

# CODACA

## PRODUCT CATALOG

### Automotive Component



CODACA ELECTRONIC CO., LTD

CODACA is a professional manufacturer of power inductor, common mode choke and other magnetic components which are used in a variety of automotive applications. CODACA provides a wide range of automotive grade magnetics solutions for car chargers, DC-DC converters, LED drivers, assisted driving systems (ADAS), infotainment, motor drives, T-BOX systems, etc.

Our products include high current power inductor, molding power choke, inductor for digital amplifier, common mode choke and customized power inductors made of round, flat wire or litz wire, rod core chokes with automotive grade. The products are 100% tailored to the requirements of our customers and the respective applications, including AEC-Q200 standard and PPAP requirement.

Automotive-grade products are manufactured in factories certified by IATF16949. CODACA has a CNAS-accredited laboratory. With high-quality inductor products and services, CODACA lays the foundation for the safe, environmentally friendly and intelligent development of a new generation of vehicles.





IATF16949



PPAP available



CNAS certificated laboratory,  
products meet AEC-Q200 standard



Magnetic component manufacturer,  
100% independent R&D and production



Online design tool, which can realize  
fast and accurate inductor selection



Core material developed by CODACA,  
which can provide flexible and efficient  
sample and mass production delivery



CODACA has leading high current power  
inductor development and customization  
ability, advanced production capacity



Professional FAE technical support,  
timely provide solutions



Comfort Positioning

- Window Lifts
- Seat Positioning



Vehicle Lighting

- HID
- LED



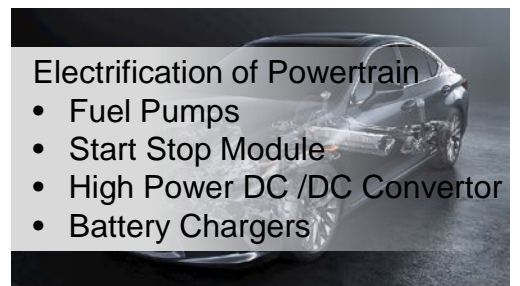
Instrumentation

- Infotainment
- ADAS



Vehicle Networks

- CAN Flexray
- Ethernet
- LIN



Electrification of Powertrain

- Fuel Pumps
- Start Stop Module
- High Power DC /DC Converter
- Battery Chargers

### Measurement Lab

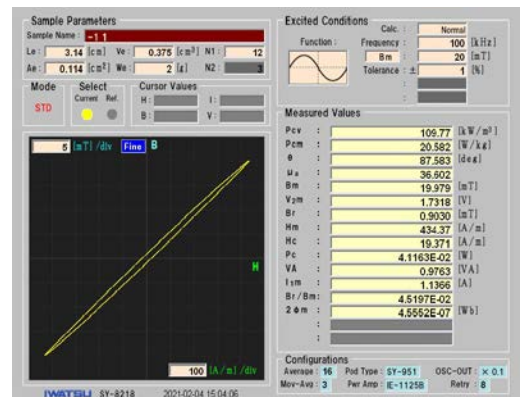
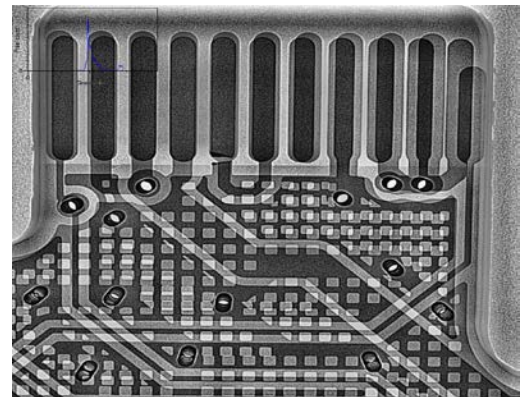
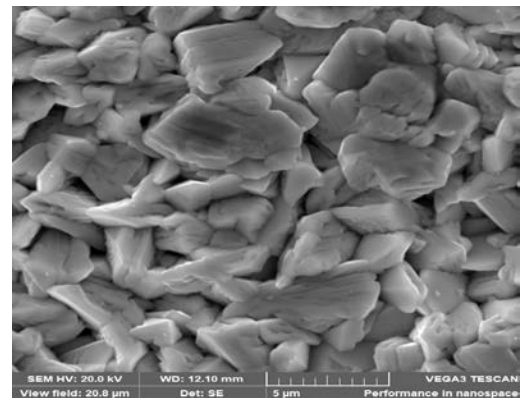
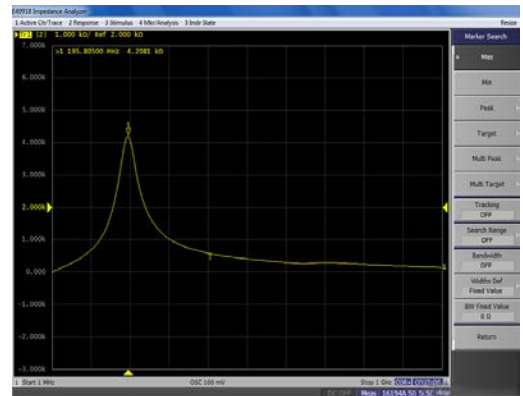
- High Frequency Impedance Analyzer
- High Frequency LCR Tester
- Precision Micro Resistance Meter
- Programmable Constant Current Source
- Withstand Voltage Tester

### Environmental Lab

- Constant Temp & Hum Test Chamber
- Thermal Shock Test Chamber
- Double-layer Temperature Test Chamber
- High and Low Temperature Test Chamber
- Steam Aging Tester
- Salt Spray Tester

### Analytical Lab

- X-Ray Inspection System
- Scanning Electron Microscope
- XRF Spectrograph
- BH Analyzer
- Particle Size Analyzer
- Cross Sectioning and Polishing Tester
- Electric Vibration System
- Mechanical Shock Tester
- Universal Testing Machine
- Drop Tester
- Wetting Balance
- Reflow Oven
- Wave Soldering Machine





# Quick Power Inductor Selection

DC-DC Converter Inductor Selection

Power Inductor Finder

Power Inductor Loss Comparison

DCR Temperature Calculator

Cross Reference Inductor Finder

Reference Design Inductor Finder

In order to easy high current power inductor selection, CODACA developed the online comprehensive magnetics products design tools to make it fast for circuit designers to select the right components to meet their increasingly complex and demanding application requirements.

## Get the Best Power Inductor by 6 Steps

**1**

Power Inductor Loss Comparison

Frequency\* 100 KHz

Ambient Temperat... 40 °C

Working Current\* 10 A

Ripple Current\* 30 % 2.60869 A

Model1\* CSEB0880 CSEB0880-1R0M

Model2 CSEB0880 CSEB0880-4R7M

Model3 CSEB0880 CSEB0880-100M

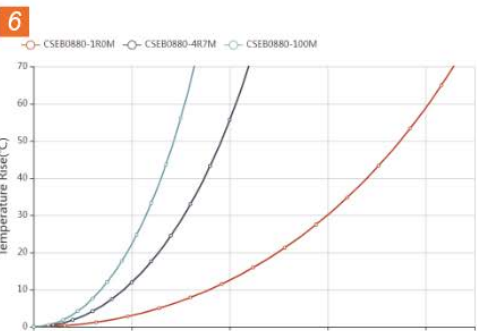
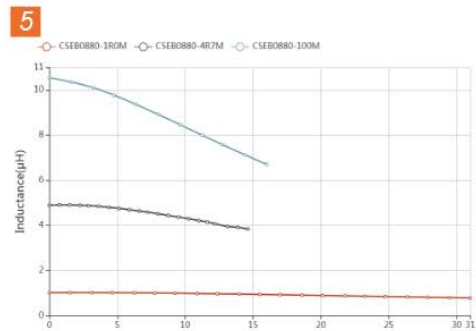
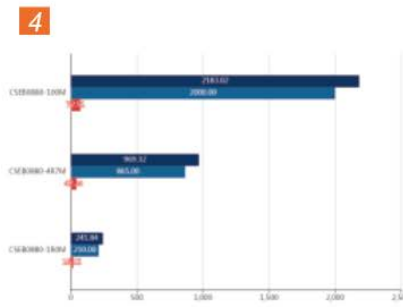
Model4 \*Please select\* \*Please select\*

Search

**2**

Picture	Apply	Series	Part No.	Inductance (μH)	DCR Typ (mΩ)	Ist (A)	Ims (A)	Working (°C)	Length (mm)	Width (mm)	Height (mm)	Mounting	Shield	Core Material	AEC Grade	PDF
	Apply	CSEB	CSEB0880-1R0M	1.00	2.10	31.00	34.00	-40~125	8.80	8.30	7.80	SMD	Y	Alloy powder	1	
	Apply	CSEB	CSEB0880-4R7M	4.70	8.85	17.40	14.80	-40~125	8.80	8.30	7.80	SMD	Y	Alloy powder	1	
	Apply	CSEB	CSEB0880-100M	10.00	20.00	11.00	9.00	-40~125	8.80	8.30	7.80	SMD	Y	Alloy powder	1	

Page 1 of 1 | 3 in Total | 30 Items/Page | 1 Total Pages | Go to 1 page | Determine

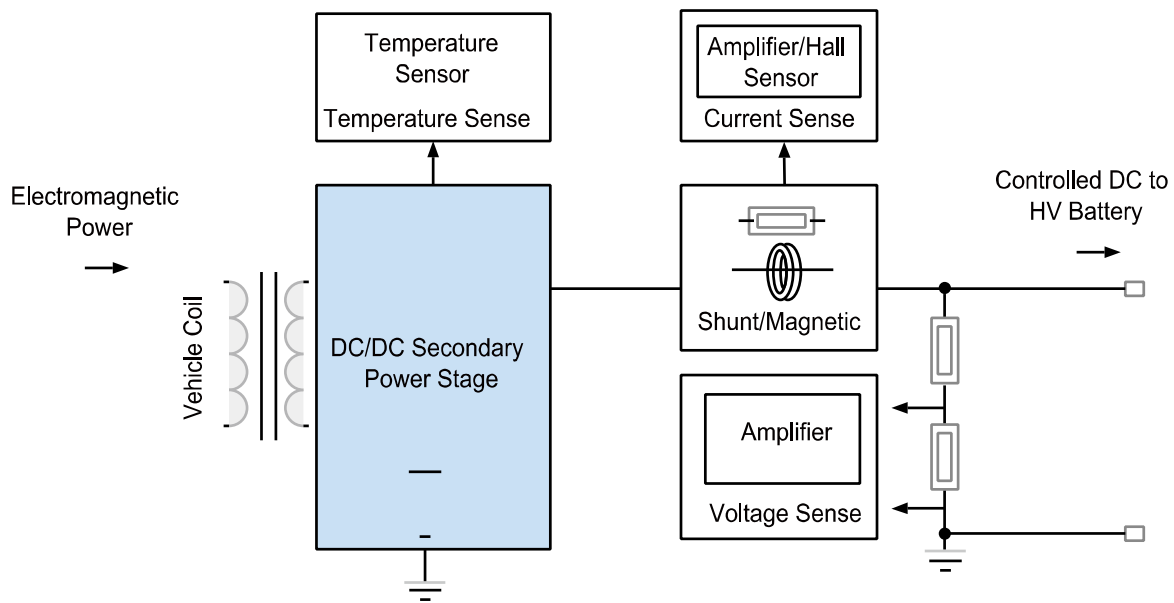


Design tool by scanning

### OBC(On Board Charger)


The main function of the On Board Charger is to charge the power battery of the electric vehicle. OBC is used in battery electric vehicles (BEV), plug-in hybrid electric vehicles (PHEV), and potentially fuel cell vehicles (FCEV).

With the multi-in-one integration of vehicle power supply circuits, high power, miniaturization, integration, and high cost performance have become the development direction of vehicle power supply products.



### Recommended Products

AEC-Q200



- Low DC resistance
- Low loss
- High efficiency
- Wide application frequency

**VPAB Series**

AEC-Q200



- High current
- Low loss
- High efficiency
- Customizable

**VPEH Series**

AEC-Q200



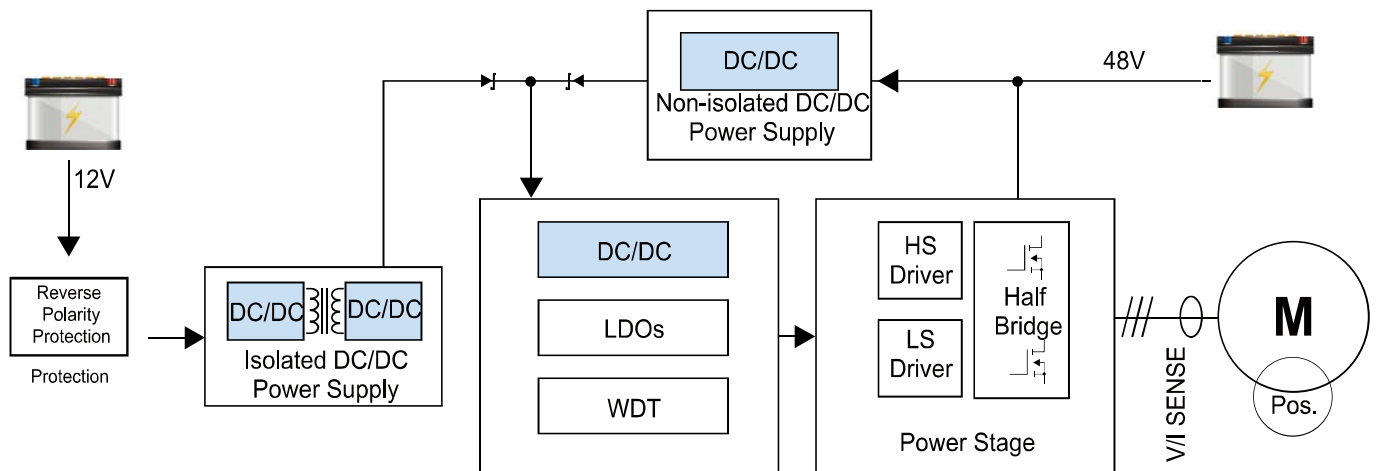
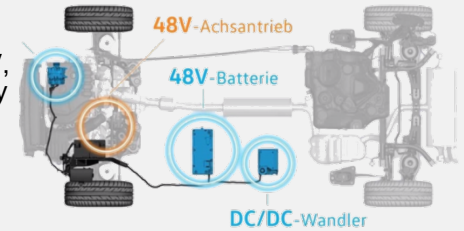
- High reliability
- Excellent impedance
- Both for power line and signal line
- Customizable

**VTCB Series**

## DC-DC Converter


Many electronic loads in cars are driven by 12V, and for enhanced bus and additional energy-saving power. Today's battery lines have incorporated 48V, where in an EV or HEV. The 48V battery is charged by a high-voltage battery pack or traction battery.

In order to meet the different voltage requirements, to install a 12V-48V bidirectional converter in automotive body power system is an choice. In addition, buck converters are also widely used in automotive electronics.



## Recommended Products

AEC-Q200



- Improved reliability
- Low DC resistance
- Flat wire winding

**VSRU Series**


AEC-Q200



- Fully shielded structure
- Low power loss
- High operation current
- High power efficiency

**VSAB Series**


AEC-Q200



- Composite molded structure
- Extra low DC resistance
- High power efficiency
- Wide application frequency

**VSEB Series**

AEC-Q200



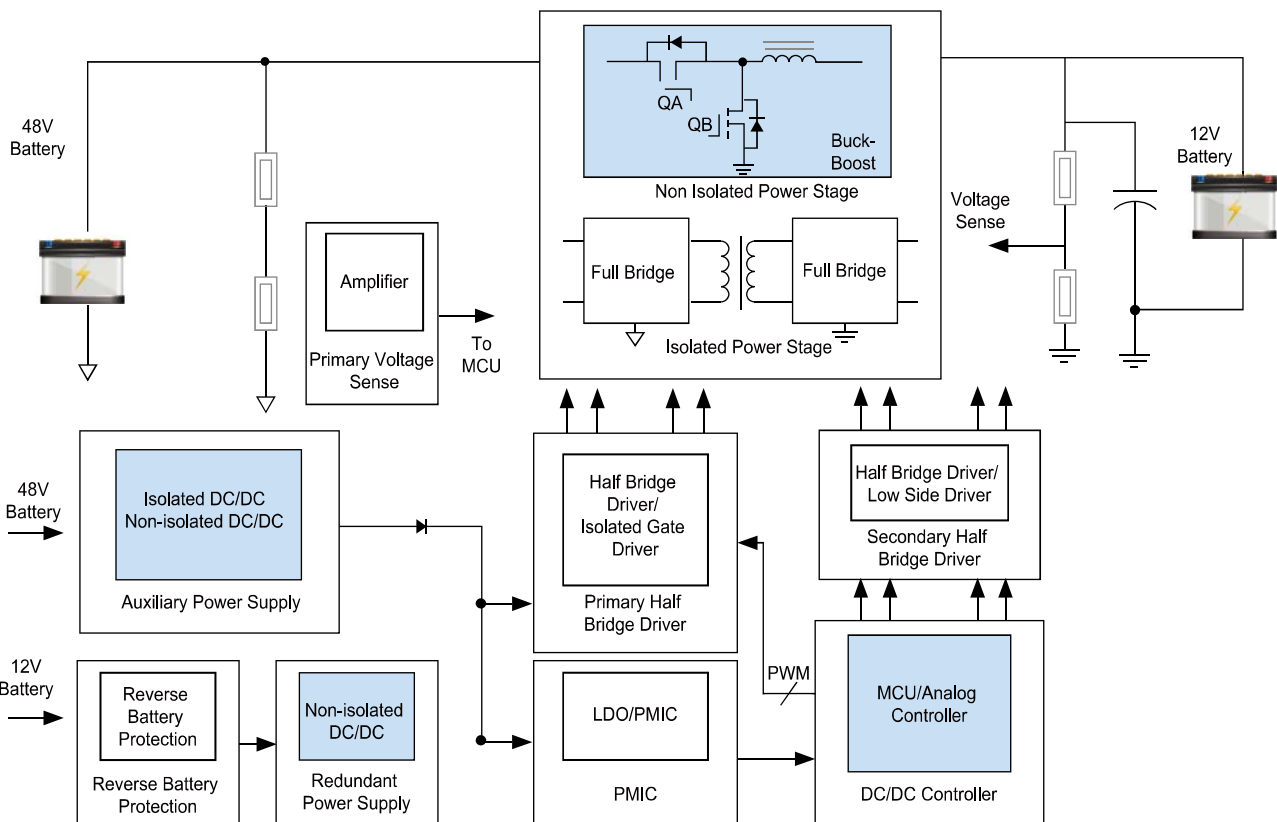
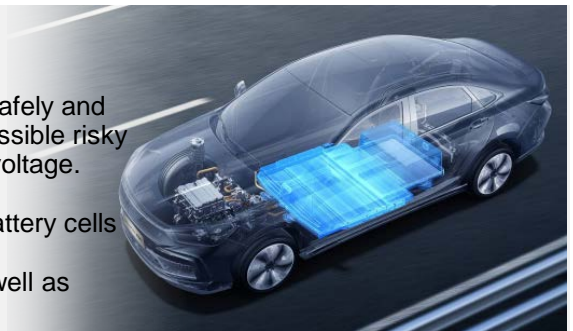
- Composite molded structure
- Extra low DC resistance
- High power efficiency
- Wide application frequency

**VSTP Series**


## Battery Management System(BMS)

High-voltage battery packs in electric or hybrid vehicles need to be safely and efficiently monitored to avoid premature aging or even failure and possible risky operational failures such as over-temperature, over-current or over-voltage.

Therefore, the BMS must simultaneously monitor and balance the battery cells to minimize charging risk and maximize service life. As an important component of BMS, the inductor needs to have stable reliability, as well as compact design, high current.



