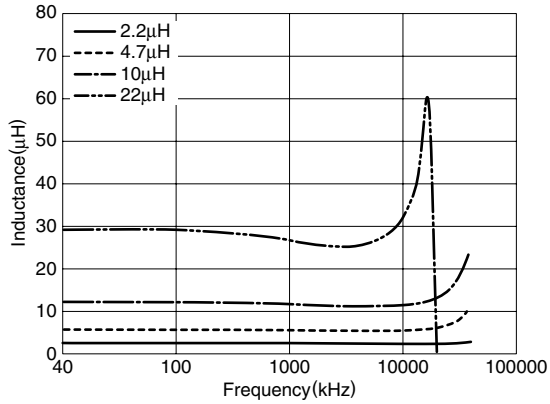
INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



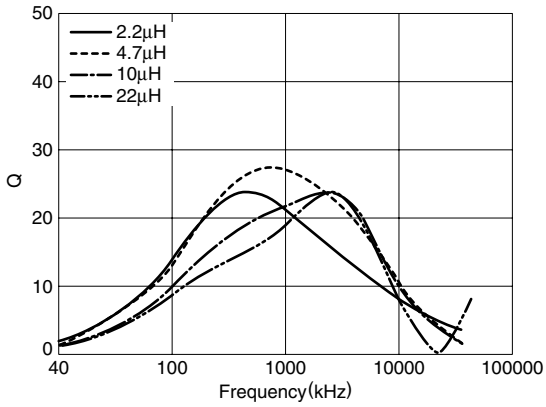
IMPEDANCE vs. FREQUENCY CHARACTERISTICS



INDUCTANCE vs. FREQUENCY CHARACTERISTICS

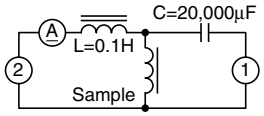


Q vs. FREQUENCY CHARACTERISTICS



• Test equipment: YHP4194A IMPEDANCE/GAIN-PHASE ANALYZER(10kHz to 40MHz)

TEST CIRCUIT



1: LCR meter 4285A=100kHz
2: DC constant current

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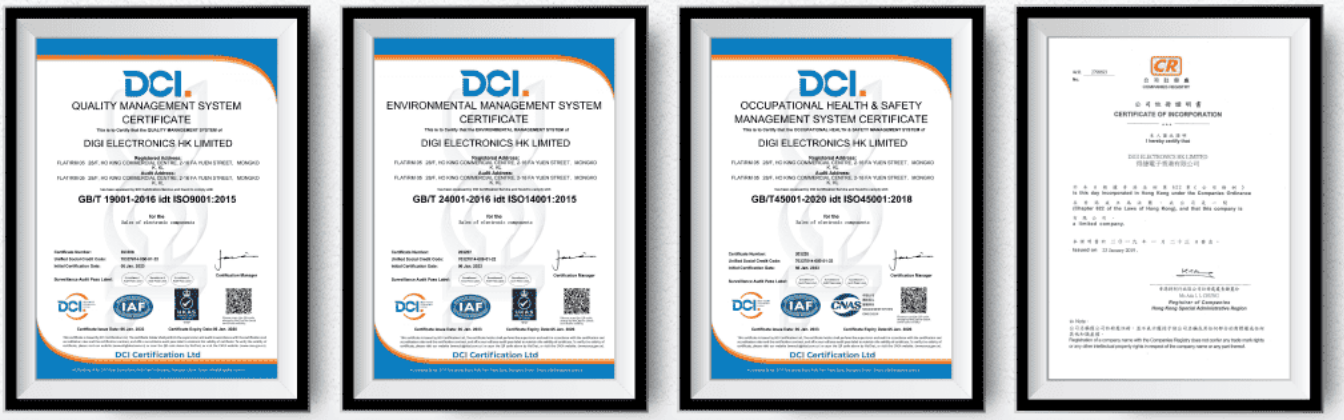

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