

Inductors for Power Circuits

Wound/STD • magnetic shielded

VLCF series

Type: VLCF4018-2 (4.0x4.0 mm)
 VLCF4020 (4.0x4.0 mm)
 VLCF4024-2 (4.0x4.0 mm)
 VLCF4028-2 (4.0x4.0 mm)
 VLCF5020 (5.0x5.0 mm)
 VLCF5020-1 (5.0x5.0 mm)
 VLCF5020-3 (5.0x5.0 mm)
 VLCF5024-2 (5.0x5.0 mm)
 VLCF5028-2 (5.0x5.0 mm)

Issue date: October 2012

- All specifications are subject to change without notice.
- 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.

Conformity to RoHS Directive

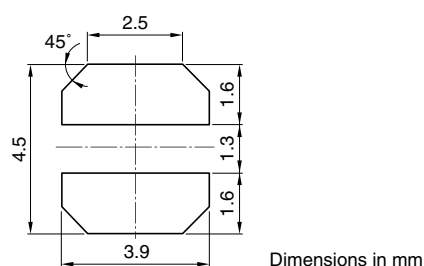
FEATURES

- ## APPLICATIONS

SHAPES AND DIMENSIONS



RECOMMENDED PC BOARD PATTERN



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.
VLCF4018T-1R6N1R7-2	1.6	±30	100	0.051	0.044	1.72	2.42
VLCF4018T-2R2N1R4-2	2.2	±30	100	0.06	0.052	1.44	2.23
VLCF4018T-3R3N1R2-2	3.3	±30	100	0.079	0.069	1.26	1.93
VLCF4018T-4R7N1R0-2	4.7	±30	100	0.101	0.088	1.07	1.72
VLCF4018T-6R8NR94-2	6.8	±30	100	0.124	0.108	0.94	1.55
VLCF4018T-100MR74-2	10	±20	100	0.188	0.163	0.74	1.26
VLCF4018T-150MR59-2	15	±20	100	0.268	0.233	0.59	1.1
VLCF4018T-220MR49-2	22	±20	100	0.369	0.321	0.49	0.9
VLCF4018T-330MR42-2	33	±20	100	0.54	0.469	0.42	0.74
VLCF4018T-470MR34-2	47	±20	100	0.76	0.661	0.34	0.62

- Operating temperature range: -40 to $+105^{\circ}\text{C}$ (Including self-temperature rise)

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Inductors for Power Circuits

Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

VLCF Series VLCF4020

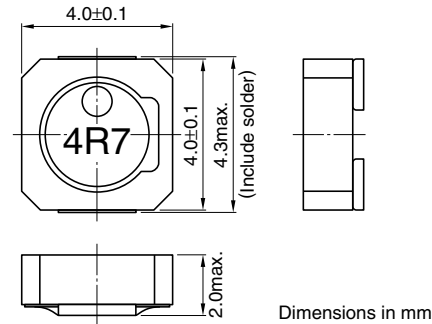
FEATURES

- Miniature size
Mount area: 4×4mm
Height: 2.0mm max.
- Generic use for portable DC to DC converter line
- High magnetic shield construction should actualize high resolution for EMC protection.
- Available for automatic mounting in tape and reel package.
- The products do not contain lead and support lead-free soldering.

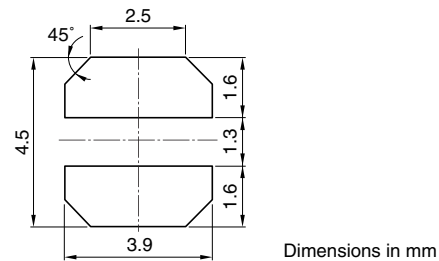
APPLICATIONS

DC to DC converters for DVC, DSC, PDA, MD, LCD displays, HDDs, etc.