## Recommended Products



**VSBX Series**

- In-house made core material
- Flat wire winding
- Low DC resistance
- Low power loss



**VSAB Series**

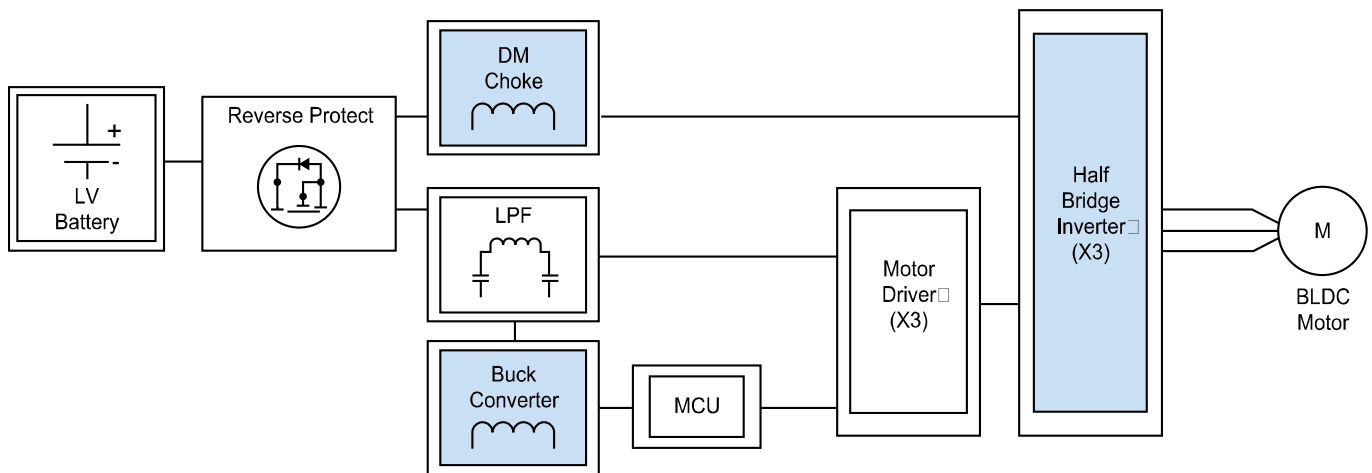
- Fully shielded structure
- Low power loss
- High operation current
- High power efficiency




### Motor Driver

A new generation of cars integrate rear cameras, lane collision warnings, doors/windows, rear trunks or other electronic control devices, which are driven by a large number of motors.

For motor drive applications, CODACA can quickly customize magnetic rod inductors that can adapt to high-temperature working environments according to specific needs of customers.



### Recommended Products




**VRKL\IRKL Series**

- Low DC resistance
- High saturation current
- High frequency
- Customizable



**VSAB Series**

- Fully shielded structure
- Low power loss
- High operation current
- High power efficiency



**VSBX Series**

- In-house made core material
- Flat wire winding
- Low DC resistance
- Low power loss



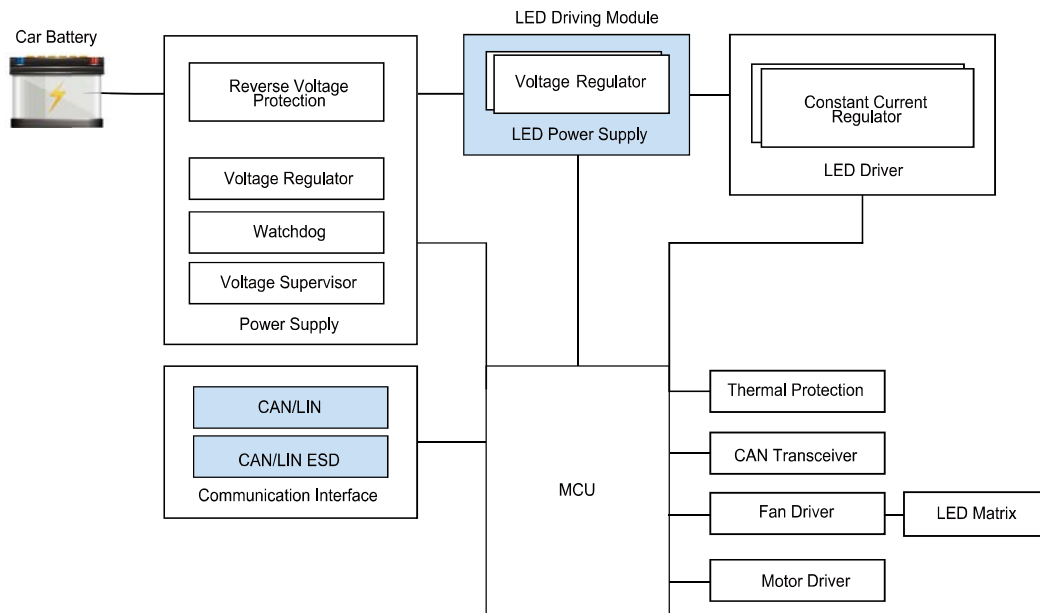
**VCRHS Series**

- Low DC resistance
- High rated current
- Magnetic shielded structure

## Lighting System


In the field of automotive lights, due to the low power consumption and multi-function features, LED lights are rapidly replacing traditional halogen lamps and xenon headlights (HID).

A large number of power inductors are used in the automotive lighting system. These inductor products need to meet the requirements of automotive standards, high current and small dimensions.



## Recommended Products

AEC-Q200



- Magnetic shielded structure
- A composite structure
- Low buzz noise
- High current
- High efficiency

**VSHB-T Series**


AEC-Q200



- Fully shielded structure
- Low power loss
- High operation current
- High power efficiency

**VSAB Series**

AEC-Q200



- Composite molded structure
- Extra low DC resistance
- High power efficiency
- Wide application frequency

**VSEB-H Series**

AEC-Q200



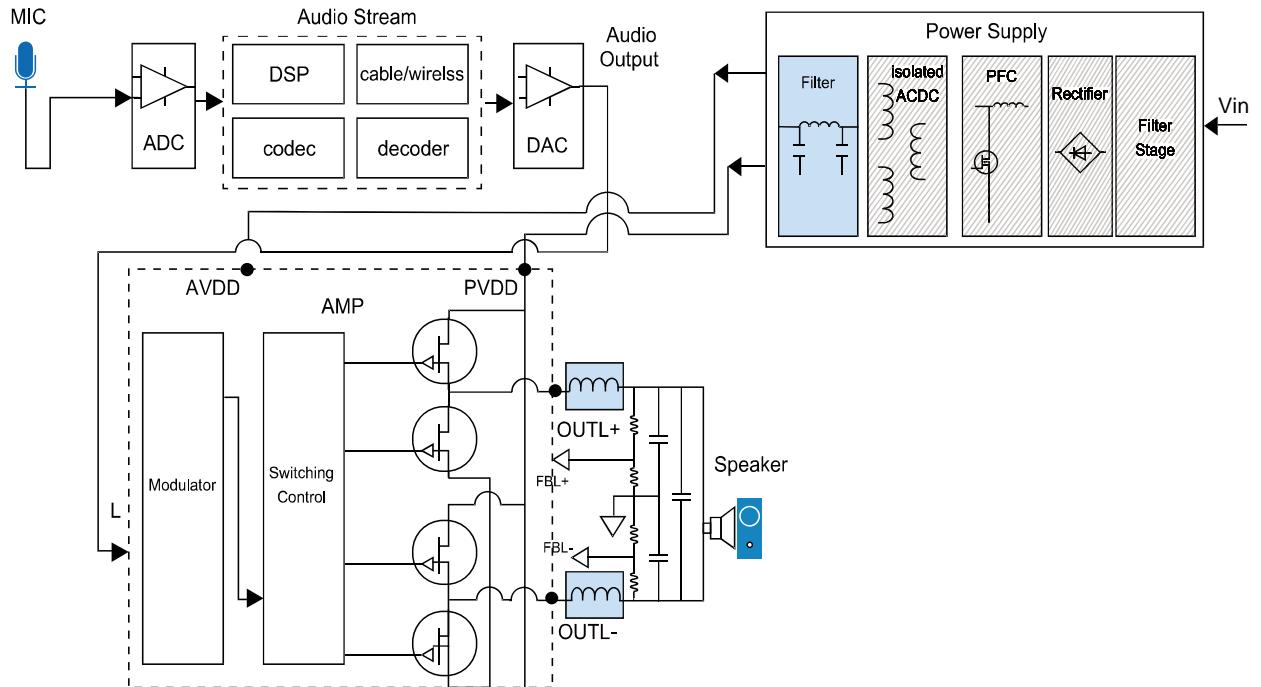
- Low DC resistance
- High rated current
- Magnetic shielded structure
- For SEPIC, Cuk circuits

**VCRHC Series**

## Audio Unit

Class D power amplifiers are widely used in the car entertainment market due to their excellent sound quality and high conversion efficiency.

In order to meet the requirements of high fidelity, low distortion, high reliability and small size of the automotive class D power amplifier, inductors for car audio solutions with small size, low loss and high power output have gradually become a key concern of engineers.



## Recommended Products


**AEC-Q200**



- Low DC resistance
- High saturation current
- Small size
- 2 in 1 structure

**VSD Series**

**AEC-Q200**



- Molded structure
- 2 in 1 design
- Fully shielded structure
- High saturation current

**VSAD Series**

**AEC-Q200**



- Fully shielded structure
- Low power loss
- High operation current
- High power efficiency

**VSAB Series**

**AEC-Q200**



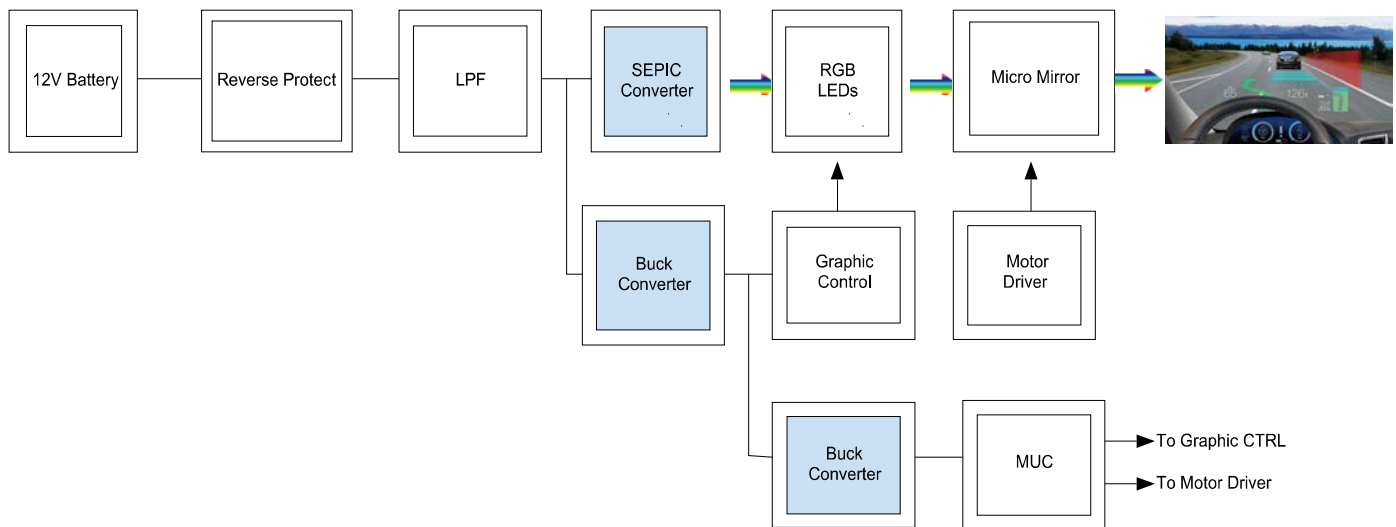
- Low DC resistance
- High rated current
- Magnetic shielded structure
- For SEPIC, Cuk circuits

**VCRHC Series**

## Head Up Display

Head Up Display is a must-have for the smart cockpit.

The main function is to project important driving data directly in front of the driver's eyes, provide driving assistance for the driver, reduce the time that the driver takes his eyes off the road, and improve driving performance and security.



## Recommended Products


AEC-Q200



- Fully shielded structure
- Low power loss
- High operation current
- High power efficiency

**VSAB Series**


AEC-Q200



- Magnetic shielded structure
- Small size
- Low DC resistance
- High operation current

**VSHB Series**

AEC-Q200



- Composite molded structure
- Extra low DC resistance
- High power efficiency
- Wide application frequency

**VSEB-H Series**

AEC-Q200



- Low DC resistance
- High rated current
- Magnetic shielded structure

**VCRHS Series**

### VSBX1050



Operating temperature range: - 55°C ~ +155°C

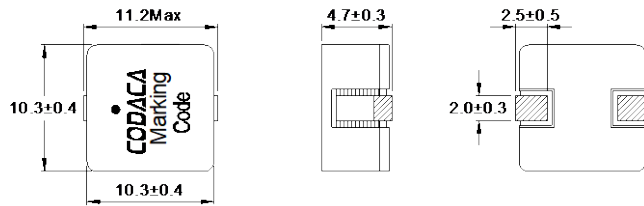
Construction



Wire



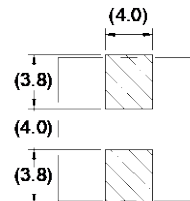
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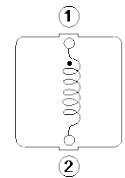
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

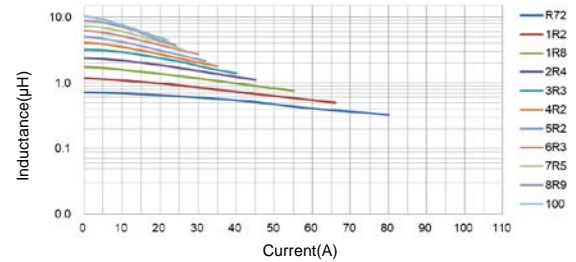
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2	Temperature Rise Current (A) ※3
	±20%	Typ.	Typ.	Max.	Typ.	Typ.
VSBX1050-R72M	0.72	1.23	1.50	40.0	23.0	
VSBX1050-1R2M	1.20	1.95	2.35	33.0	19.0	
VSBX1050-1R8M	1.80	2.83	3.40	27.0	17.0	
VSBX1050-2R4M	2.40	4.00	4.80	23.0	14.5	
VSBX1050-3R3M	3.30	5.60	6.70	20.0	11.7	
VSBX1050-4R2M	4.20	7.05	8.50	17.5	11.0	
VSBX1050-5R2M	5.20	8.33	10.0	16.0	10.0	
VSBX1050-6R3M	6.30	10.6	12.7	14.0	9.00	
VSBX1050-7R5M	7.50	13.0	15.6	13.0	8.00	
VSBX1050-8R9M	8.90	15.5	18.6	12.0	7.10	
VSBX1050-100M	10.0	20.2	24.2	11.0	6.20	

※1. Inductance measure condition at 100KHz, 0.1V.

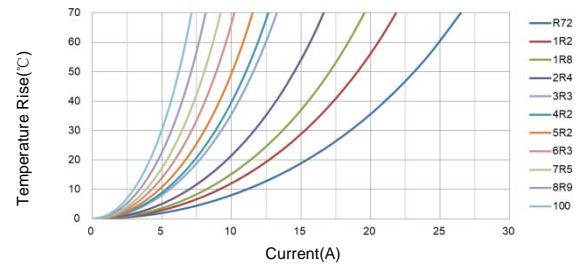
※2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSBX1265



Operating temperature range: - 55°C ~ +155°C

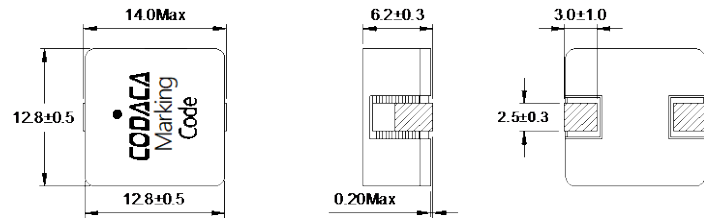
Construction



Wire



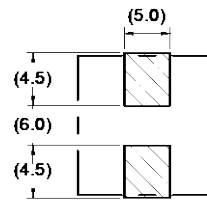
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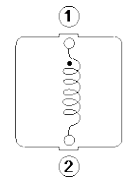
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

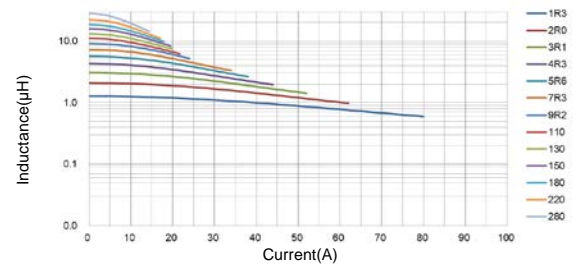
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2	Temperature Rise Current (A) ※3
	±20%	Typ.	Typ.	Max.	Typ.	Typ.
VSBX1265-1R3M	1.30	1.10	1.32	40.0	30.0	
VSBX1265-2R0M	2.00	1.65	1.98	31.0	26.0	
VSBX1265-3R1M	3.10	2.45	2.94	26.0	22.0	
VSBX1265-4R3M	4.30	3.45	4.14	22.0	18.0	
VSBX1265-5R6M	5.60	4.40	5.28	19.0	16.0	
VSBX1265-7R3M	7.30	5.75	6.90	17.0	14.0	
VSBX1265-9R2M	9.20	7.20	8.64	15.0	12.3	
VSBX1265-110M	11.3	8.65	10.38	13.5	11.0	
VSBX1265-130M	13.0	10.80	12.96	12.2	10.0	
VSBX1265-150M	15.4	12.25	14.70	11.1	9.10	
VSBX1265-180M	18.0	16.10	19.32	10.5	8.30	
VSBX1265-220M	22.0	17.55	21.06	9.80	7.70	
VSBX1265-280M	28.0	22.50	27.00	8.50	6.90	

※1. Inductance measure condition at 100KHz, 0.1V.

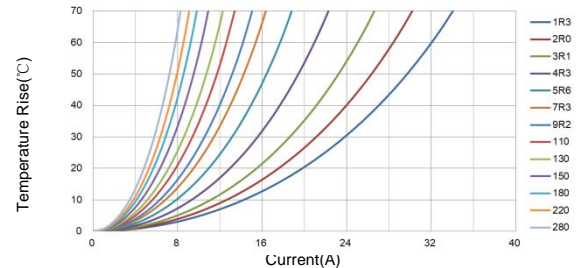
※2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSBX1809



Operating temperature range: - 55°C ~ +155°C

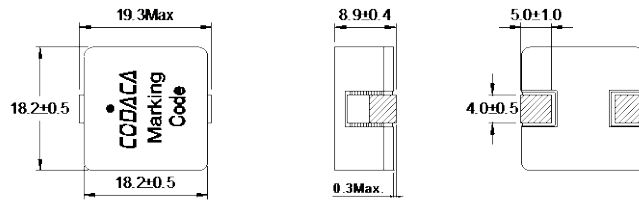
Construction



Wire



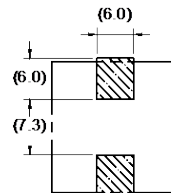
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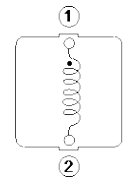
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

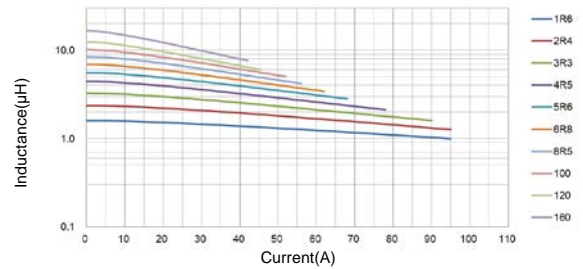
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2	Temperature Rise Current (A) ※3
	±20%	Typ.	Typ.	Max.	Typ.	Typ.
VSBX1809-1R6M	1.60	1.00	1.20	62.0	36.0	
VSBX1809-2R4M	2.40	1.20	1.44	53.0	34.0	
VSBX1809-3R3M	3.30	1.60	1.92	45.0	30.0	
VSBX1809-4R5M	4.50	2.10	2.55	38.0	26.0	
VSBX1809-5R6M	5.60	2.80	3.30	34.0	23.0	
VSBX1809-6R8M	6.80	3.40	4.10	31.0	21.0	
VSBX1809-8R5M	8.50	4.30	5.16	28.0	19.0	
VSBX1809-100M	10.0	5.45	6.50	26.0	17.0	
VSBX1809-120M	12.0	5.85	7.00	23.0	16.0	
VSBX1809-160M	16.0	7.80	9.40	19.0	14.0	

※1. Inductance measure condition at 100KHz, 0.1V.

