

Inductors for power circuits

Wound ferrite

VLS-E-CA series (For automobiles)

VLS2012E-CA type

VLS2012E-CA



The products in this catalog is not recommended to a new design

Please refer to our Web site about replacement information.



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 these products.

⚠ REMINDERS	
 The storage period is less than 12 months. Be sure to follow the storage conditions (Temperature: 5 to 40°C, For less). If the storage period elapses, the soldering of the terminal electrodes may deteriorate. 	lumidity: 10 to 75% RH
On 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 does not exceed 150°C. 	and chip temperature
 Soldering corrections after mounting should be within the range of the conditions determined in the specification If overheated, a short circuit, performance deterioration, or lifespan shortening may occur. 	ns.
When embedding a printed circuit board where a chip is mounted to a set, be sure that residual stress is not gi the overall distortion of the printed circuit board and partial distortion such as at screw tightening portions.	ven to the chip due to
 Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient design. 	for the set thermal
 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.	
On not expose the products to magnets or magnetic fields.	
On 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, telecon equipment, home appliances, amusement equipment, computer equipment, personal equipment, office 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 paper quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause	nent, measurement
society, person or property.	

- (1) Aerospace/Aviation equipment
- (2) Transportation equipment (electric trains, ships, etc.)

set forth in the each catalog, please contact us.

- (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.



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Product compatible with RoHS directive Halogen-free

Overview of VLS2012E-CA type

FEATURES

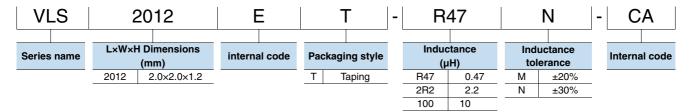
- Magnetic shield type wound inductor for power circuits.
- O Low-profile product.
- O High magnetic shield construction and compatible with high-density mounting.

APPLICATION

Car navigation, car stereo and car accessories only

* Not available for use related to driving, curving, stopping, and the other safety.

PART NUMBER CONSTRUCTION



■ OPERATING TEMPERATURE RANGE, PACKAGE QUANTITY, PRODUCT WEIGHT

	Temperat	ure range	Package quantity	Individual weight
Туре	Operating Storage temperature**			
	(°C)	(°C)	(pieces/reel)	(mg)
VLS2012E-CA	-40 to +105	-40 to +105	2000	17

^{*} Operating temperature range includes self-temperature rise.

^{**} The Storage temperature range is for after the circuit board is mounted.

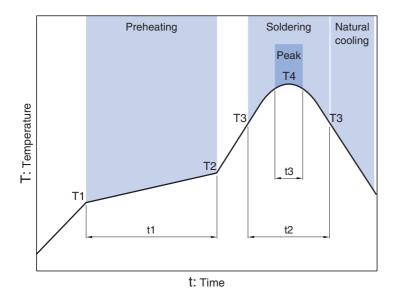
RoHS Directive Compliant Product: See the following for more details.https://product.tdk.com/info/en/environment/rohs/index.html

O Halogen-free: Indicates that CI content is less than 900ppm, Br content is less than 900ppm, and that the total CI and Br content is less than 1500ppm.



VLS2012E-CA type

■ RECOMMENDED REFLOW PROFILE

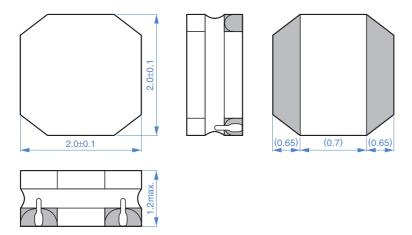


Preheating	g		Soldering		Peak	
Temp.		Time	Temp.	Time	Temp.	Time
T1	T2	t1	T3	t2	T4	t3
150°C	180°C	60 to 120s	230°C	30s	260°C	10s



VLS2012E-CA type

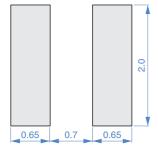
SHAPE & DIMENSIONS





Dimensions in mm

■ RECOMMENDED LAND PATTERN



Dimensions in mm



VLS2012E-CA type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

L		Measuring frequency	DC resista	DC resistance Rated current*		Part No.		
(LI)	Talawanaa	(MHz)	(O)may	(O) No. 100	Isat (A)may	Isat	Itemp	
(μH)	Tolerance	(IVITZ)	(Ω)max.	(Ω)typ.	(A)max.	(A)typ.	(A)typ.	
0.47	±30%	1.0	0.059	0.049	2.05	2.25	2.00	VLS2012ET-R47N-CA
0.68	±30%	1.0	0.066	0.055	1.70	1.90	1.85	VLS2012ET-R68N-CA
1.0	±30%	1.0	0.086	0.071	1.45	1.65	1.65	VLS2012ET-1R0N-CA
1.5	±30%	1.0	0.108	0.090	1.20	1.30	1.45	VLS2012ET-1R5N-CA
2.2	±20%	1.0	0.153	0.127	1.00	1.10	1.25	VLS2012ET-2R2M-CA
3.3	±20%	1.0	0.228	0.190	0.84	0.93	1.00	VLS2012ET-3R3M-CA
4.7	±20%	1.0	0.336	0.280	0.70	0.78	0.84	VLS2012ET-4R7M-CA
6.8	±20%	1.0	0.498	0.415	0.57	0.64	0.69	VLS2012ET-6R8M-CA
10	±20%	1.0	0.834	0.695	0.47	0.52	0.53	VLS2012ET-100M-CA
15	±20%	1.0	1.062	0.885	0.40	0.44	0.47	VLS2012ET-150M-CA
22	±20%	1.0	1.764	1.470	0.33	0.37	0.35	VLS2012ET-220M-CA

^{*} Rated current: smaller value of either lsat or Itemp.