SHAPES AND DIMENSIONS



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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.
VLCF4020T-1R8N1R9	1.8	±30	100	0.051	0.046	1.97	2.37
VLCF4020T-2R2N1R7	2.2	±30	100	0.059	0.054	1.72	2.19
VLCF4020T-3R3N1R5	3.3	±30	100	0.078	0.071	1.52	1.94
VLCF4020T-4R7N1R2	4.7	±30	100	0.098	0.089	1.24	1.71
VLCF4020T-6R8N1R0	6.8	±30	100	0.131	0.119	1.05	1.47
VLCF4020T-100MR85	10	±20	100	0.185	0.168	0.85	1.22
VLCF4020T-150MR68	15	±20	100	0.303	0.275	0.68	1.0
VLCF4020T-220MR56	22	±20	100	0.431	0.391	0.56	0.8
VLCF4020T-270MR48	27	±20	100	0.496	0.451	0.48	0.8
VLCF4020T-330MR47	33	±20	100	0.628	0.571	0.47	0.69
VLCF4020T-470MR39	47	±20	100	0.934	0.849	0.39	0.56
VLCF4020T-101MR26	100	±20	100	1.4	1.308	0.26	0.45

* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

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

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Inductors for Power Circuits

Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

VLCF Series VLCF4024-2

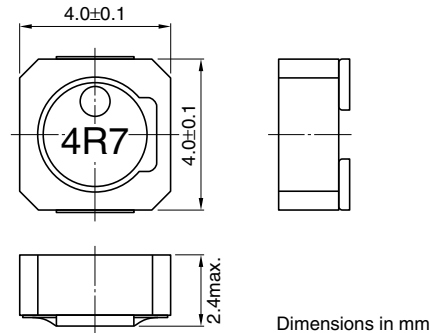
FEATURES

- Miniature size
Mount area: 4×4mm
Height: 2.4mm max.
- Generic use for portable DC to DC converter line
- High magnetic shield construction should actualize high resolution for EMC protection.
- Available for automatic mounting in tape and reel package.
- The products do not contain lead and support lead-free soldering.

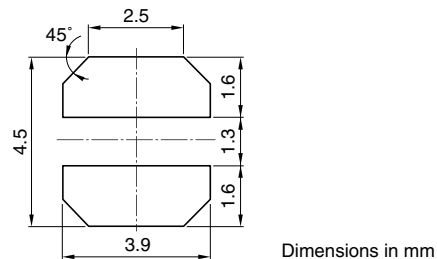
APPLICATIONS

DC to DC converters for DVC, DSC, PDA, MD, LCD displays, HDDs, cellular phones, etc.

SHAPES AND DIMENSIONS



RECOMMENDED PC BOARD PATTERN



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.
VLCF4024T-1R2N2R4-2	1.2	±30%	100	0.032	0.027	2.46	3.09
VLCF4024T-1R6N2R1-2	1.6	±30%	100	0.039	0.035	2.10	2.61
VLCF4024T-2R2N1R7-2	2.2	±30%	100	0.043	0.039	1.76	2.43
VLCF4024T-3R3N1R6-2	3.3	±30%	100	0.068	0.061	1.60	1.96
VLCF4024T-4R7N1R4-2	4.7	±30%	100	0.087	0.075	1.43	1.76
VLCF4024T-6R8N1R1-2	6.8	±30%	100	0.116	0.101	1.15	1.54
VLCF4024T-100MR90-2	10	±20%	100	0.136	0.119	0.90	1.37
VLCF4024T-150MR80-2	15	±20%	100	0.198	0.172	0.80	1.05
VLCF4024T-220MR65-2	22	±20%	100	0.332	0.28	0.65	0.90
VLCF4024T-330MR55-2	33	±20%	100	0.438	0.38	0.55	0.74
VLCF4024T-470MR44-2	47	±20%	100	0.644	0.56	0.44	0.64
VLCF4024T-101MR30-2	100	±20%	100	1.21	1.05	0.30	0.48

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- 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.