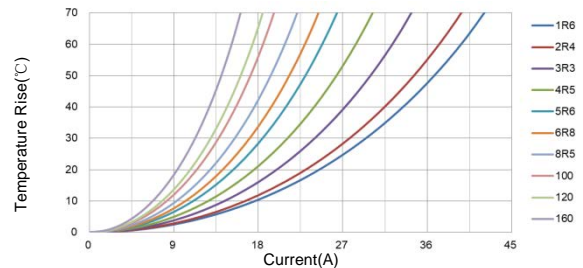
※2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSRU27



Operating temperature range: - 55°C ~ +150°C

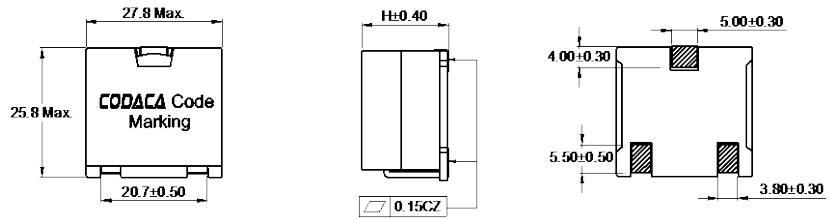
Construction



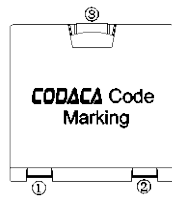
Wire



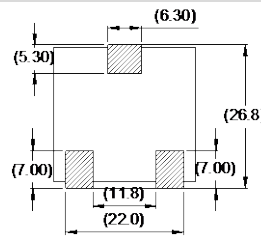
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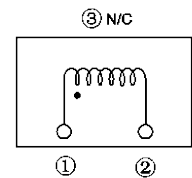
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

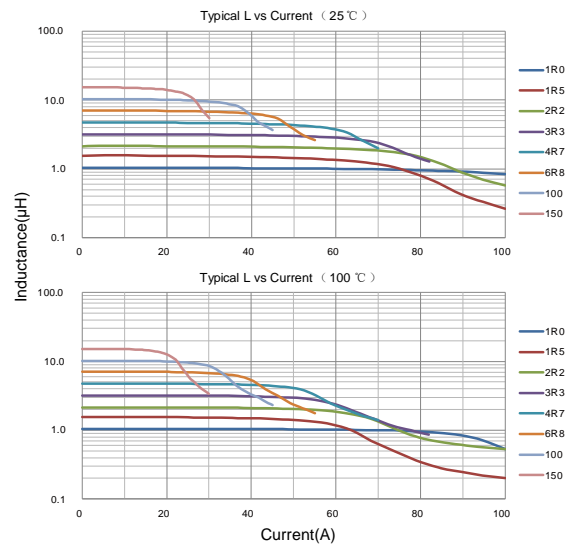
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	High
	±10%	Typ.	Typ.	Max.	Typ. (25°C)	Max. (100°C)	Typ.	
VSRU2711-1R0K	1.00	0.46	0.56	100.0	88.3	54.0	11.9	
VSRU2711-1R5K	1.50	0.46	0.56	67.0	57.7	54.0	11.9	
VSRU2713-2R2K	2.20	0.68	0.82	71.1	60.9	47.3	13.5	
VSRU2714-3R3K	3.30	0.88	1.06	64.7	56.1	42.5	14.9	
VSRU2714-4R7K	4.70	1.39	1.67	56.4	51.6	37.2	14.6	
VSRU2715-6R8K	6.80	1.66	1.99	44.1	37.6	35.0	15.8	
VSRU2716-100K	10.0	1.92	2.30	34.9	30.1	33.1	16.9	
VSRU2716-150K	15.0	1.92	2.30	23.0	20.0	33.1	16.9	

※1. Inductance measure condition at 100KHz, 0.1V.

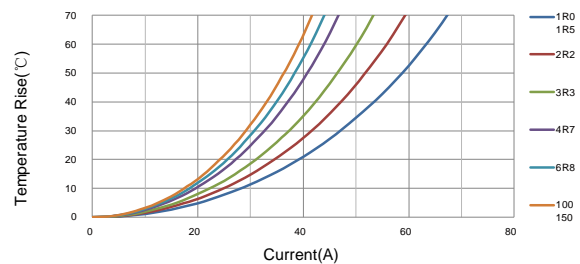
※2. Saturation current: the actual value of DC current when the inductance decrease 20% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve





### VSAD0660



Operating temperature range: - 55°C ~ +155°C

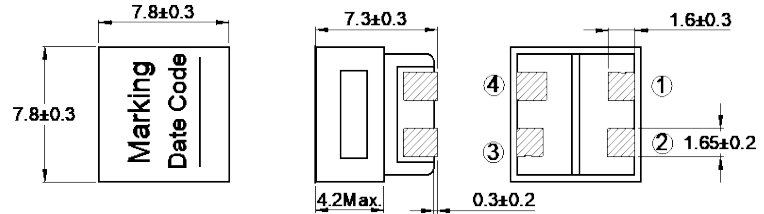
Construction



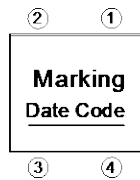
Wire



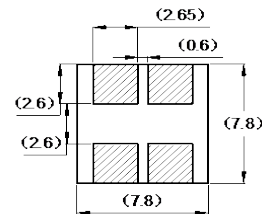
#### Appearance and Dimensions (mm)



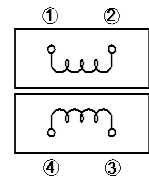
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

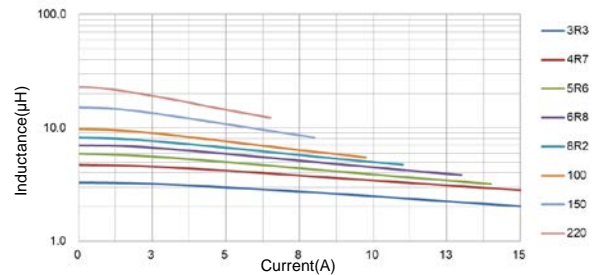
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2	Temperature Rise Current (A) ※3
	±20%	Typ.	Typ.	Max.	Typ.	Typ.
VSAD0660-3R3M	3.30	17.9	19.0	12.5	7.80	
VSAD0660-4R7M	4.70	23.0	27.5	12.0	5.50	
VSAD0660-5R6M	5.60	30.0	36.0	9.50	5.00	
VSAD0660-6R8M	6.80	36.0	43.0	8.80	4.50	
VSAD0660-8R2M	8.20	38.5	46.0	7.50	4.00	
VSAD0660-100M	10.0	47.0	55.0	6.50	3.50	
VSAD0660-150M	15.0	87.0	95.0	5.50	3.00	
VSAD0660-220M	22.0	112	134	4.30	2.40	

※1. Inductance measure condition at 100KHz, 1.0V.

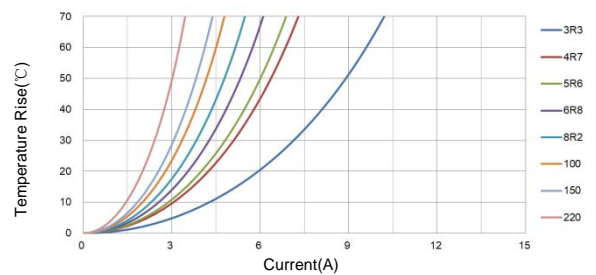
※2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSAD0880



Operating temperature range: - 55°C ~ +155°C

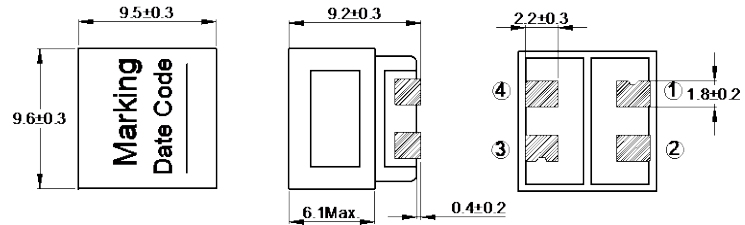
Construction



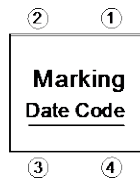
Wire



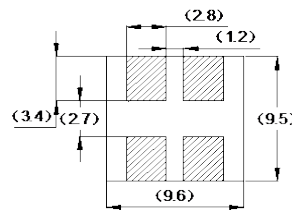
### Appearance and Dimensions (mm)



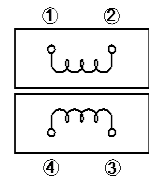
### Marking



### Reference Land Pattern (mm)



### Schematic



### Electrical Characteristics

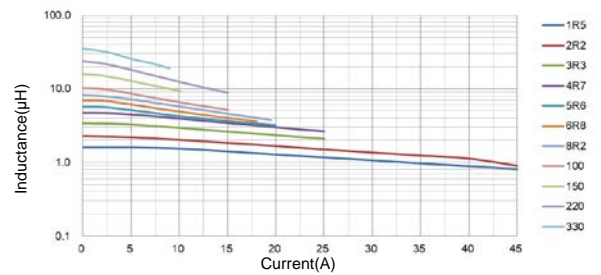
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2	Temperature Rise Current (A) ※3
	±20%	Typ.	Typ.	Max.	Typ.	Typ.
VSAD0880-1R5M	1.50	6.90	8.20	25.0	13.0	
VSAD0880-2R2M	2.20	7.90	9.50	17.5	12.0	
VSAD0880-3R3M	3.30	14.2	17.0	17.0	10.5	
VSAD0880-4R7M	4.70	19.0	22.0	14.0	9.00	
VSAD0880-5R6M	5.60	21.2	25.0	10.5	7.50	
VSAD0880-6R8M	6.80	23.1	27.5	9.70	7.00	
VSAD0880-8R2M	8.20	30.0	35.0	8.50	5.80	
VSAD0880-100M	10.0	34.3	40.0	8.00	5.30	
VSAD0880-150M	15.0	61.0	67.0	6.60	4.50	
VSAD0880-220M	22.0	89.2	98.0	5.00	3.50	
VSAD0880-330M	33.0	143	157	4.20	2.80	

※1. Inductance measure condition at 100KHz, 1.0V.

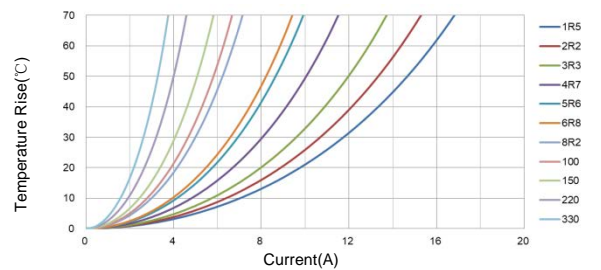
※2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

### Saturation Current Curve



### Temperature Rise Current Curve



### VSAD1010



Operating temperature range: - 55°C ~ +155°C

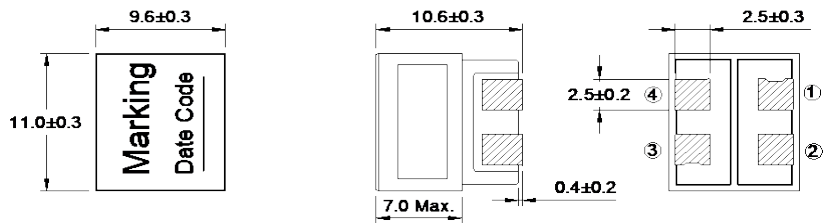
Construction



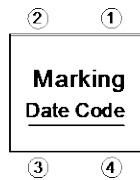
Wire



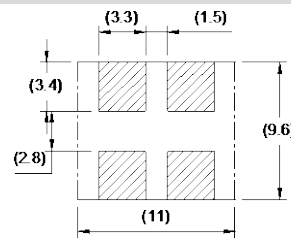
### Appearance and Dimensions (mm)



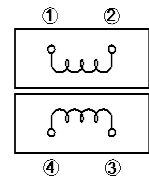
### Marking



### Reference Land Pattern (mm)



### Schematic



### Electrical Characteristics

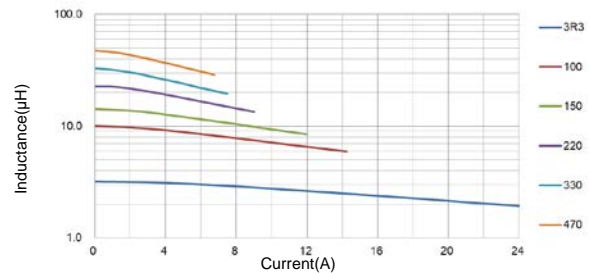
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2	Temperature Rise Current (A) ※3
	±20%	Typ.	Typ.	Max.	Typ.	Typ.
VSAD1010-3R3M	3.30	10.2	12.5	16.0	11.0	
VSAD1010-100M	10.0	25.0	28.0	9.50	7.60	
VSAD1010-150M	15.0	37.0	40.0	8.00	6.00	
VSAD1010-220M	22.0	58.0	62.0	6.00	4.90	
VSAD1010-330M	33.0	87.0	93.0	5.00	4.00	
VSAD1010-470M	47.0	128	136	4.50	3.20	

※1. Inductance measure condition at 100KHz, 1.0V.

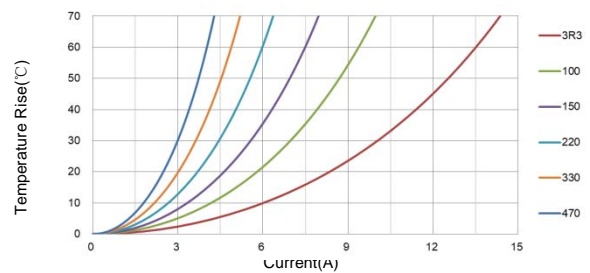
※2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

### Saturation Current Curve



### Temperature Rise Current Curve



### VSD0808BH



Operating temperature range: - 55°C~+150°C

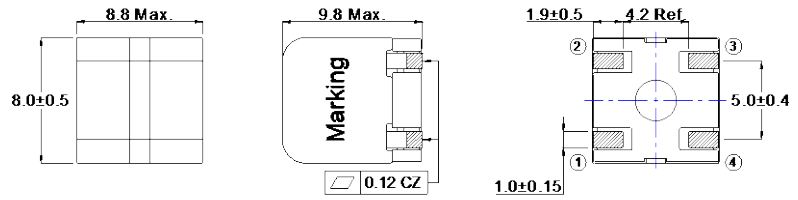
Construction



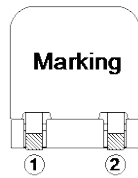
Wire



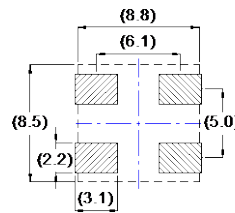
#### Appearance and Dimensions (mm)



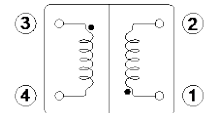
Marking



Reference Land Pattern (mm)



Schematic



#### Electrical Characteristics

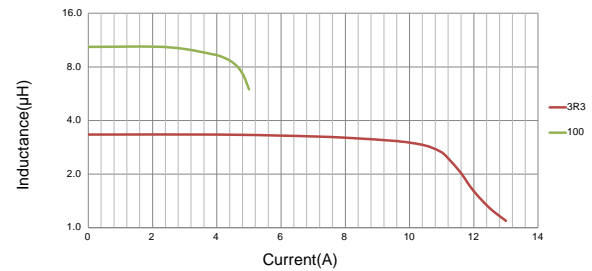
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2	Temperature Rise Current (A) ※3
	± 15%	Typ.	Typ.	Max.	Typ.	Typ.
VSD0808BH-3R3L	3.30	10.8	13.0	10.2	7.60	
VSD0808BH-100L	10.0	20.5	24.6	4.00	5.50	

※1. Inductance measure condition at 100KHz, 1.0V.

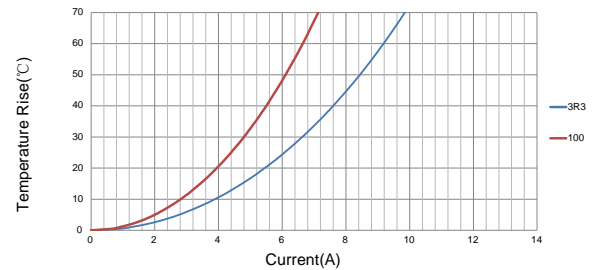
※2. Saturation current: the actual value of DC current when the inductance decrease 25% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



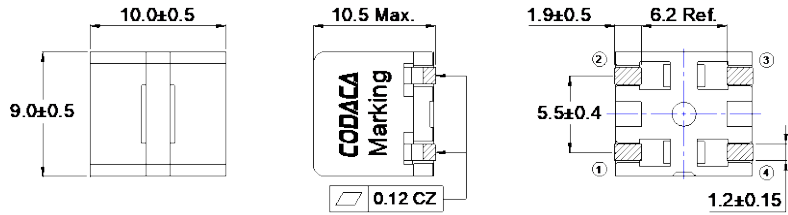
#### Temperature Rise Current Curve



### VSD0910C



#### Appearance and Dimensions (mm)



Operating temperature range: - 55°C ~ +150°C

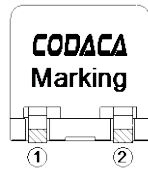
Construction



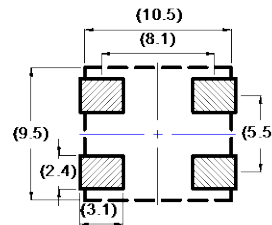
Wire



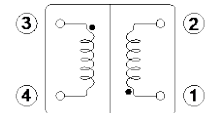
Marking



Reference Land Pattern (mm)



Schematic



#### Electrical Characteristics

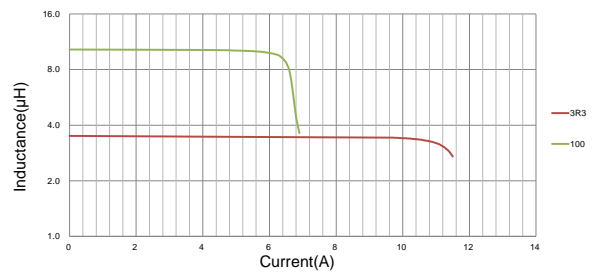
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2	Temperature Rise Current (A) ※3
	± 15%	Typ.	Typ.	Max.	Typ.	Typ.
VSD0910C-3R3L	3.30	7.70	7.70	9.20	10.6	10.6
VSD0910C-100L	10.0	24.5	24.5	28.2	6.10	5.00

※1. Inductance measure condition at 100KHz, 1.0V.

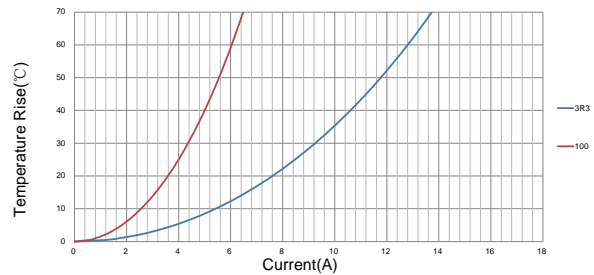
※2. Saturation current: the actual value of DC current when the inductance decrease 25% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSD1013C



Operating temperature range: - 55°C ~ +150°C

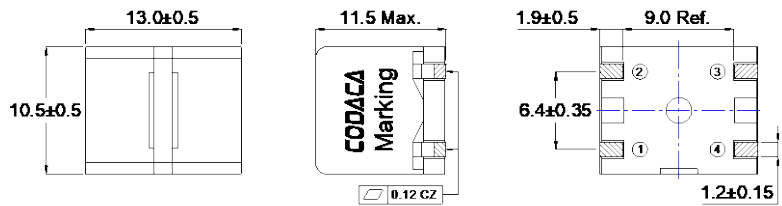
Construction



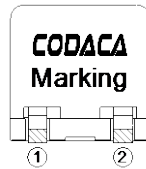
Wire



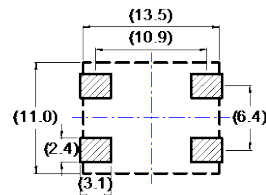
#### Appearance and Dimensions (mm)



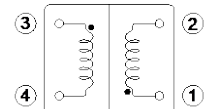
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

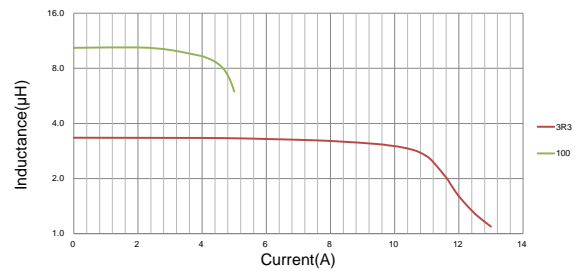
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2	Temperature Rise Current (A) ※3
	± 15%	Typ.	Typ.	Max.	Typ.	Typ.
VSD1013C-3R3L	3.30	5.70	6.80	15.2	15.2	
VSD1013C-100L	10.0	15.5	18.6	8.50	5.80	

※1. Inductance measure condition at 100KHz, 1.0V.