Isat: When based on the inductance change rate (30% below the nominal value)

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

O Measurement equipment

Measurement item	Product No.	Manufacturer
L	4194A	Keysight Technologies
DC resistance	VP-2941A	Panasonic
Rated current Isat	4285A+42841A+42842C	Keysight Technologies

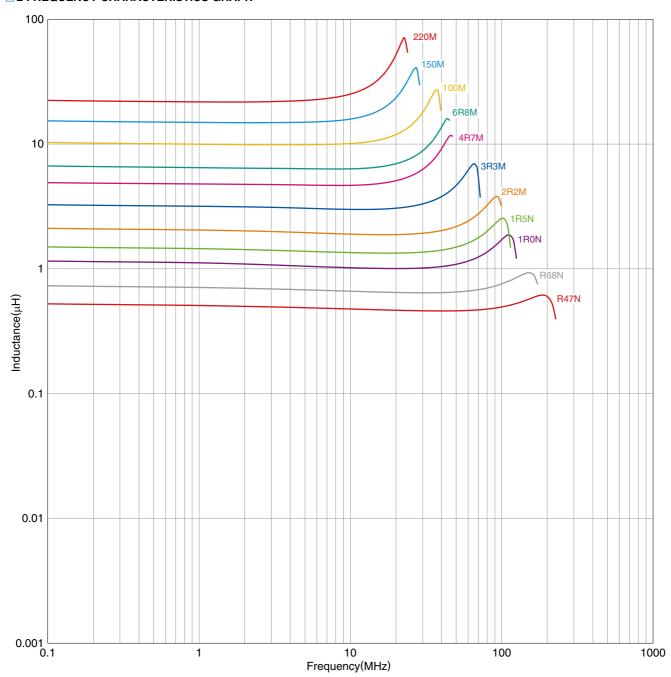
^{*} Equivalent measurement equipment may be used.



VLS2012E-CA type

ELECTRICAL CHARACTERISTICS

L FREQUENCY CHARACTERISTICS GRAPH



O Measurement equipment

Product No.	Manufacturer
4294A	Keysight Technologies

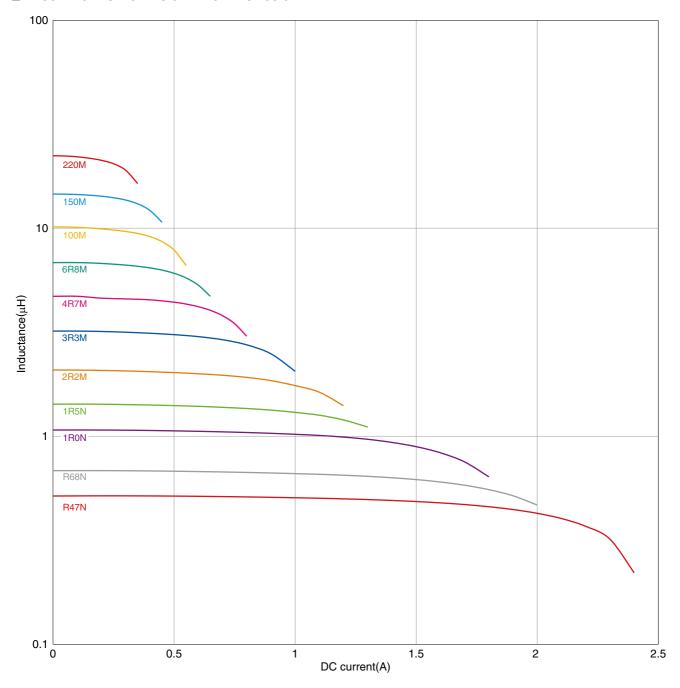
^{*} Equivalent measurement equipment may be used.



VLS2012E-CA type

ELECTRICAL CHARACTERISTICS

□INDUCTANCE VS. DC BIAS CHARACTERISTICS GRAPH



O Measurement equipment

Product No.	Manufacturer
4285A+42841A+42842C	Keysight Technologies

^{*} Equivalent measurement equipment may be used.



Ε

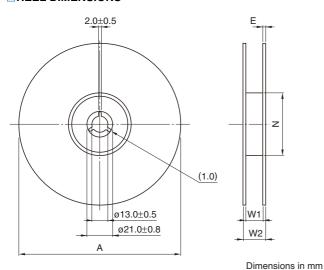
0.5

ø60

VLS2012E-CA type

■ PACKAGING STYLE

REEL DIMENSIONS



Type

VLS2012E-CA

* These values are typical values.

W1

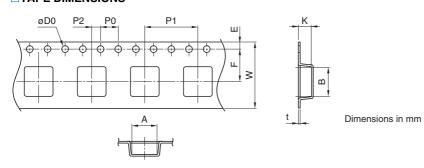
9

ø180

W2

13

TAPE DIMENSIONS



Туре	Α	В	øD0	Е	F	P0	P1	P2	W	K	t
VLS2012E-CA	2.2	2.2	1.5+0.10/-0	1.75±0.1	3.5±0.05	4.0±0.1	4.0±0.1	2.00±0.05	8.0±0.2	1.35	0.25



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

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