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Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

VLCF Series VLCF4028-2

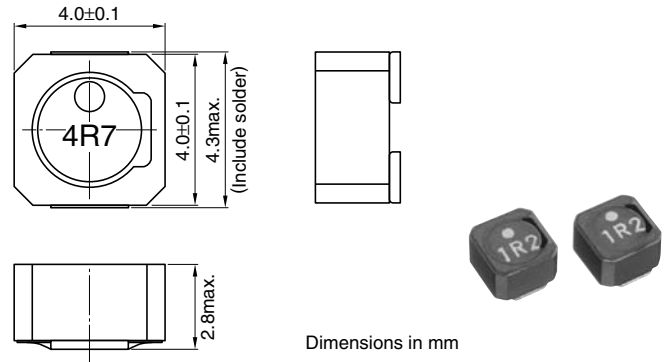
FEATURES

- Mount area: 4×4mm
Low profile: 2.8mm max. height
- Generic use for portable DC to DC converter line.
- High magnetic shield construction should actualize high resolution for EMC protection.
- Available for automatic mounting in tape and reel package.
- The products contain no lead and also support lead-free soldering.
- It is a product conforming to RoHS directive.

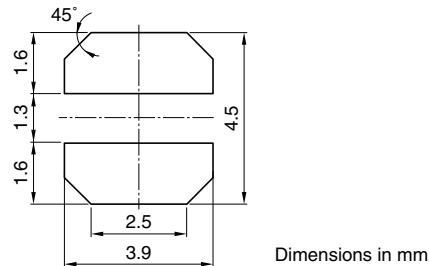
APPLICATIONS

Power source inductor for mobile devices such as mobile phones, HDDs, and DSCs

SHAPES AND DIMENSIONS



RECOMMENDED PC BOARD PATTERN



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.
VLCF4028T-1R2N2R7-2	1.2	±30	100	0.032	0.027	2.71	3.11
VLCF4028T-1R6N2R3-2	1.6	±30	100	0.038	0.032	2.31	2.85
VLCF4028T-2R2N1R9-2	2.2	±30	100	0.043	0.037	1.94	2.63
VLCF4028T-2R7N1R8-2	2.7	±30	100	0.049	0.043	1.89	2.46
VLCF4028T-4R7N1R5-2	4.7	±30	100	0.062	0.054	1.57	2.18
VLCF4028T-6R8N1R3-2	6.8	±30	100	0.1	0.09	1.36	1.69
VLCF4028T-100M1R0-2	10	±20	100	0.14	0.12	1.06	1.45
VLCF4028T-150MR88-2	15	±20	100	0.17	0.15	0.88	1.05
VLCF4028T-220MR72-2	22	±20	100	0.24	0.21	0.72	0.9
VLCF4028T-330MR61-2	33	±20	100	0.35	0.3	0.61	0.74
VLCF4028T-470MR48-2	47	±20	100	0.49	0.42	0.48	0.78
VLCF4028T-101MR33-2	100	±20	100	1	0.87	0.33	0.55
VLCF4028T-471MR14-2	470	±20	100	4.58	3.98	0.14	0.25

* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

- 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.

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Inductors for Power Circuits

Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

VLCF Series VLCF5020

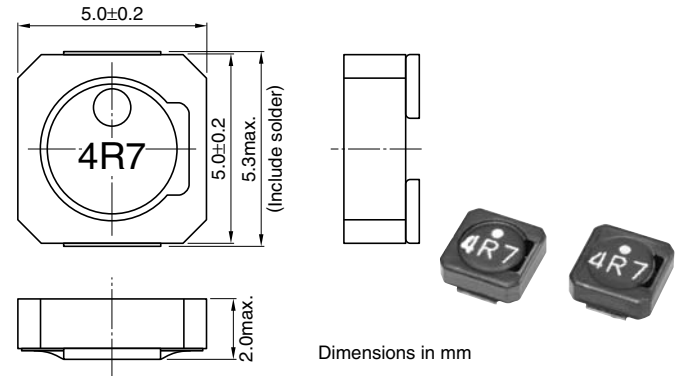
FEATURES

- Miniature size
Mount area: 5×5mm
Height: 2.0mm max.
- Generic use for portable DC to DC converter line
- High magnetic shield construction should actualize high resolution for EMC protection.
- Available for automatic mounting in tape and reel package.
- The products do not contain lead and support lead-free soldering.