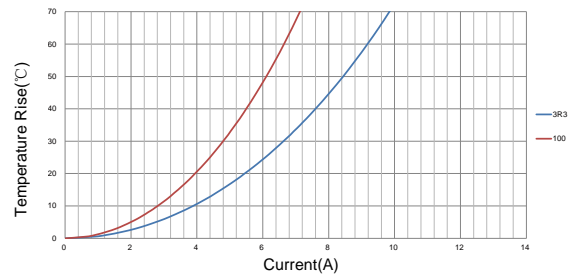
※2. Saturation current: the actual value of DC current when the inductance decrease 25% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSAB0530



Operating temperature range: - 55°C ~ +155°C

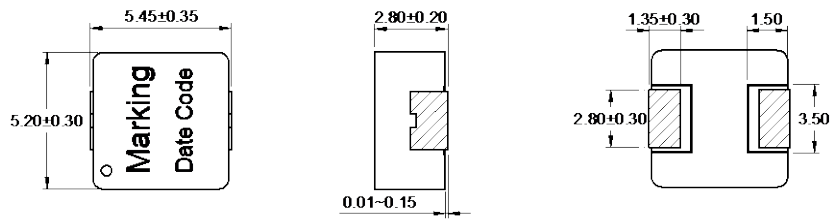
Construction



Wire



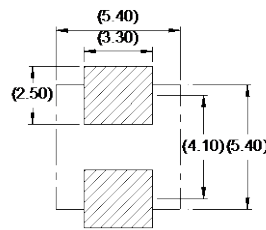
#### Appearance and Dimensions (mm)



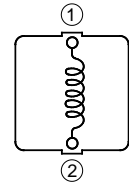
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

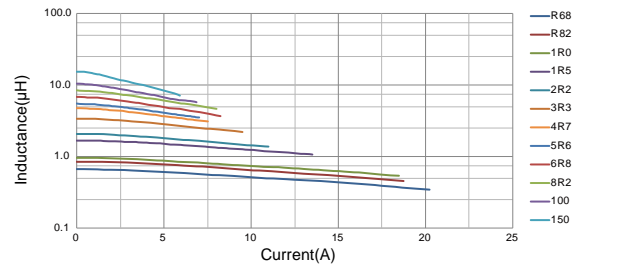
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSAB0530-R68M	0.68	8.50	9.60	9.00	7.50	11.5	10.5	
VSAB0530-R82M	0.82	8.80	9.80	8.50	7.00	11.0	10.0	
VSAB0530-1R0M	1.00	10.0	11.5	8.00	6.50	10.5	9.50	
VSAB0530-1R5M	1.50	15.0	17.5	6.40	5.50	8.20	7.40	
VSAB0530-2R2M	2.20	20.0	23.0	6.00	5.00	7.00	6.30	
VSAB0530-3R3M	3.30	33.0	38.0	5.30	4.50	5.50	5.00	
VSAB0530-4R7M	4.70	54.0	63.0	4.40	3.90	4.40	3.90	
VSAB0530-5R6M	5.60	67.0	73.0	3.80	3.50	3.80	3.50	
VSAB0530-6R8M	6.80	79.0	90.0	3.60	3.10	3.60	3.30	
VSAB0530-8R2M	8.20	100	116	3.00	2.80	3.00	2.70	
VSAB0530-100M	10.0	110	128	2.70	2.30	2.60	2.40	
VSAB0530-150M	15.0	168	194	2.20	1.90	2.20	2.00	

※1. Inductance measure condition at 100KHz, 1.0V.

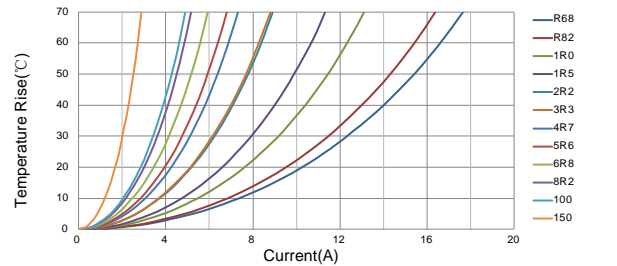
※2. Saturation current: the actual value of DC current when the inductance decrease 20% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSAB0630



Operating temperature range: - 55°C ~ +155°C

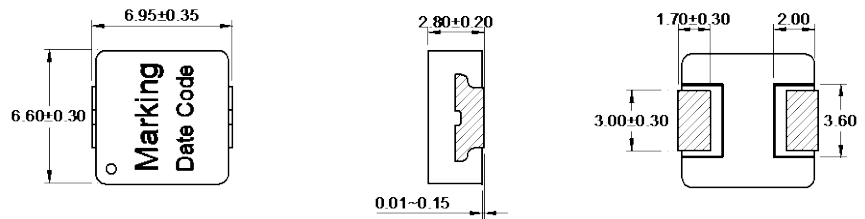
Construction



Wire



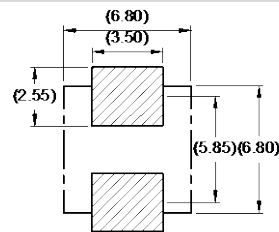
#### Appearance and Dimensions (mm)



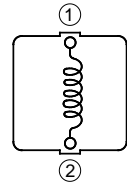
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

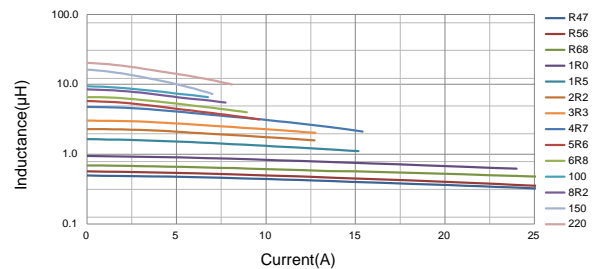
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSAB0630-R47M	0.47	3.80	4.50	16.5	14.5	16.0	14.0	
VSAB0630-R56M	0.56	4.20	4.80	14.5	13.0	15.5	13.5	
VSAB0630-R68M	0.68	4.70	5.50	13.5	11.8	15.0	13.0	
VSAB0630-1R0M	1.00	6.30	7.60	12.5	11.0	13.5	12.0	
VSAB0630-1R5M	1.50	10.3	12.4	10.0	9.00	11.0	10.0	
VSAB0630-2R2M	2.20	15.0	16.5	8.00	7.00	9.50	8.50	
VSAB0630-3R3M	3.30	21.0	25.0	7.60	6.50	7.60	6.80	
VSAB0630-4R7M	4.70	27.0	33.0	6.00	5.00	6.80	6.00	
VSAB0630-5R6M	5.60	35.0	40.5	4.80	4.50	5.80	5.00	
VSAB0630-6R8M	6.80	41.0	46.5	4.40	4.00	4.80	4.50	
VSAB0630-8R2M	8.20	50.0	58.0	3.90	3.60	4.40	4.00	
VSAB0630-100M	10.0	61.0	72.0	3.50	3.10	4.00	3.60	
VSAB0630-150M	15.0	96.0	108	3.00	2.50	3.30	2.80	
VSAB0630-220M	22.0	163	174	2.40	2.10	2.50	2.00	

※1. Inductance measure condition at 100KHz, 1.0V.

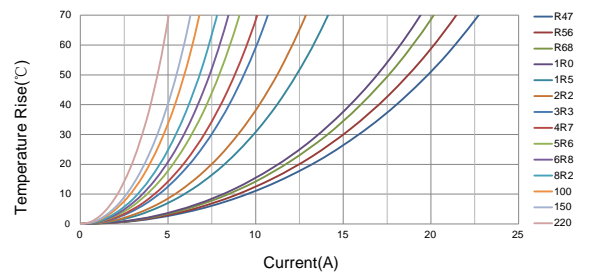
※2. Saturation current: the actual value of DC current when the inductance decrease 20% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve





### VSAB0640



Operating temperature range: - 55°C ~ +155°C

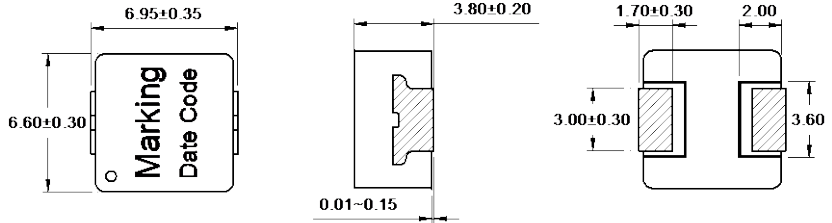
Construction



Wire



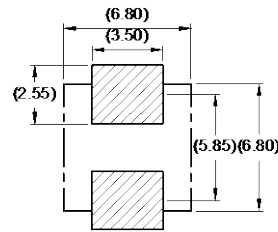
#### Appearance and Dimensions (mm)



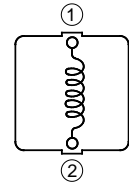
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

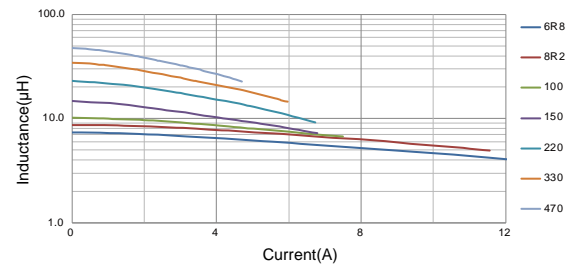
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSAB0640-6R8M	6.80	38.0	45.0	5.50	5.00	6.50	5.60	
VSAB0640-8R2M	8.20	48.0	56.0	5.00	4.50	5.00	4.40	
VSAB0640-100M	10.0	58.0	67.0	4.50	4.00	4.40	4.00	
VSAB0640-150M	15.0	90.0	103	3.30	2.80	3.50	3.00	
VSAB0640-220M	22.0	110	130	2.70	2.30	2.80	2.40	
VSAB0640-330M	33.0	180	210	2.00	1.80	1.90	1.70	
VSAB0640-470M	47.0	230	270	1.70	1.50	1.60	1.40	

※1. Inductance measure condition at 100KHz, 1.0V.

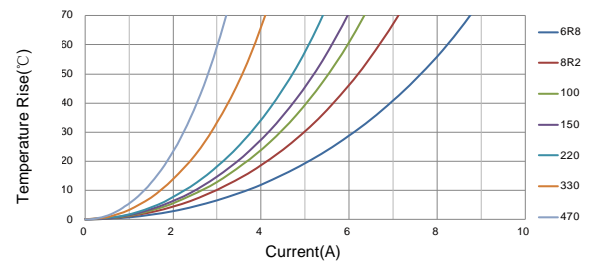
※2. Saturation current: the actual value of DC current when the inductance decrease 20% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSAB0650



Operating temperature range: - 55°C ~ +155°C

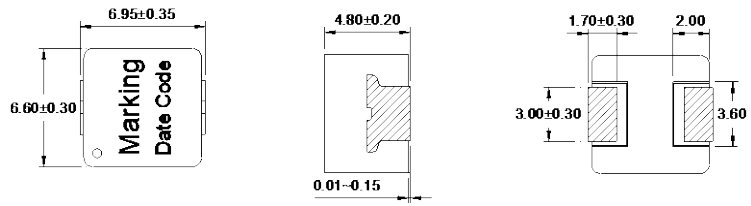
Construction



Wire



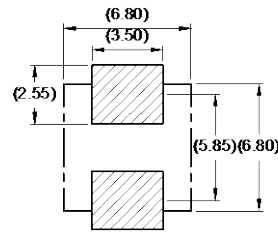
### Appearance and Dimensions (mm)



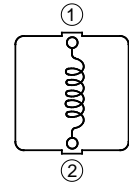
### Marking



### Reference Land Pattern (mm)



### Schematic



### Electrical Characteristics

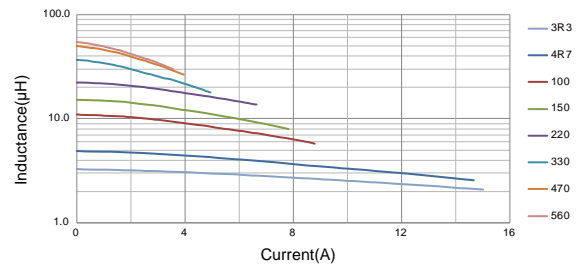
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSAB0650-3R3M	3.30	16.0	17.5	9.00	7.50	8.80	7.50	
VSAB0650-4R7M	4.70	18.0	23.0	7.00	6.30	8.50	7.00	
VSAB0650-100M	10.0	54.0	62.0	4.70	4.20	5.00	4.50	
VSAB0650-150M	15.0	85.0	96.0	3.80	3.30	3.80	3.30	
VSAB0650-220M	22.0	100	120	3.20	2.80	3.20	2.80	
VSAB0650-330M	33.0	170	195	2.50	2.00	2.50	2.00	
VSAB0650-470M	47.0	210	230	2.00	1.60	2.00	1.60	
VSAB0650-560M	56.0	235	270	1.60	1.30	1.60	1.30	

※1. Inductance measure condition at 100KHz, 1.0V.

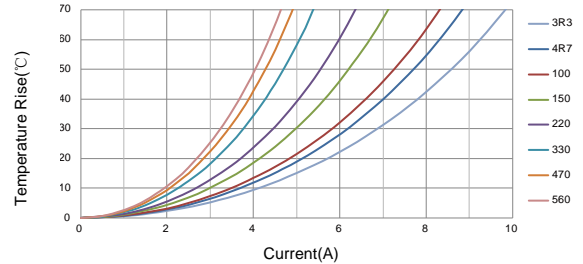
※2. Saturation current: the actual value of DC current when the inductance decrease 20% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

### Saturation Current Curve



### Temperature Rise Current Curve



### VSAB1040



Operating temperature range: - 55°C ~ +155°C

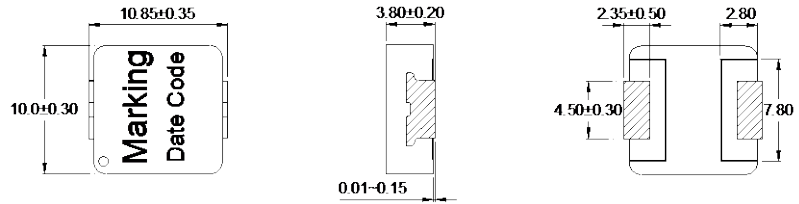
Construction



Wire



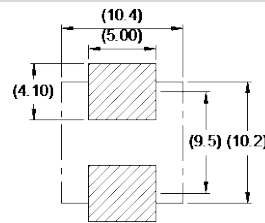
#### Appearance and Dimensions (mm)



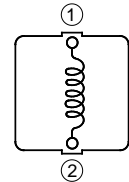
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

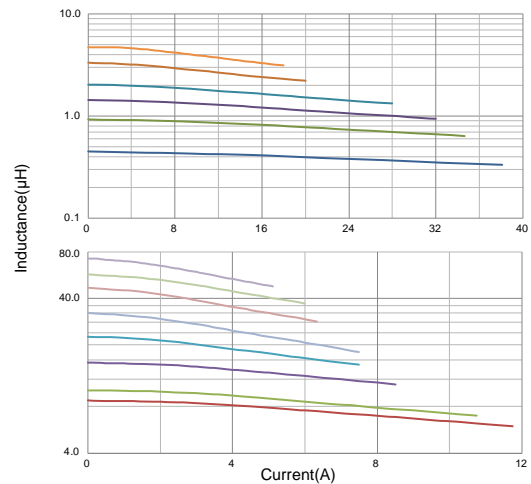
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSAB1040-1R0M	1.00	2.70	3.10	19.0	16.0	23.0	20.0	
VSAB1040-1R5M	1.50	4.20	5.00	15.5	14.0	18.0	16.0	
VSAB1040-2R2M	2.20	7.80	8.80	13.5	11.5	15.0	13.0	
VSAB1040-3R3M	3.30	9.90	11.8	12.0	10.5	11.0	10.0	
VSAB1040-4R7M	4.70	13.5	15.3	11.0	9.50	9.80	8.50	
VSAB1040-6R8M	6.80	19.0	22.4	8.50	7.50	9.00	8.00	
VSAB1040-8R2M	8.20	25.0	27.5	7.40	6.50	7.70	7.00	
VSAB1040-100M	10.0	28.0	32.0	6.40	6.00	7.50	6.80	
VSAB1040-150M	15.0	42.0	48.5	5.80	5.00	6.00	5.40	
VSAB1040-220M	22.0	59.0	68.0	4.80	4.10	5.00	4.30	
VSAB1040-330M	33.0	87.0	100	3.80	3.20	4.00	3.50	
VSAB1040-470M	47.0	140	165	3.50	2.80	3.30	2.80	
VSAB1040-560M	56.0	170	200	2.60	2.40	2.70	2.40	
VSAB1040-680M	68.0	215	250	2.40	2.00	2.40	2.00	

※1. Inductance measure condition at 100KHz, 1.0V.

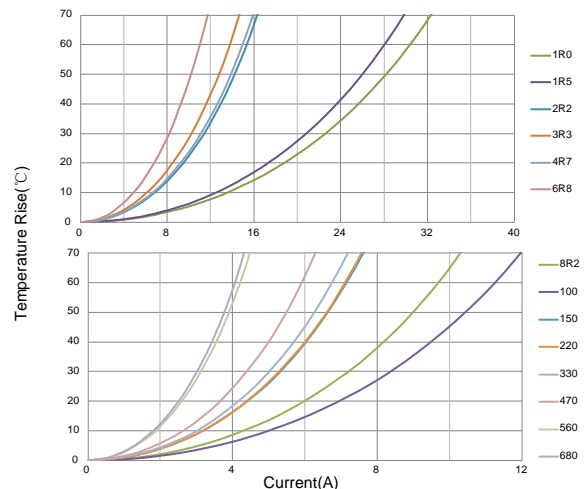
※2. Saturation current: the actual value of DC current when the inductance decrease 20% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSAB1054



Operating temperature range: - 55°C ~ +155°C

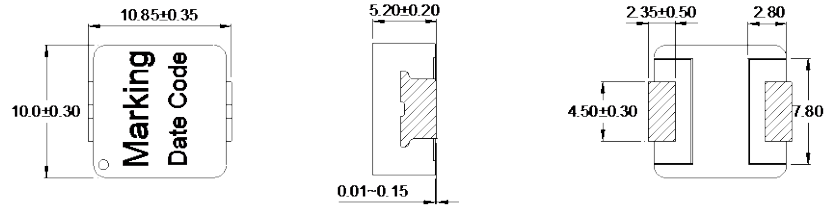
Construction



Wire



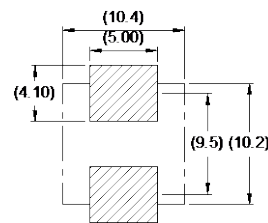
#### Appearance and Dimensions (mm)



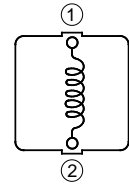
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

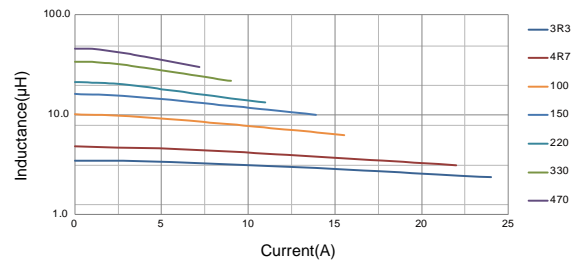
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSAB1054-3R3M	3.30	7.50	8.90	15.8	13.8	14.3	12.5	
VSAB1054-4R7M	4.70	10.5	12.5	12.5	11.0	12.0	10.5	
VSAB1054-100M	10.0	22.0	26.0	8.50	8.00	10.0	9.00	
VSAB1054-150M	15.0	36.0	42.0	6.80	6.30	8.50	7.50	
VSAB1054-220M	22.0	45.0	50.0	5.00	4.50	8.00	7.00	
VSAB1054-330M	33.0	73.0	85.0	4.50	4.00	4.50	4.00	
VSAB1054-470M	47.0	95.0	110	4.00	3.50	4.20	3.70	

※1. Inductance measure condition at 100KHz, 1.0V.

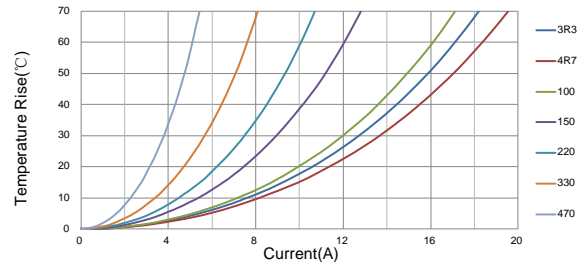
※2. Saturation current: the actual value of DC current when the inductance decrease 20% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSAB1365



Operating temperature range: - 55°C ~ +155°C

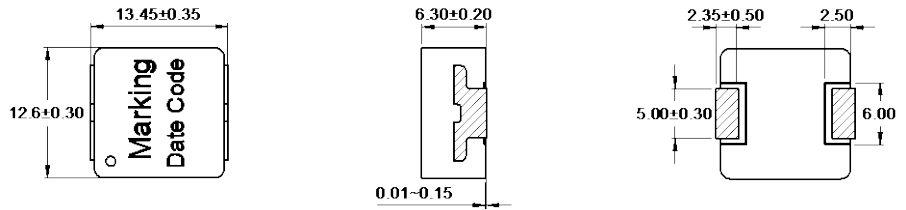
Construction



Wire



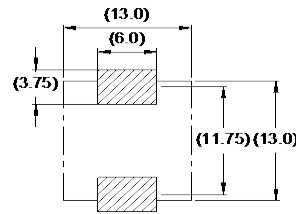
### Appearance and Dimensions (mm)



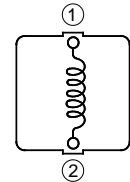
### Marking



### Reference Land Pattern (mm)



### Schematic



### Electrical Characteristics

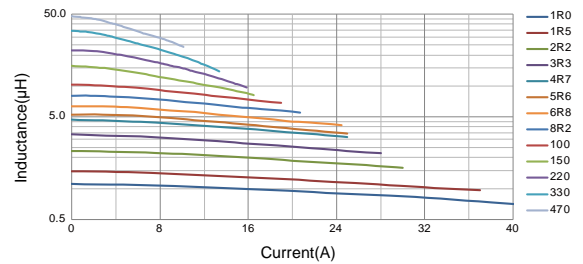
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSAB1365-1R0M	1.00	1.70	2.30	24.0	21.0	29.0	25.0	
VSAB1365-1R5M	1.50	2.50	2.90	18.0	15.5	27.5	24.0	
VSAB1365-2R2M	2.20	4.00	4.50	17.7	15.0	21.0	19.0	
VSAB1365-3R3M	3.30	5.00	5.80	17.0	14.6	19.5	16.6	
VSAB1365-4R7M	4.70	7.90	8.60	13.5	11.5	15.0	13.5	
VSAB1365-5R6M	5.60	9.30	10.0	12.0	10.5	14.0	12.5	
VSAB1365-6R8M	6.80	10.0	11.5	10.5	9.00	13.5	11.5	
VSAB1365-8R2M	8.20	12.0	13.8	10.0	8.60	12.0	10.8	
VSAB1365-100M	10.0	15.0	17.8	9.00	7.50	11.0	9.50	
VSAB1365-150M	15.0	24.5	28.0	7.20	6.00	8.50	7.50	
VSAB1365-220M	22.0	35.0	39.5	6.40	5.50	7.00	6.00	
VSAB1365-330M	33.0	60.0	69.0	4.40	3.80	5.50	5.00	
VSAB1365-470M	47.0	72.0	85.0	3.90	3.50	4.20	3.60	

※1. Inductance measure condition at 100KHz, 1.0V.

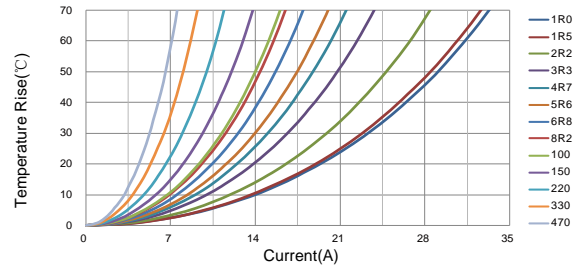
※2. Saturation current: the actual value of DC current when the inductance decrease 20% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

### Saturation Current Curve



### Temperature Rise Current Curve



### VSAB1770



Operating temperature range: - 55°C ~ +155°C

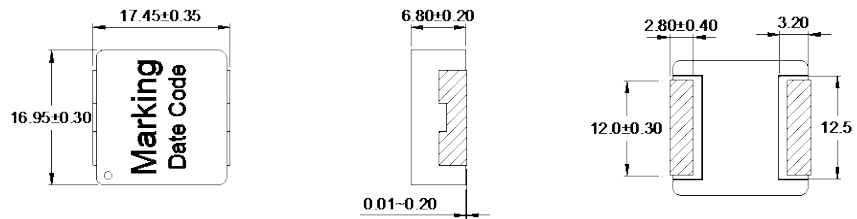
Construction



Wire



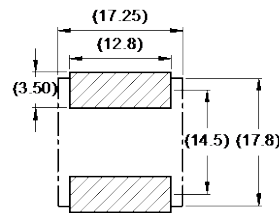
#### Appearance and Dimensions (mm)



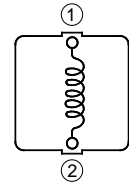
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

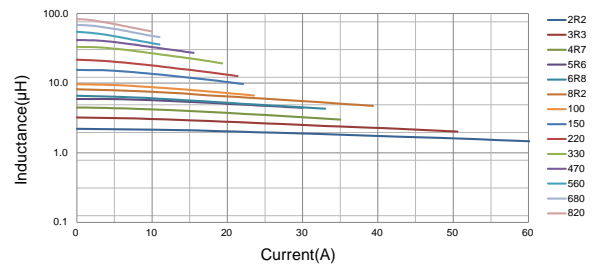
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSAB1770-2R2M	2.20	2.20	2.50	35.0	30.0	34.0	29.0	
VSAB1770-3R3M	3.30	2.80	3.30	29.0	25.0	28.0	24.0	
VSAB1770-4R7M	4.70	4.40	5.20	23.0	20.0	22.0	19.0	
VSAB1770-5R6M	5.60	5.80	6.50	19.8	17.8	18.5	17.0	
VSAB1770-6R8M	6.80	7.00	7.80	17.5	16.0	16.8	15.5	
VSAB1770-8R2M	8.20	8.20	9.20	16.5	15.0	16.0	14.5	
VSAB1770-100M	10.0	10.0	11.0	14.5	13.0	14.0	12.5	
VSAB1770-150M	15.0	17.0	21.0	12.0	10.5	12.5	11.0	
VSAB1770-220M	22.0	22.0	27.0	10.0	9.00	10.0	8.50	
VSAB1770-330M	33.0	30.0	36.0	9.20	8.00	9.50	8.00	
VSAB1770-470M	47.0	48.0	55.0	7.80	7.00	7.50	6.80	
VSAB1770-560M	56.0	52.0	60.0	6.50	6.00	6.50	6.00	
VSAB1770-680M	68.0	75.0	85.0	5.50	5.00	5.50	5.00	
VSAB1770-820M	82.0	90.0	105	4.70	4.30	4.70	4.30	

※1. Inductance measure condition at 100KHz, 1.0V.

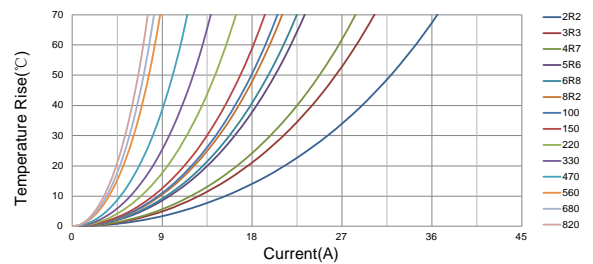
※2. Saturation current: the actual value of DC current when the inductance decrease 20% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSEB0430H



Operating temperature range: - 55°C ~ +155°C

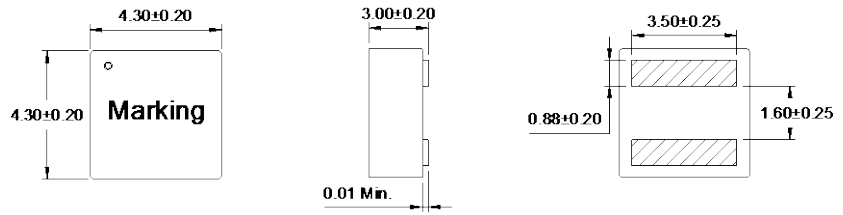
Construction



Wire



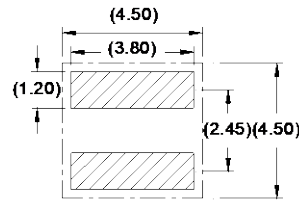
#### Appearance and Dimensions (mm)



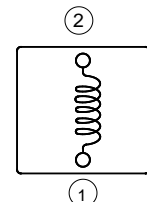
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

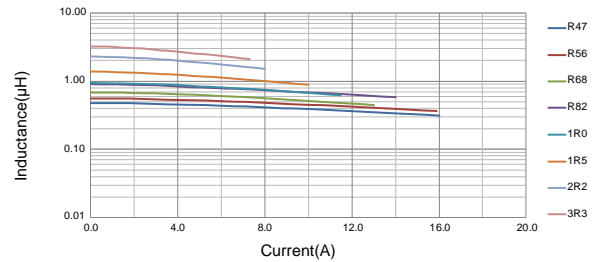
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSEB0430H-R47MC	0.47	4.40	5.10	14.0	12.0	16.0	14.4	
VSEB0430H-R56MC	0.56	4.80	5.70	13.1	11.3	15.5	14.0	
VSEB0430H-R68MC	0.68	5.30	6.30	11.0	9.50	15.0	13.2	
VSEB0430H-R82MC	0.82	6.30	7.50	10.5	9.20	12.8	11.5	
VSEB0430H-1R0MC	1.00	9.00	10.3	9.00	7.80	10.7	9.60	
VSEB0430H-1R5MC	1.50	10.5	12.5	8.50	7.30	9.00	8.10	
VSEB0430H-2R2MC	2.20	17.0	20.5	6.80	5.80	8.30	7.50	
VSEB0430H-3R3MC	3.30	22.5	26.6	5.60	4.80	7.10	6.30	

※1. Inductance measure condition at 100KHz, 1.0V.

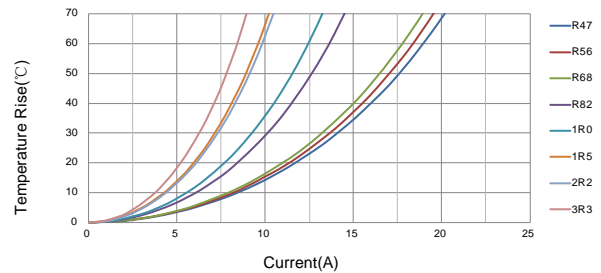
※2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSEB0530H



Operating temperature range: -55°C~+155°C

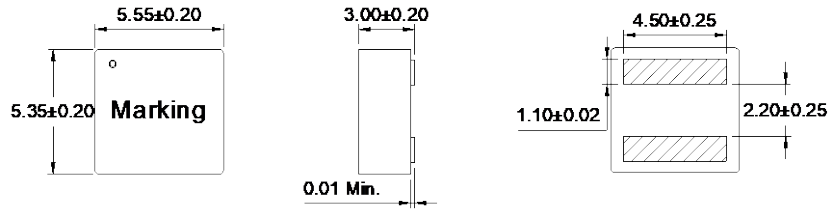
Construction



Wire



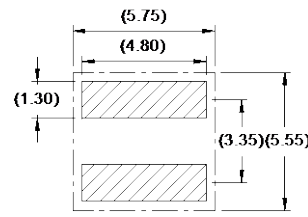
#### Appearance and Dimensions (mm)



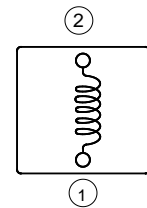
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

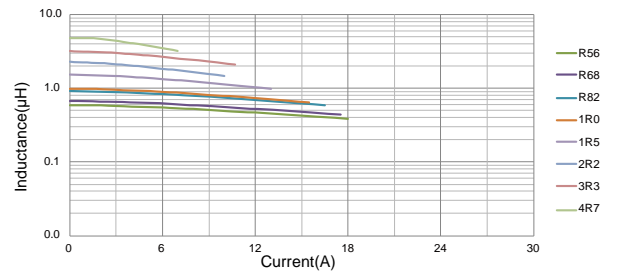
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSEB0530H-R56MC	0.56	4.20	4.90	16.1	14.0	17.7	16.0	
VSEB0530H-R68MC	0.68	4.60	5.50	15.2	13.2	15.6	13.6	
VSEB0530H-R82MC	0.82	5.10	5.90	15.0	13.0	13.1	11.8	
VSEB0530H-1R0MC	1.00	6.90	8.20	14.3	12.2	12.0	11.0	
VSEB0530H-1R5MC	1.50	9.00	10.6	10.7	9.30	11.0	10.0	
VSEB0530H-2R2MC	2.20	11.0	13.0	8.30	7.20	10.0	9.10	
VSEB0530H-3R3MC	3.30	18.0	21.2	8.10	7.00	9.00	8.10	
VSEB0530H-4R7MC	4.70	25.8	30.8	6.20	5.30	7.90	7.10	

※1. Inductance measure condition at 100KHz, 1.0V.

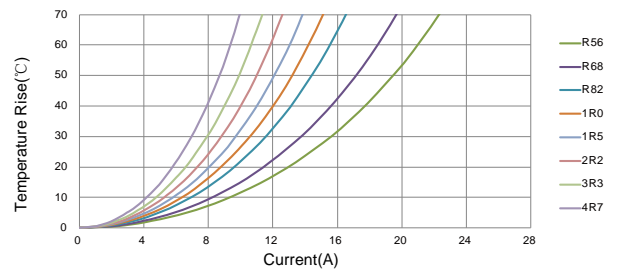
※2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve

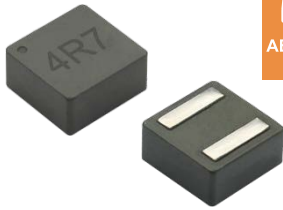


#### Temperature Rise Current Curve





### VSEB0630H



Operating temperature range: - 55°C ~ +155°C

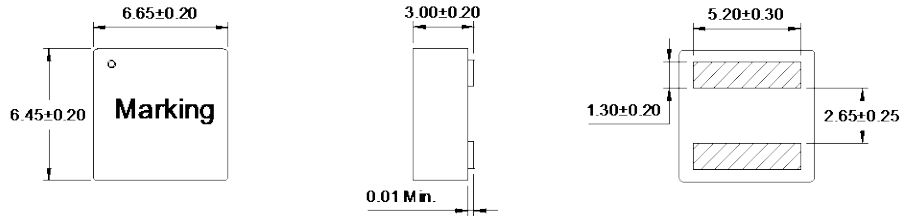
Construction



Wire



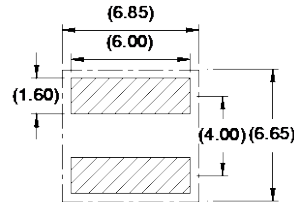
#### Appearance and Dimensions (mm)



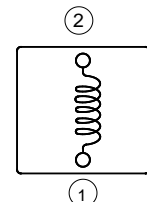
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

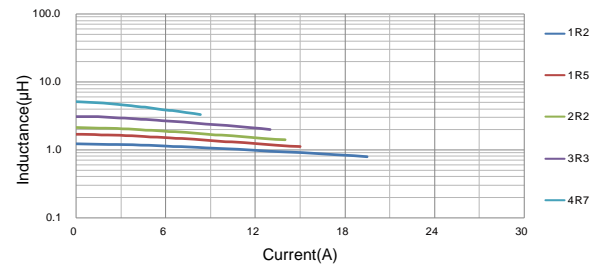
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSEB0630H-1R2MC	1.20	5.80	6.80	16.6	14.4	16.5	15.0	
VSEB0630H-1R5MC	1.50	6.80	7.90	13.2	11.3	15.5	14.0	
VSEB0630H-2R2MC	2.20	8.30	9.80	12.2	10.5	12.0	11.0	
VSEB0630H-3R3MC	3.30	16.5	19.0	8.80	7.50	8.80	8.00	
VSEB0630H-4R7MC	4.70	19.5	23.2	6.70	5.70	7.90	7.10	

※1. Inductance measure condition at 100KHz, 1.0V.

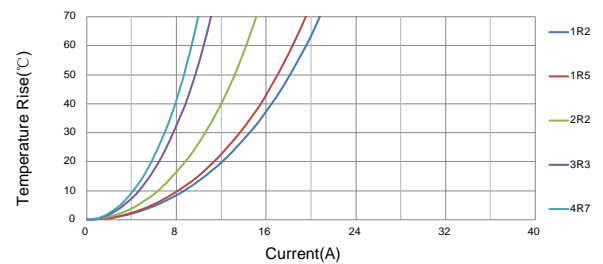
※2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

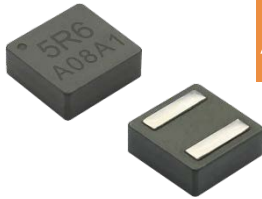
#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSEB0730H



Operating temperature range: - 55°C ~ +155°C

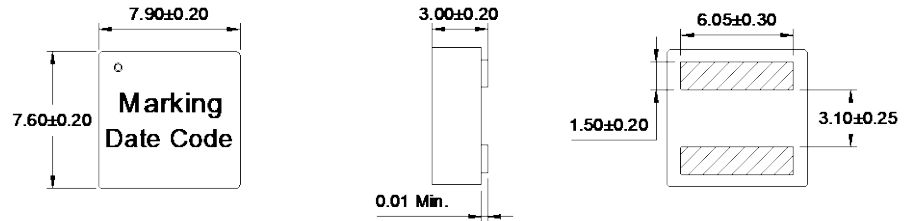
Construction



Wire



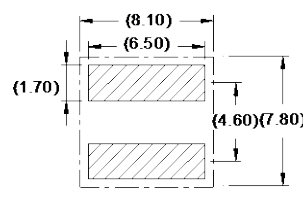
#### Appearance and Dimensions (mm)



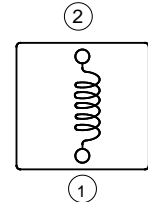
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

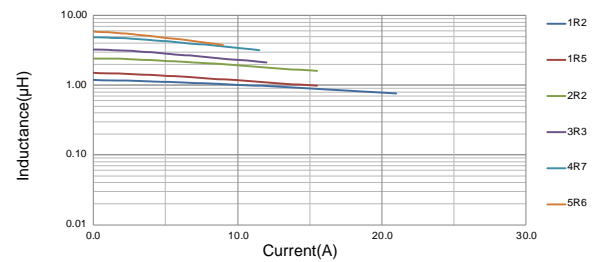
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSEB0730H-1R2MC	1.20	3.80	3.80	4.60	18.2	15.7	18.5	16.6
VSEB0730H-1R5MC	1.50	5.50	5.50	6.50	13.6	11.7	16.5	15.7
VSEB0730H-2R2MC	2.20	8.60	8.60	10.3	11.0	9.60	14.3	12.9
VSEB0730H-3R3MC	3.30	13.3	13.3	15.8	9.30	8.10	11.3	10.0
VSEB0730H-4R7MC	4.70	20.0	20.0	23.9	8.00	6.80	10.0	9.20
VSEB0730H-5R6MC	5.60	22.1	22.1	26.0	7.30	6.20	8.10	7.30

※1. Inductance measure condition at 100KHz, 1.0V.