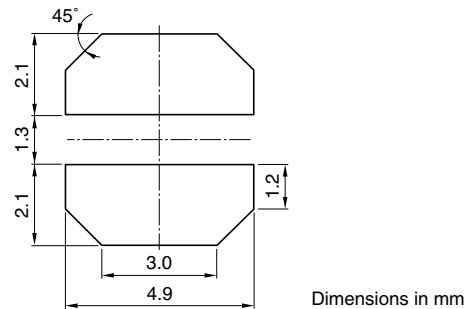
APPLICATIONS

DC to DC converters for DVC, DSC, PDA, MD, LCD displays, HDDs, etc.

SHAPES AND DIMENSIONS



RECOMMENDED PC BOARD PATTERN



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.
VLCF5020T-1R8N2R0	1.8	±30%	100	0.059	0.049	2.07	2.75
VLCF5020T-2R7N1R7	2.7	±30%	100	0.071	0.058	1.76	2.51
VLCF5020T-3R3N1R6	3.3	±30%	100	0.083	0.069	1.6	2.31
VLCF5020T-4R7N1R4	4.7	±30%	100	0.096	0.079	1.4	2.15
VLCF5020T-6R8N1R1	6.8	±30%	100	0.122	0.102	1.11	1.9
VLCF5020T-100MR87	10	±20%	100	0.182	0.151	0.87	1.56
VLCF5020T-150MR71	15	±20%	100	0.256	0.214	0.71	1.3
VLCF5020T-220MR58	22	±20%	100	0.373	0.311	0.58	1.1
VLCF5020T-330MR48	33	±20%	100	0.522	0.435	0.48	0.92
VLCF5020T-470MR40	47	±20%	100	0.748	0.623	0.40	0.77
VLCF5020T-101MR27	100	±20%	100	1.581	1.375	0.27	0.52

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

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Inductors for Power Circuits

Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

VLCF Series VLCF5020-1

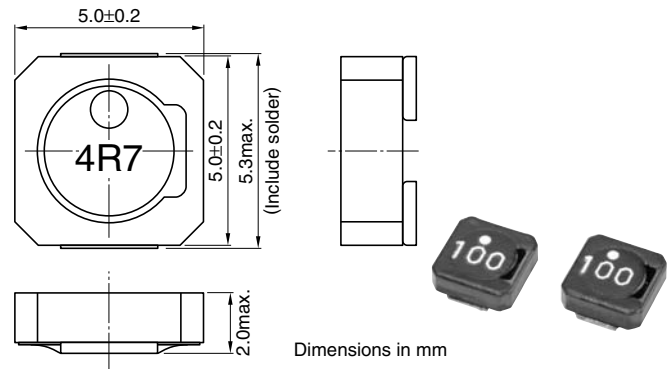
FEATURES

- Miniature size
Mount area: 5×5mm
Height: 2.0mm max.
- Generic use for portable DC to DC converter line
- High magnetic shield construction should actualize high resolution for EMC protection.
- Available for automatic mounting in tape and reel package.
- The products do not contain lead and support lead-free soldering.

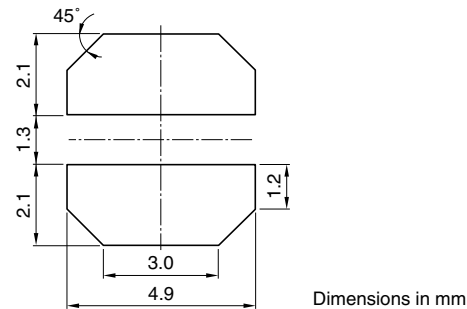
APPLICATIONS

DC to DC converters for DVC, DSC, PDA, MD, LCD displays, HDDs, etc.