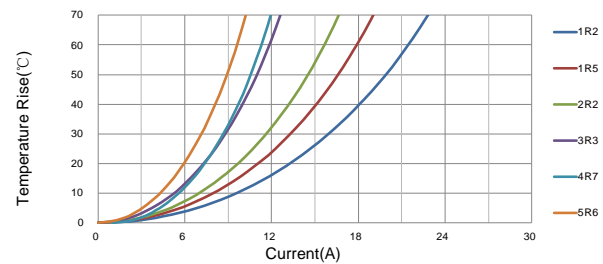
※2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

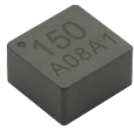
#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSEB0850H



Operating temperature range: - 55°C ~ +155°C

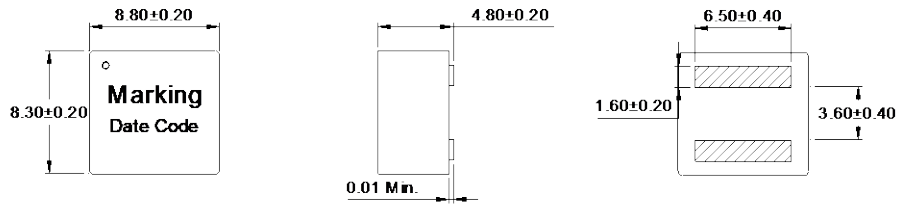
Construction



Wire



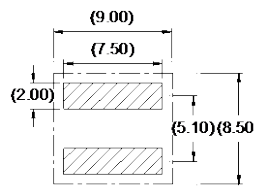
#### Appearance and Dimensions (mm)



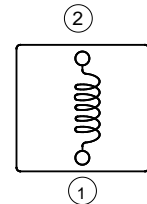
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

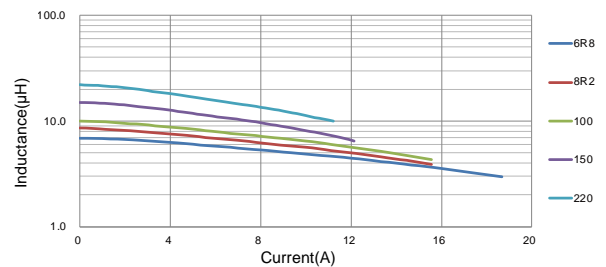
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSEB0850H-6R8MC	6.80	15.5	17.8	9.70	8.50	12.0	10.8	
VSEB0850H-8R2MC	8.20	20.3	25.0	9.00	7.80	10.3	9.30	
VSEB0850H-100MC	10.0	25.5	29.8	8.20	7.10	9.80	8.50	
VSEB0850H-150MC	15.0	37.0	44.0	7.20	6.10	8.10	7.30	
VSEB0850H-220MC	22.0	55.0	64.4	6.20	5.20	5.80	5.20	

※1. Inductance measure condition at 100KHz, 1.0V.

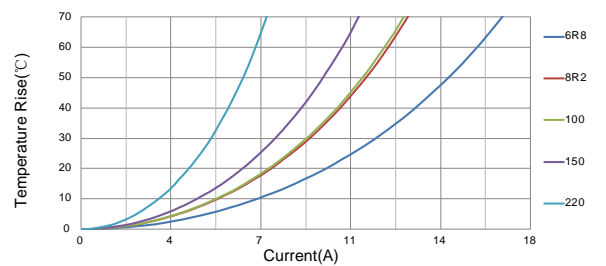
※2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSHB0421



Operating temperature range: - 55°C ~ +155°C

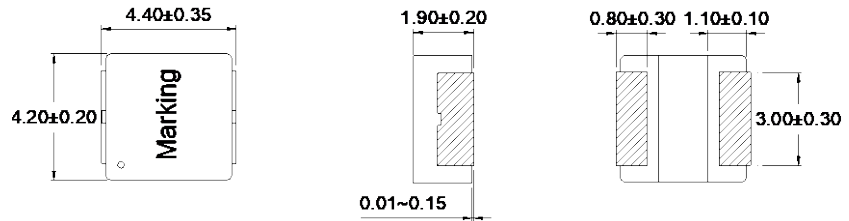
Construction



Wire



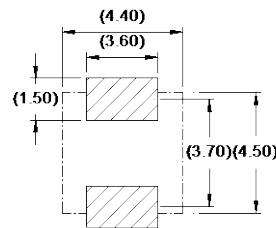
#### Appearance and Dimensions (mm)



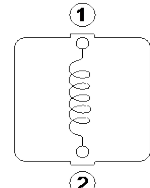
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

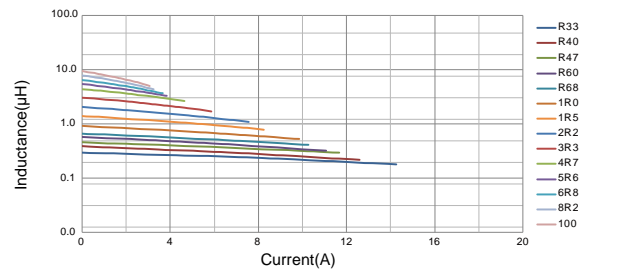
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSHB0421-R33MC	0.33	5.80	7.00	13.6	11.8	10.9	9.80	
VSHB0421-R40MC	0.40	6.20	7.10	12.7	10.9	10.6	9.50	
VSHB0421-R47MC	0.47	7.00	8.00	11.0	9.50	10.3	9.10	
VSHB0421-R60MC	0.60	8.30	9.30	10.5	9.00	9.40	8.60	
VSHB0421-R68MC	0.68	9.60	11.2	9.80	8.50	8.90	8.00	
VSHB0421-1R0MC	1.00	12.2	13.9	8.10	7.00	8.30	7.50	
VSHB0421-1R5MC	1.50	14.3	16.5	6.30	5.40	7.20	6.30	
VSHB0421-2R2MC	2.20	21.5	24.5	5.50	4.70	5.60	5.00	
VSHB0421-3R3MC	3.30	37.0	42.5	4.20	3.70	4.70	4.20	
VSHB0421-4R7MC	4.70	51.0	58.0	3.80	3.30	3.70	3.30	
VSHB0421-5R6MC	5.60	65.0	74.2	3.10	2.70	3.30	2.90	
VSHB0421-6R8MC	6.80	76.0	91.2	2.90	2.50	2.90	2.70	
VSHB0421-8R2MC	8.20	105	118	2.60	2.20	2.60	2.30	
VSHB0421-100MC	10.0	120	139	2.60	2.20	2.50	2.20	

※1. Inductance measure condition at 100KHz, 1.0V.

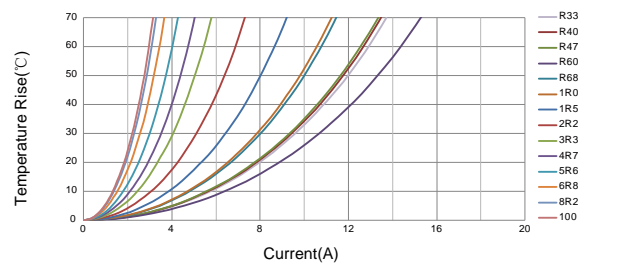
※2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

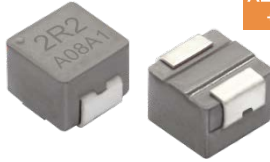
#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSHB0540



Operating temperature range: - 55°C ~ +155°C

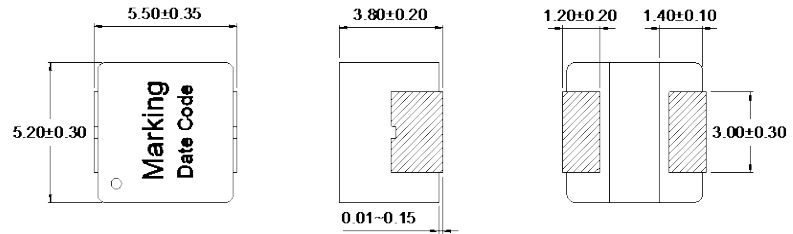
Construction



Wire



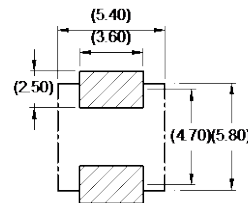
### Appearance and Dimensions (mm)



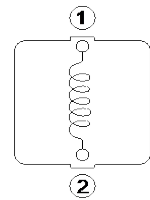
### Marking



### Reference Land Pattern (mm)



### Schematic



### Electrical Characteristics

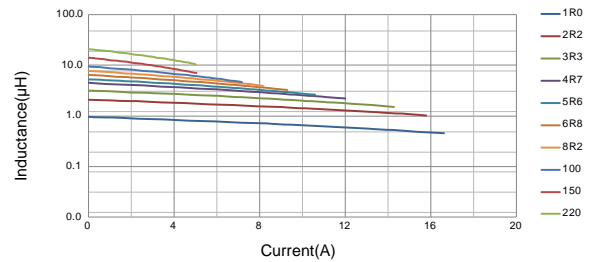
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSHB0540-1R0MC	1.00	10.4	13.0	11.5	10.5	7.20	6.70	
VSHB0540-2R2MC	2.20	21.8	25.0	10.2	8.80	6.90	6.20	
VSHB0540-3R3MC	3.30	28.0	33.0	8.40	7.40	6.30	5.80	
VSHB0540-4R7MC	4.70	34.5	41.0	7.70	6.60	5.80	5.20	
VSHB0540-5R6MC	5.60	39.1	47.0	6.90	6.00	5.00	4.50	
VSHB0540-6R8MC	6.80	47.0	56.6	6.30	5.40	4.30	3.90	
VSHB0540-8R2MC	8.20	66.5	80.0	5.60	4.90	3.70	3.30	
VSHB0540-100MC	10.0	84.0	92.4	4.80	4.00	3.20	2.90	
VSHB0540-150MC	15.0	108	124	3.60	3.10	2.80	2.50	
VSHB0540-220MC	22.0	156	177	3.00	2.50	2.40	2.20	

※1. Inductance measure condition at 100KHz, 1.0V.

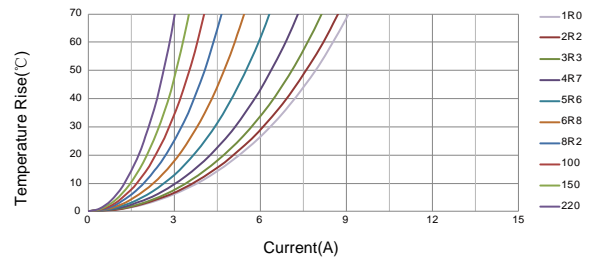
※2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

### Saturation Current Curve



### Temperature Rise Current Curve



### VSHB0645



Operating temperature range: - 55°C ~ +155°C

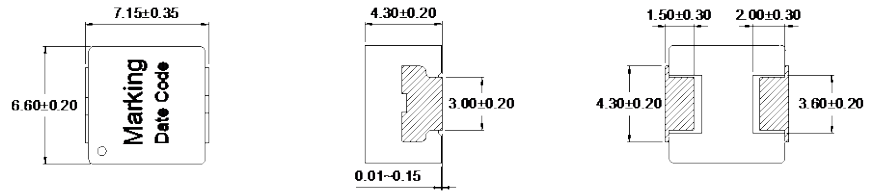
Construction



Wire



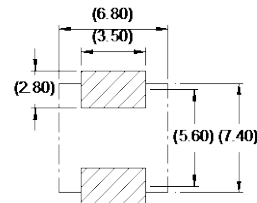
#### Appearance and Dimensions (mm)



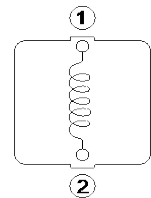
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

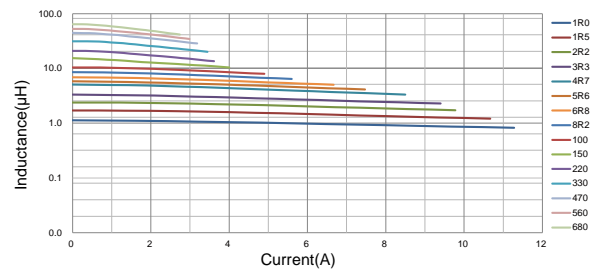
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSHB0645-1R0MC	1.00	4.90	5.9	14.5	11.5	14.0	12.5	
VSHB0645-1R5MC	1.50	6.50	7.8	12.0	10.0	12.0	10.6	
VSHB0645-2R2MC	2.20	9.20	11.0	11.0	9.00	11.0	10.0	
VSHB0645-3R3MC	3.30	15.5	18.6	9.40	8.00	8.50	7.50	
VSHB0645-4R7MC	4.70	20.2	24.0	8.50	7.00	7.60	6.50	
VSHB0645-5R6MC	5.60	22.0	26.4	8.40	7.00	6.00	5.50	
VSHB0645-6R8MC	6.80	25.0	30.0	7.50	6.50	6.00	5.30	
VSHB0645-8R2MC	8.20	35.0	42.0	7.20	6.00	5.80	5.00	
VSHB0645-100MC	10.0	44.5	53.4	6.30	5.30	5.40	4.60	
VSHB0645-150MC	15.0	65.0	78.0	4.20	3.50	4.50	3.80	
VSHB0645-220MC	22.0	92.0	112	3.20	2.80	3.00	2.50	
VSHB0645-330MC	33.0	136	163	2.90	2.50	2.40	2.10	
VSHB0645-470MC	47.0	181	217	2.60	2.30	2.00	1.80	
VSHB0645-560MC	56.0	227	272	2.50	2.20	1.90	1.70	
VSHB0645-680MC	68.0	285	320	2.40	2.10	1.80	1.60	

※1. Inductance measure condition at 100KHz, 1.0V.

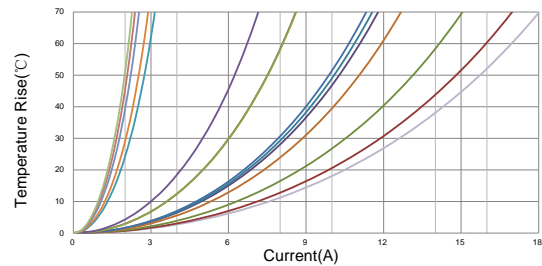
※2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSHB0754T



Operating temperature range: - 55°C~+165°C

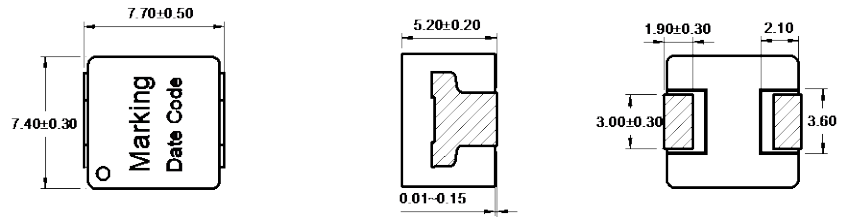
Construction



Wire



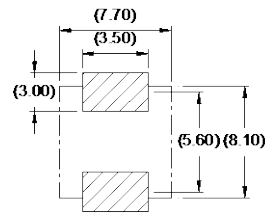
#### Appearance and Dimensions (mm)



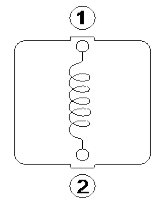
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

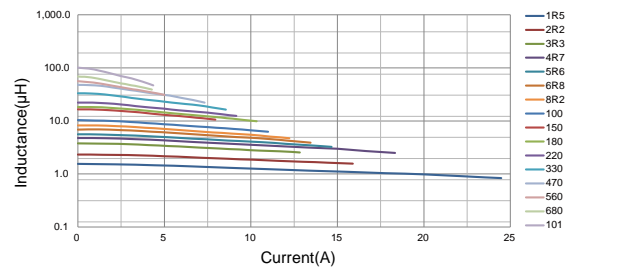
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSHB0754T-1R5MC	1.50	6.90	7.80	16.5	14.2	11.6	10.5	
VSHB0754T-2R2MC	2.20	10.0	12.0	15.0	12.9	9.80	8.80	
VSHB0754T-3R3MC	3.30	14.0	15.4	13.5	11.8	8.30	7.50	
VSHB0754T-4R7MC	4.70	19.0	20.9	13.2	11.3	7.30	6.50	
VSHB0754T-5R6MC	5.60	21.5	23.8	10.8	9.40	6.70	6.10	
VSHB0754T-6R8MC	6.80	24.2	26.5	10.4	8.90	6.40	5.80	
VSHB0754T-8R2MC	8.20	29.0	31.9	9.10	7.80	5.80	5.20	
VSHB0754T-100MC	10.0	35.0	38.3	8.20	7.10	5.20	4.80	
VSHB0754T-150MC	15.0	60.0	66.0	7.20	6.50	4.10	3.70	
VSHB0754T-180MC	18.0	63.0	72.0	6.70	5.60	3.90	3.50	
VSHB0754T-220MC	22.0	92.0	102	6.30	5.50	3.70	3.30	
VSHB0754T-330MC	33.0	118	134	5.00	4.30	3.30	2.90	
VSHB0754T-470MC	47.0	156	171	4.10	3.50	2.50	2.20	
VSHB0754T-560MC	56.0	185	213	3.40	2.90	2.20	2.00	
VSHB0754T-680MC	68.0	225	255	2.80	2.40	2.00	1.80	
VSHB0754T-101MC	100	280	330	2.40	2.00	1.90	1.70	

※1. Inductance measure condition at 100KHz, 1.0V.

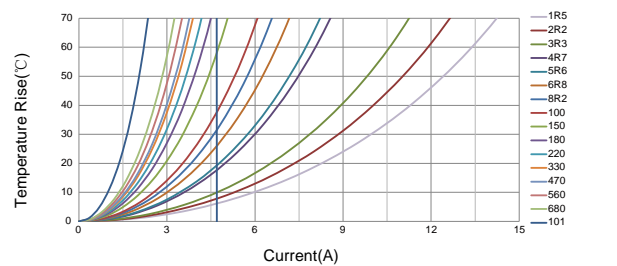
※2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSHB1054T



Operating temperature range: - 55°C~+165°C

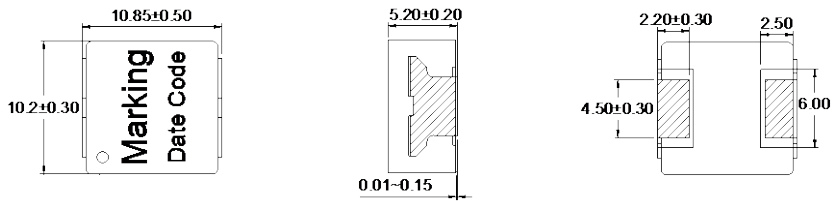
Construction



Wire



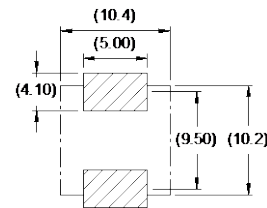
#### Appearance and Dimensions (mm)



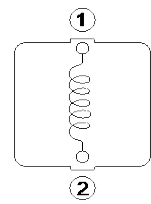
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

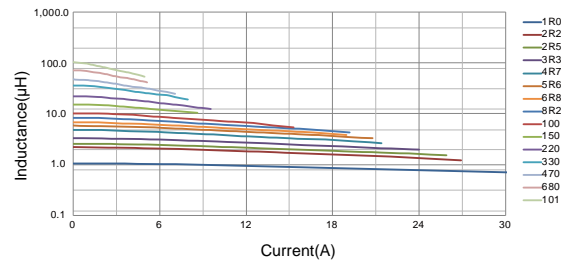
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSHB1054T-1R0MC	1.00	2.30	2.70	28.5	24.0	30.0	27.0	
VSHB1054T-2R2MC	2.20	4.00	4.70	23.0	18.0	23.0	20.7	
VSHB1054T-2R5MC	2.50	4.70	5.60	22.5	17.6	21.0	18.9	
VSHB1054T-3R3MC	3.30	6.20	7.30	19.2	16.4	18.7	16.8	
VSHB1054T-4R7MC	4.70	8.30	10.0	15.5	13.0	14.5	13.0	
VSHB1054T-5R6MC	5.60	10.0	11.8	14.8	12.5	14.0	12.5	
VSHB1054T-6R8MC	6.80	11.5	13.6	13.3	11.4	12.0	10.8	
VSHB1054T-8R2MC	8.20	15.5	18.0	12.4	10.6	10.5	8.80	
VSHB1054T-100MC	10.0	20.5	23.5	11.8	9.50	8.80	7.90	
VSHB1054T-150MC	15.0	27.2	31.2	8.50	7.20	7.60	6.80	
VSHB1054T-220MC	22.0	38.0	45.0	7.30	6.20	6.30	5.60	
VSHB1054T-330MC	33.0	60.0	70.0	6.50	5.50	5.00	4.50	
VSHB1054T-470MC	47.0	83.0	100	4.70	4.00	4.20	3.80	
VSHB1054T-680MC	68.0	120	143	3.90	3.10	3.40	3.10	
VSHB1054T-101MC	100	190	220	3.30	2.70	3.00	2.70	

※1. Inductance measure condition at 100KHz, 1.0V.

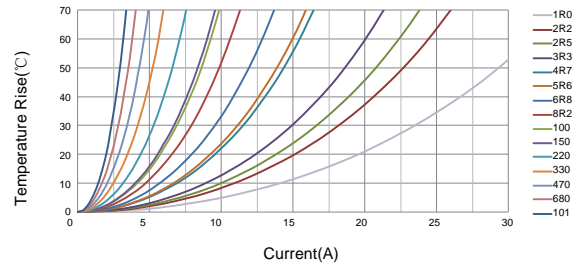
※2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve

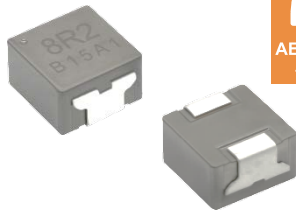


#### Temperature Rise Current Curve





### VSHB1060T



Operating temperature range: - 55°C~+165°C

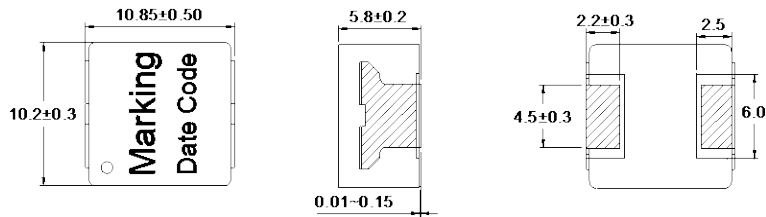
Construction



Wire



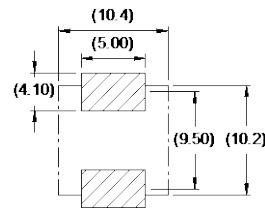
#### Appearance and Dimensions (mm)



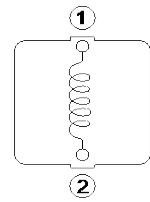
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

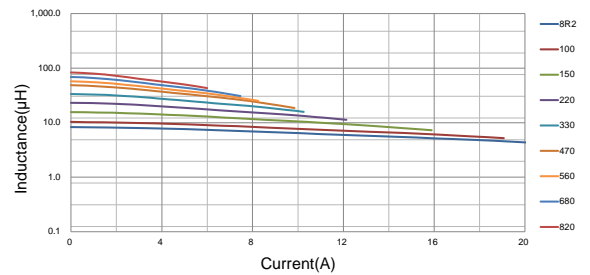
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VSHB1060T-8R2MC	8.20	13.5	16.0	13.2	11.3	11.5	9.80	
VSHB1060T-100MC	10.0	16.5	19.5	12.5	10.6	9.50	8.50	
VSHB1060T-150MC	15.0	21.8	25.0	10.3	8.40	8.30	7.10	
VSHB1060T-220MC	22.0	33.8	39.5	8.00	6.80	7.00	6.10	
VSHB1060T-330MC	33.0	48.0	56.0	7.00	5.80	6.30	5.60	
VSHB1060T-470MC	47.0	67.0	74.0	5.50	4.70	4.50	4.00	
VSHB1060T-560MC	56.0	75.0	92.0	4.90	4.10	4.20	3.70	
VSHB1060T-680MC	68.0	95.0	115	4.30	3.60	3.70	3.40	
VSHB1060T-820MC	82.0	117	140	4.00	3.30	3.30	3.00	

※1. Inductance measure condition at 100KHz, 1.0V.

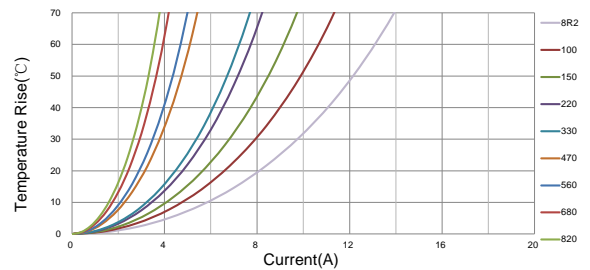
※2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C(Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VPAB3822



Operating temperature range: - 55°C ~ +165°C

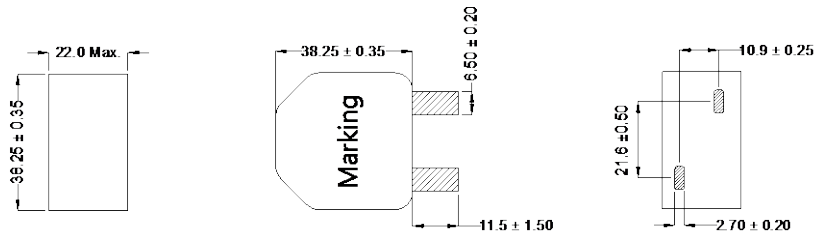
Construction



Wire



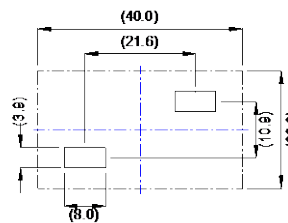
#### Appearance and Dimensions (mm)



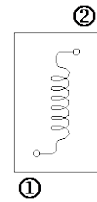
Marking



Reference Hole Pattern (mm)



Schematic



#### Electrical Characteristics

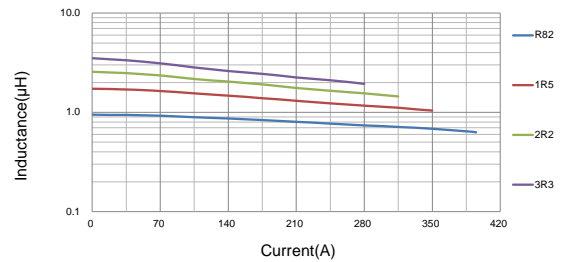
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	
	±20%	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
VPAB3822-R82M	0.82	0.160	0.175	335	330	142	138	
VPAB3822-1R5M	1.50	0.230	0.245	245	238	130	125	
VPAB3822-2R2M	2.20	0.315	0.335	190	185	126	120	
VPAB3822-3R3M	3.30	0.395	0.420	176	170	105	100	

※1. Inductance measure condition at 100KHz, 1.0V.

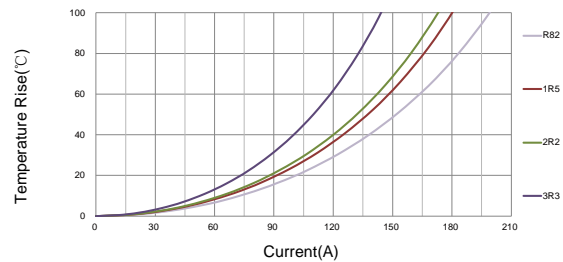
※2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VRKL0740



Operating temperature range: - 40°C~+150°C

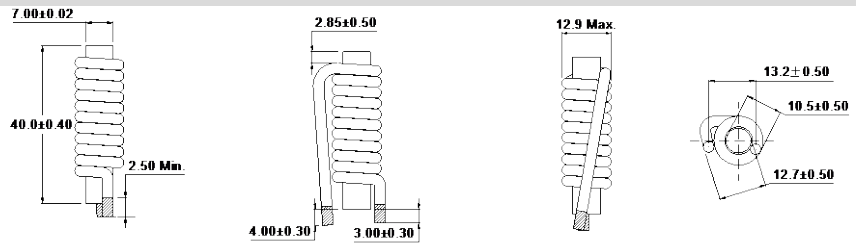
Construction



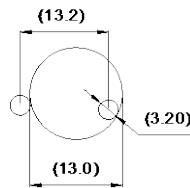
Wire



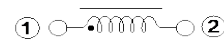
#### Appearance and Dimensions (mm)



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

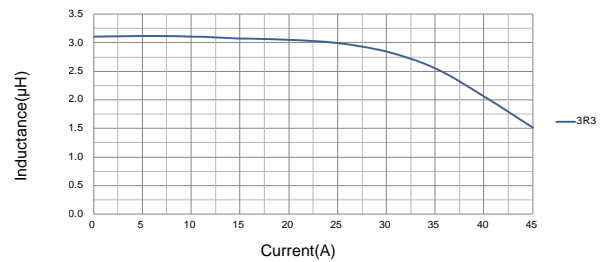
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2	Temperature Rise Current (A) ※3
	±20%	Typ.	Typ.	Max.	Typ.	Typ.
VRKL0740-3R3M	3.30	1.11	1.30	31.0	30.0	

※1. Inductance measure condition at 1.0KHz, 0.25V.

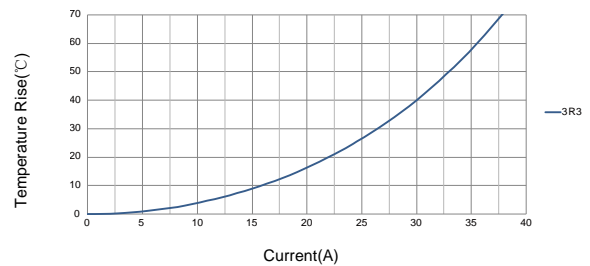
※2. Saturation current: the actual value of DC current when the inductance decrease 20% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### RKL0825A



Operating temperature range: - 40°C~+150°C

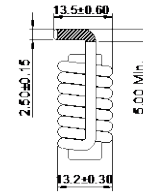
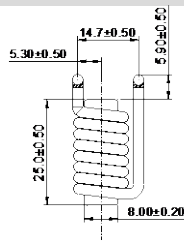
Construction



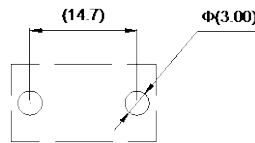
Wire



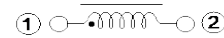
#### Appearance and Dimensions (mm)



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

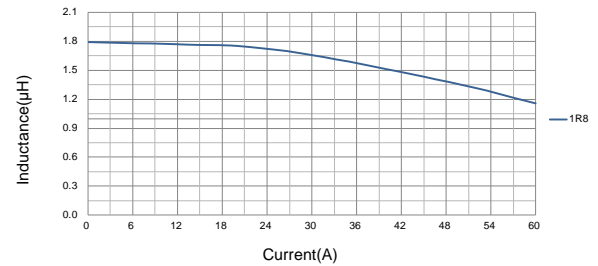
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2	Temperature Rise Current (A) ※3
	±20%	Typ.	Typ.	Max.	Typ.	Typ.
RKL0825A-1R8M	1.80	1.02	1.20	33.0	34.0	

※1. Inductance measure condition at 1.0KHz, 0.25V.

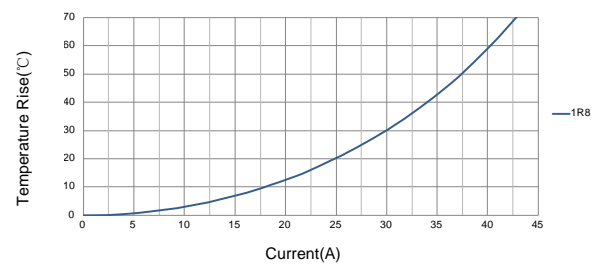
※2. Saturation current: the actual value of DC current when the inductance decrease 20% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C(Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VCRHS0704



Operating temperature range: - 55°C ~ +155°C

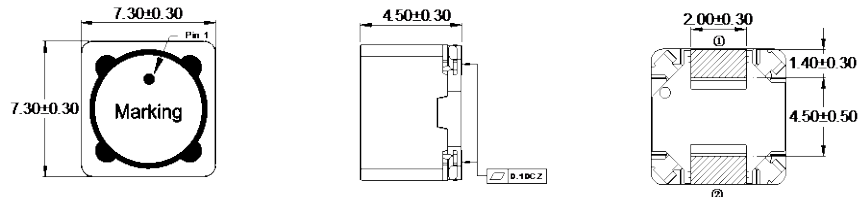
Construction



Wire



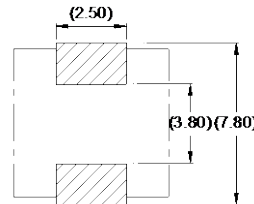
#### Appearance and Dimensions (mm)



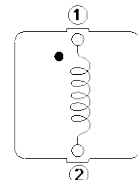
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

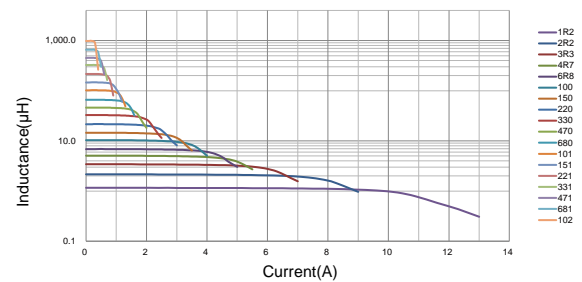
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3
	±20%	Typ.	Typ.	Max.	10% Drop	30% Drop	Typ.
VCRHS0704-1R2M	1.20±20%	12.8	15.4	8.50	10.2	5.20	
VCRHS0704-2R2M	2.20±20%	16.0	19.0	6.10	7.10	4.70	
VCRHS0704-3R3M	3.30±20%	19.5	23.4	5.10	5.80	4.20	
VCRHS0704-4R7M	4.70±20%	24.0	28.8	4.30	4.70	3.60	
VCRHS0704-6R8M	6.80±20%	33.0	39.0	3.70	4.27	3.10	
VCRHS0704-100M	10.0±20%	49.0	58.0	3.10	3.40	2.68	
VCRHS0704-150M	15.0±20%	70.0	84.0	2.40	2.75	2.30	
VCRHS0704-220M	22.0±20%	88.0	105	2.05	2.33	2.00	
VCRHS0704-330M	33.0±20%	140.0	168	1.70	1.94	1.53	
VCRHS0704-470M	47.0±20%	195.0	234	1.40	1.65	1.25	
VCRHS0704-680M	68.0±20%	266.0	318	1.20	1.31	1.06	
VCRHS0704-101L	100.0±15%	365.0	430	1.00	1.10	0.97	
VCRHS0704-151L	150.0±15%	550.0	660	0.80	0.92	0.75	
VCRHS0704-221L	220.0±15%	930.0	1,100	0.68	0.74	0.60	
VCRHS0704-331L	330.0±15%	1,170	1,400	0.53	0.60	0.51	
VCRHS0704-471L	470.0±15%	1,600	1,920	0.45	0.48	0.41	
VCRHS0704-681L	680.0±15%	2,600	3,120	0.34	0.40	0.36	
VCRHS0704-102K	1,000±10%	4,400	5,000	0.27	0.32	0.27	

※1. Inductance measure condition at 100KHz, 0.1V.

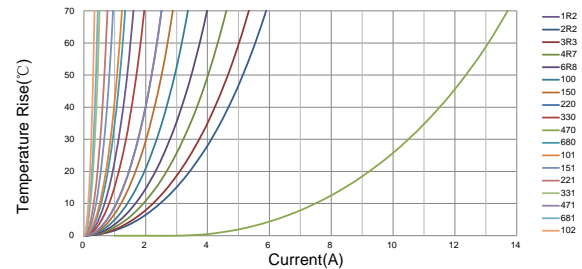
※2. Saturation current: the actual value of DC current when the inductance decrease 10% and 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VCRHS1208



Operating temperature range: - 55°C ~ +155°C

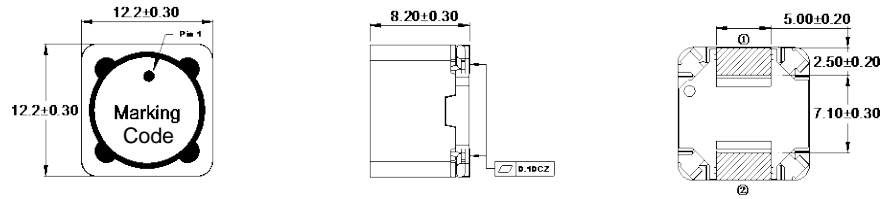
Construction



Wire



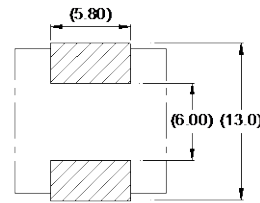
#### Appearance and Dimensions (mm)



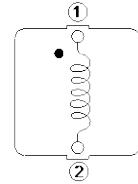
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

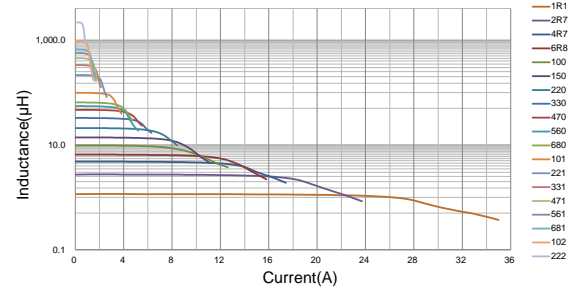
Part No.	Inductance (μH)※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3
	±20%	Typ.	Typ.	Max.	10% Drop	30% Drop	Typ.
VCRHS1208-1R1M	1.10±20%	4.30	5.20	25.0	28.0	12.0	
VCRHS1208-2R7M	2.70±20%	6.40	7.70	16.2	18.2	10.0	
VCRHS1208-4R7M	4.70±30%	7.50	9.00	12.0	14.2	9.20	
VCRHS1208-6R8M	6.80±20%	11.3	13.6	10.5	11.9	7.50	
VCRHS1208-100M	10.0±20%	17.5	21.0	8.00	9.51	6.00	
VCRHS1208-150M	15.0±20%	21.3	25.6	6.80	8.06	5.60	
VCRHS1208-220M	22.0±20%	34.0	40.8	5.80	6.60	4.30	
VCRHS1208-330M	33.0±20%	44.5	53.4	4.50	5.29	3.80	
VCRHS1208-470M	47.0±20%	59.5	71.4	4.00	4.56	3.20	
VCRHS1208-560M	56.0±20%	74.0	88.8	3.40	4.07	2.90	
VCRHS1208-680M	68.0±20%	86.0	103.0	3.30	3.78	2.70	
VCRHS1208-101L	100.0±15%	126.0	151.0	2.70	3.10	2.30	
VCRHS1208-221L	220.0±15%	262.0	315.0	1.80	2.13	1.56	
VCRHS1208-331L	330.0±15%	380.0	456.0	1.50	1.77	1.30	
VCRHS1208-471L	470.0±15%	540.0	640.0	1.22	1.45	1.10	
VCRHS1208-561L	560.0±15%	680.0	816.0	1.13	1.28	0.98	
VCRHS1208-681L	680.0±15%	760.0	910.0	1.05	1.19	0.90	
VCRHS1208-102K	1,000±10%	1,090	1,300	0.87	1.01	0.77	
VCRHS1208-222K	2,200±10%	2,600	3,120	0.55	0.64	0.47	

※1. Inductance measure condition at 100kHz, 0.1V.

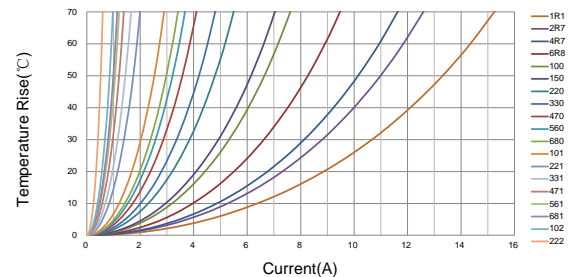
※2. Saturation current: the actual value of DC current when the inductance decrease 10% and 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VCRHS1210



Operating temperature range: - 55°C ~ +155°C

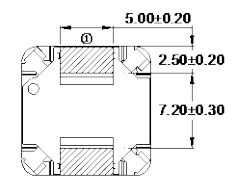
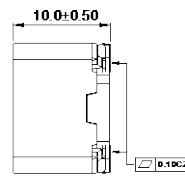
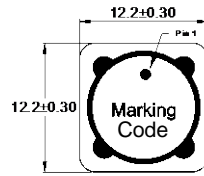
Construction



Wire



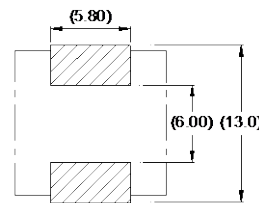
#### Appearance and Dimensions (mm)



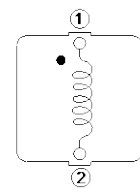
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

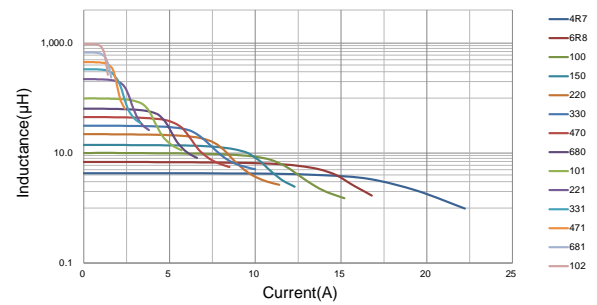
Part No.	Inductance (μH) ※1		D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3
	±20%	Typ.	Max.	10% Drop	30% Drop	Typ.	
VCRHS1210-4R7N	4.70±30%	8.70	10.4	13.5	17.0	8.80	
VCRHS1210-6R8M	6.80±20%	9.80	11.8	11.0	13.0	8.30	
VCRHS1210-100M	10.0±20%	12.5	15.0	9.20	10.7	6.70	
VCRHS1210-150M	15.0±20%	17.2	20.6	7.80	9.00	6.30	
VCRHS1210-220M	22.0±20%	21.5	25.8	6.20	7.18	5.00	
VCRHS1210-330M	33.0±20%	31.5	37.8	5.10	6.02	4.20	
VCRHS1210-470M	47.0±20%	45.0	54.0	4.20	4.85	3.60	
VCRHS1210-680M	68.0±20%	71.5	85.8	3.60	4.17	3.10	
VCRHS1210-101L	100.0±15%	100.0	120.0	2.80	3.39	2.60	
VCRHS1210-221L	220.0±15%	196.0	235.0	1.90	2.23	1.85	
VCRHS1210-331L	330.0±15%	320.0	384.0	1.50	1.78	1.45	
VCRHS1210-471L	470.0±15%	435.0	520.0	1.34	1.60	1.25	
VCRHS1210-681L	680.0±15%	640.0	768.0	1.10	1.28	1.03	
VCRHS1210-102K	1,000±10%	910.0	1,080	0.90	1.07	0.86	

※1. Inductance measure condition at 100KHz, 0.1V.