SHAPES AND DIMENSIONS



RECOMMENDED PC BOARD PATTERN



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.
VLCF5020T-2R2N2R6-1	2.2	±30%	100	0.071	0.058	2.62	2.76
VLCF5020T-2R7N2R2-1	2.7	±30%	100	0.083	0.069	2.28	2.55
VLCF5020T-3R3N2R0-1	3.3	±30%	100	0.096	0.079	2.02	2.37
VLCF5020T-4R7N1R7-1	4.7	±30%	100	0.122	0.102	1.7	2.09
VLCF5020T-6R8N1R3-1	6.8	±30%	100	0.165	0.138	1.39	1.8
VLCF5020T-100M1R1-1	10	±20%	100	0.237	0.198	1.13	1.5
VLCF5020T-150MR90-1	15	±20%	100	0.35	0.292	0.90	1.2
VLCF5020T-220MR75-1	22	±20%	100	0.496	0.413	0.75	1.0
VLCF5020T-330MR62-1	33	±20%	100	0.717	0.597	0.62	0.86
VLCF5020T-470MR51-1	47	±20%	100	1.05	0.875	0.51	0.71

* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

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

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Inductors for Power Circuits

Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

VLCF Series VLCF5020-3

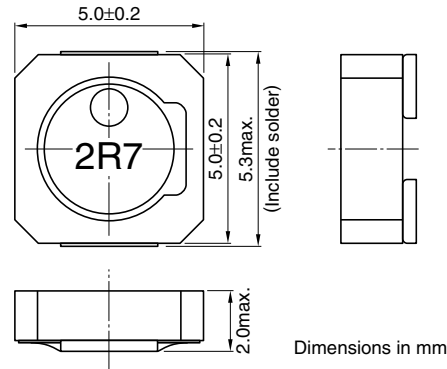
FEATURES

- Miniature size
Mount area: 5×5mm
Height: 2.0mm max.
- Generic use for portable DC to DC converter line
- High magnetic shield construction should actualize high resolution for EMC protection.
- Available for automatic mounting in tape and reel package.
- The products contain no lead and also support lead-free soldering.

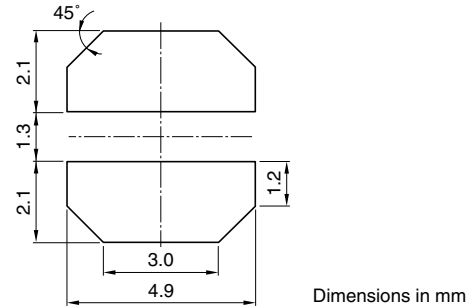
APPLICATIONS

DC to DC converters for DVC, DSC, PDA, MD, LCD displays, HDDs, cellular phones, etc.

SHAPES AND DIMENSIONS



RECOMMENDED PC BOARD PATTERN



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.
VLCF5020T-2R2N2R6-3	2.2	±30%	100	0.043	0.038	2.62	3.25
VLCF5020T-2R7N2R2-3	2.7	±30%	100	0.054	0.046	2.28	2.98
VLCF5020T-3R3N2R0-3	3.3	±30%	100	0.065	0.055	2.02	2.76

* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

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VLCF Series VLCF5024-2

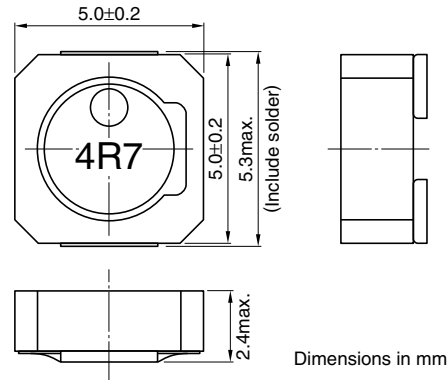
FEATURES

- Miniature size
Mount area: 5×5mm
Height: 2.4mm max.
- Generic use for portable DC to DC converter line
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APPLICATIONS

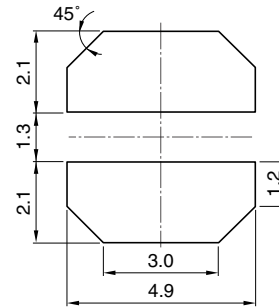
DC to DC converters for DVC, DSC, PDA, MD, LCD displays, HDDs, etc.

SHAPES AND DIMENSIONS



Dimensions in mm

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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.
VLCF5024T-1R8N1R8-2	1.8	±30%	100	0.026	0.022	1.86	4.05
VLCF5024T-2R7N1R5-2	2.7	±30%	100	0.031	0.027	1.53	3.67
VLCF5024T-3R3N1R4-2	3.3	±30%	100	0.037	0.032	1.46	3.37
VLCF5024T-4R7N1R3-2	4.7	±30%	100	0.044	0.038	1.33	3.11
VLCF5024T-6R8N1R1-2	6.8	±30%	100	0.061	0.053	1.11	2.62
VLCF5024T-100MR88-2	10	±20%	100	0.092	0.080	0.88	2.14
VLCF5024T-150MR71-2	15	±20%	100	0.152	0.133	0.71	1.66
VLCF5024T-220MR59-2	22	±20%	100	0.188	0.164	0.59	1.50
VLCF5024T-330MR50-2	33	±20%	100	0.275	0.239	0.50	1.24
VLCF5024T-470MR40-2	47	±20%	100	0.383	0.333	0.40	1.05
VLCF5024T-101MR28-2	100	±20%	100	0.838	0.762	0.28	0.72

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VLCF Series VLCF5028-2

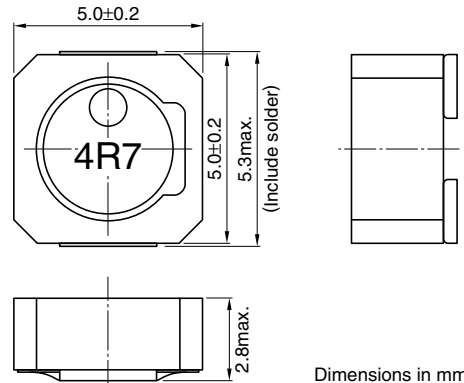
FEATURES

- Miniature size
Mount area: 5×5mm
Height: 2.8mm max.
- Generic use for portable DC to DC converter line.
- High magnetic shield construction should actualize high resolution for EMC protection.
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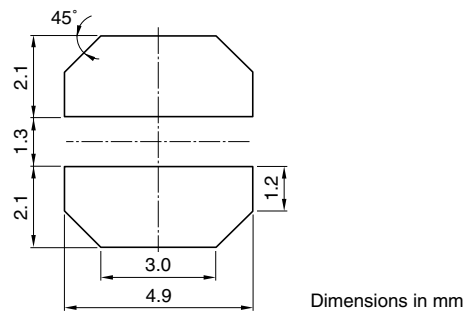
APPLICATIONS

DC to DC converters for DVCs, DSCs, PDAs, MDs, LCD displays, HDDs, etc.

SHAPES AND DIMENSIONS



RECOMMENDED PC BOARD PATTERN



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.
VLCF5028T-1R3N2R5-2	1.3	±30	100	0.022	0.019	2.56	4.32
VLCF5028T-1R8N2R2-2	1.8	±30	100	0.028	0.023	2.22	3.88
VLCF5028T-2R7N1R8-2	2.7	±30	100	0.033	0.028	1.82	3.53
VLCF5028T-3R3N1R7-2	3.3	±30	100	0.037	0.032	1.74	3.26
VLCF5028T-4R7N1R5-2	4.7	±30	100	0.043	0.038	1.58	3.03
VLCF5028T-6R8N1R3-2	6.8	±30	100	0.056	0.048	1.32	2.67
VLCF5028T-100M1R0-2	10	±20	100	0.083	0.072	1.05	2.19
VLCF5028T-150MR85-2	15	±20	100	0.12	0.1	0.85	1.85
VLCF5028T-220MR71-2	22	±20	100	0.14	0.13	0.71	1.66
VLCF5028T-330MR62-2	33	±20	100	0.24	0.21	0.62	1.3
VLCF5028T-470MR49-2	47	±20	100	0.33	0.29	0.49	1.1
VLCF5028T-560MR43-2	56	±20	100	0.41	0.36	0.43	0.98
VLCF5028T-680MR40-2	68	±20	100	0.46	0.4	0.4	0.93
VLCF5028T-101MR33-2	100	±20	100	0.67	0.58	0.33	0.77
VLCF5028T-221MR22-2	220	±20	100	1.38	1.2	0.22	0.54
VLCF5028T-471MR14-2	470	±20	100	3.12	2.71	0.14	0.35

* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

- 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.

• All specifications are subject to change without notice.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.