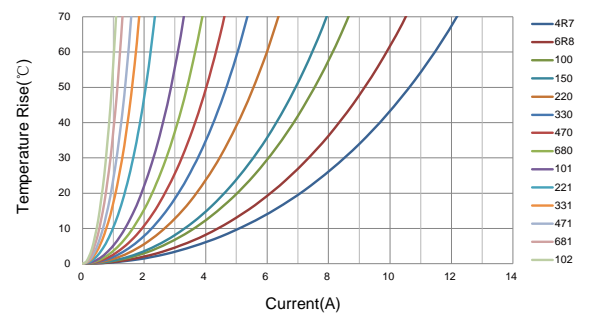
※2. Saturation current: the actual value of DC current when the inductance decrease 10% and 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C(Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VCRHC0704



Operating temperature range: - 55°C ~ +155°C

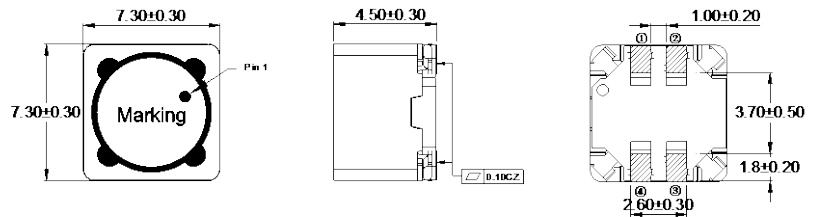
Construction



Wire



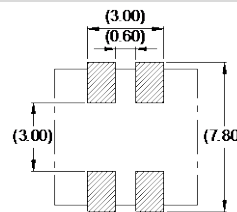
#### Appearance and Dimensions (mm)



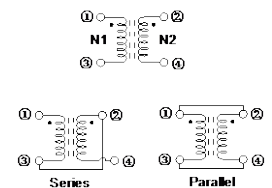
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

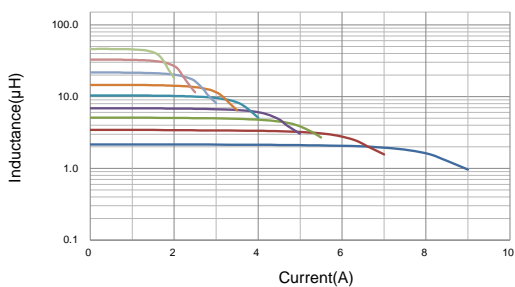
Part No.	Inductance (μH) ※1	Leakage Inductance (μH)	D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	HI-POT (Vdc) 1mA, 1S
	±20%		Typ.	Max.	10% Drop	30% Drop		
VCRHC0704-2R2M	2.20±20%	0.13	32.0	38.0	6.10	7.10	4.70	500
VCRHC0704-3R3M	3.30±20%	0.15	38.9	46.0	5.10	5.80	4.20	500
VCRHC0704-4R7M	4.70±20%	0.17	47.0	56.0	4.30	4.70	3.60	500
VCRHC0704-6R8M	6.80±20%	0.18	65.0	78.0	3.70	4.27	3.10	500
VCRHC0704-100M	10.0±20%	0.22	96.0	115	3.10	3.40	2.67	500
VCRHC0704-150M	15.0±20%	0.25	144	170	2.30	2.75	2.30	500
VCRHC0704-220M	22.0±20%	0.38	176	210	2.05	2.33	2.00	500
VCRHC0704-330M	33.0±20%	0.45	265	310	1.70	1.94	1.53	500
VCRHC0704-470M	47.0±20%	0.52	390	450	1.40	1.65	1.25	500

※1. Inductance measure condition at 100KHz, 0.1V.

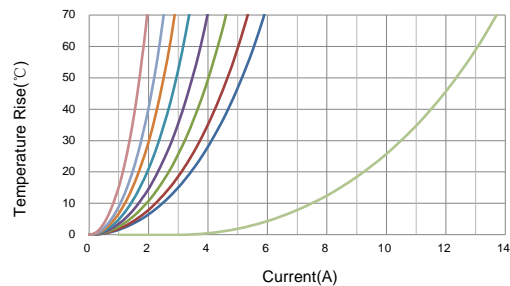
※2. Saturation current: the actual value of DC current when the inductance decrease 10% and 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve





### VCRHC1208



Operating temperature range: - 55°C ~ +155°C

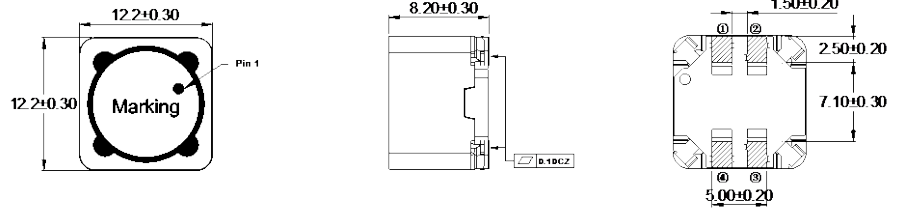
Construction



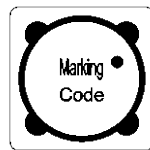
Wire



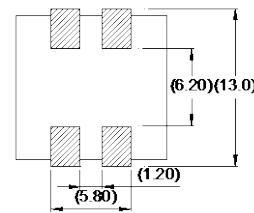
#### Appearance and Dimensions (mm)



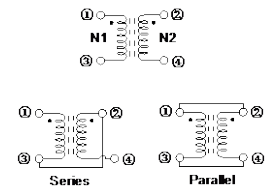
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

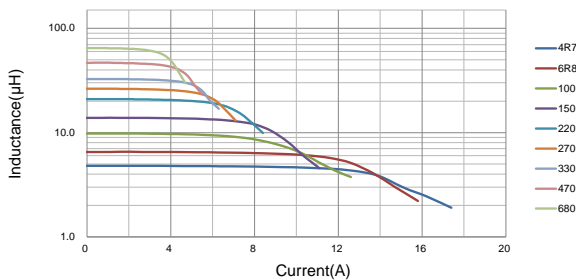
Part No.	Inductance (μH) ※1	Leakage Inductance (μH)	D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	HI-POT (Vdc) 1mA, 1S
	±20%		Typ.	Max.	10% Drop	30% Drop		
VCRHC1208-4R7N	4.70±30%	0.23	18.0	21.6	12.0	14.2	9.20	500
VCRHC1208-6R8M	6.80±20%	0.25	23.6	28.3	10.5	11.9	7.50	500
VCRHC1208-100M	10.0±20%	0.30	35.0	42.0	8.00	9.51	6.00	500
VCRHC1208-150M	15.0±20%	0.43	44.0	52.0	6.80	8.06	5.60	500
VCRHC1208-220M	22.0±20%	0.49	67.0	78.0	5.80	6.60	4.30	500
VCRHC1208-270M	27.0±20%	0.51	78.3	93.0	5.10	6.01	4.05	500
VCRHC1208-330M	33.0±20%	0.58	88.4	106.0	4.50	5.29	3.80	500
VCRHC1208-470M	47.0±20%	0.66	120.0	142.0	4.00	4.56	3.20	500
VCRHC1208-680M	68.0±20%	0.79	175.0	205.0	3.30	3.78	2.70	500

※1. Inductance measure condition at 100KHz, 0.1V.

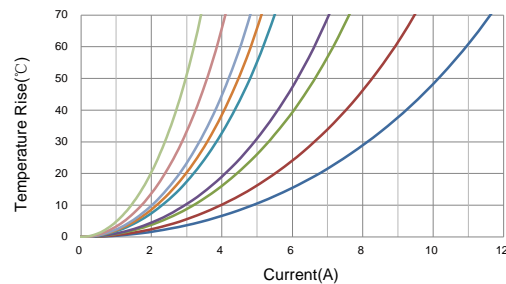
※2. Saturation current: the actual value of DC current when the inductance decrease 10% and 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VCRHC1210



Operating temperature range: - 55°C ~ +155°C

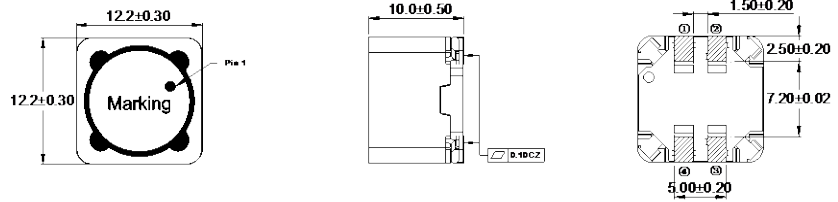
Construction



Wire



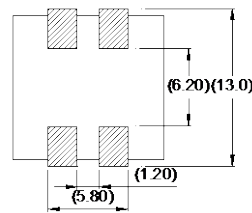
#### Appearance and Dimensions (mm)



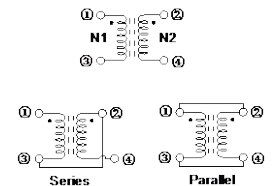
#### Marking



#### Reference Land Pattern (mm)



#### Schematic



#### Electrical Characteristics

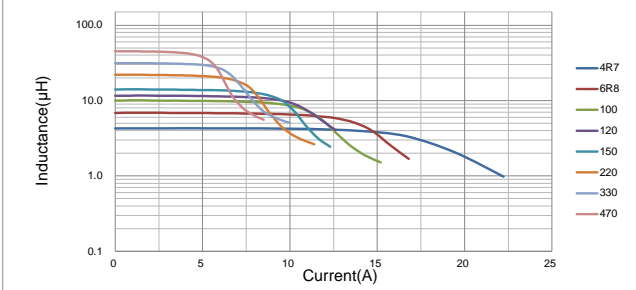
Part No.	Inductance (μH) ※1	Leakage Inductance (μH)	D.C.R. (mΩ)		Saturation Current (A) ※2		Temperature Rise Current (A) ※3	HI-POT (Vdc) 1mA, 1S
	±20%		Typ.	Max.	10% Drop	30% Drop	Typ.	
VCRHC1210-4R7N	4.70±30%	0.26	17.4	20.9	13.5	17.0	8.80	500
VCRHC1210-6R8M	6.80±20%	0.28	19.8	23.8	11.0	13.0	8.30	500
VCRHC1210-100M	10.0±20%	0.30	25.0	29.0	9.20	10.7	6.70	500
VCRHC1210-120M	12.0±20%	0.32	31.5	37.8	8.40	9.70	6.50	500
VCRHC1210-150M	15.0±20%	0.35	34.5	41.0	7.80	9.00	6.30	500
VCRHC1210-220M	22.0±20%	0.44	44.0	52.0	6.20	7.18	5.00	500
VCRHC1210-330M	33.0±20%	0.52	63.0	75.0	5.10	6.02	4.20	500
VCRHC1210-470M	47.0±20%	0.63	88.0	105.0	4.20	4.85	3.60	500

※1. Inductance measure condition at 100KHz, 0.1V.

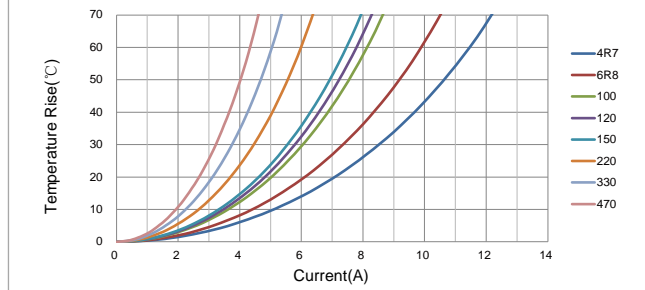
※2. Saturation current: the actual value of DC current when the inductance decrease 10% and 30% of its initial value.

※3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Saturation Current Curve



#### Temperature Rise Current Curve



### VSTCB1060R



Operating temperature range: -40°C ~ +125°C

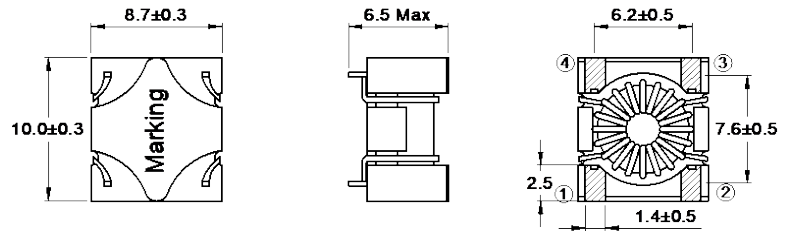
Construction



Wire



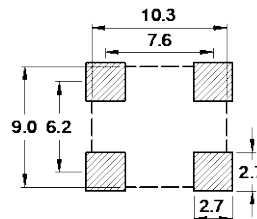
#### Appearance and Dimensions (mm)



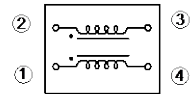
#### Marking



#### Reference Land Pattern



#### Schematic



#### Electrical Characteristics

Part No.	Inductance (mH)	Impedance (Ω) ※1	Leakage Inductance (nH) ※2	D.C.R. (mΩ)	Rated Current (A) ※3	Rated Voltage (V)	Frequency Range (MHz)
		Min.	Typ.	Max.	Max.	Max.	Min.
VSTCB1060R-202	2.00 ± 40%	2,100	220	290	0.75	80.0	0.50-15.0
VSTCB1060R-302	3.00 ± 40%	3,200	330	330	0.65	80.0	0.50-10.0
VSTCB1060R-402	4.00 ± 40%	4,200	450	550	0.52	80.0	0.50-5.00
VSTCB1060R-502	5.00 ± 40%	5,300	650	680	0.35	80.0	0.50-3.00

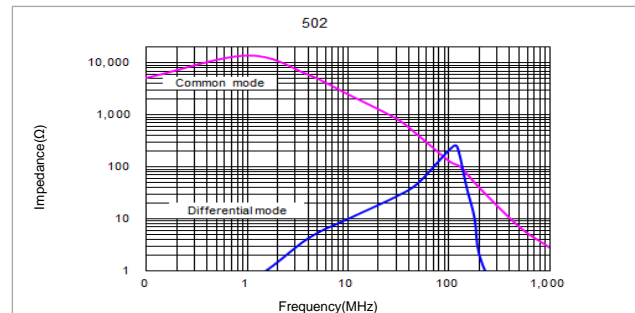
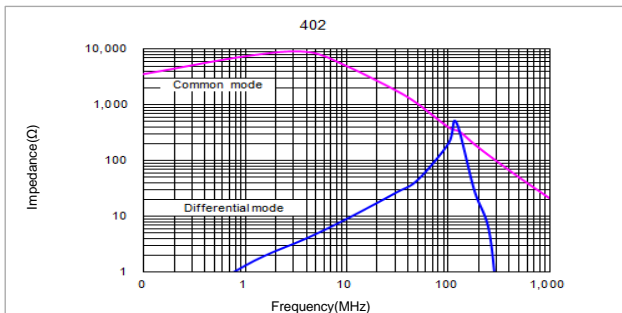
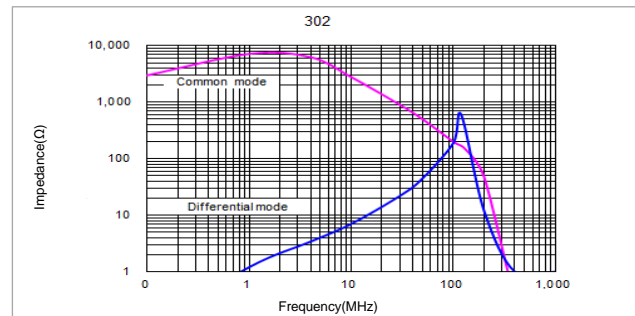
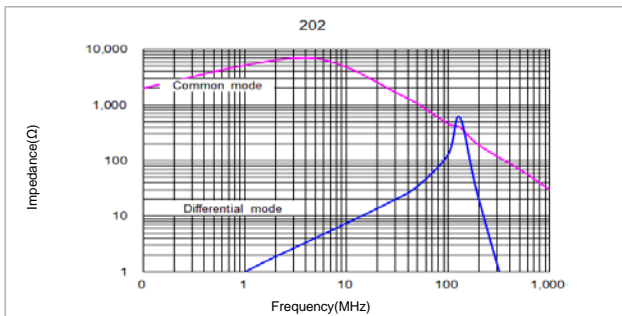
■ All data is tested based on 25°C ambient temperature.

※1 Impedance measure condition reference frequency range.

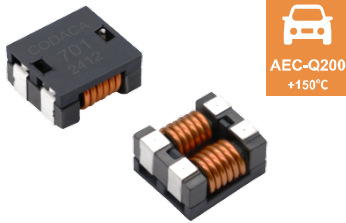
※2 Leakage inductance is for L1 and is measured with L2 shorted.

※3 Rated current: the value of DC current when the temperature rise is ΔT40°C (Ta=25°C).

#### Impedance vs Frequency Curve



### VSTP0740

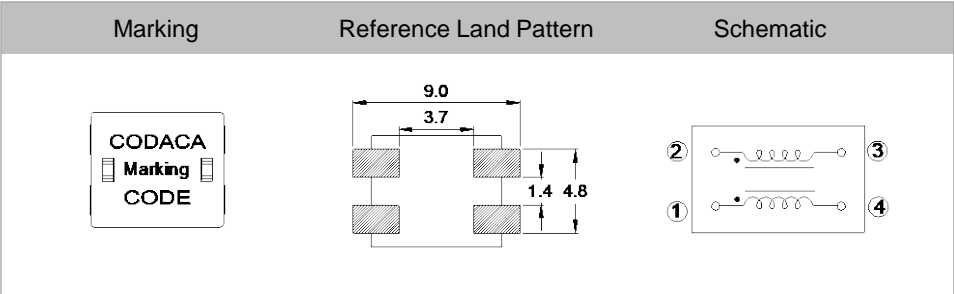
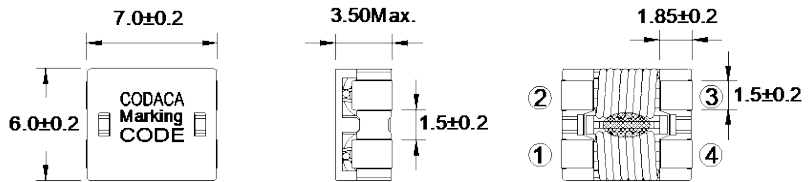


Operating temperature range: -50°C ~ +150°C

Construction Wire



#### Appearance and Dimensions (mm)



#### Electrical Characteristics

Part No.	Inductance (μH) ※1		Impedance (Ω) ※2		D.C.R. (mΩ)		Rated Current(A) ※3	Rated Voltage(V)	Insulation Resistance (MΩ)
	Min.	Typ.	Min.	Typ.	Typ.	Max.			
VSTP0740-301	1.00	2.72	225	300	7.15	9.50	5.20	80.0	10.0
VSTP0740-501	2.20	4.10	300	500	9.10	12.0	5.00	80.0	10.0
VSTP0740-701	4.00	6.89	500	700	10.6	14.0	4.00	80.0	10.0
VSTP0740-102	5.00	9.40	800	1000	15.0	19.5	3.60	80.0	10.0
VSTP0740-102A	0.20	3.80	800	1000	15.0	19.5	3.60	80.0	10.0

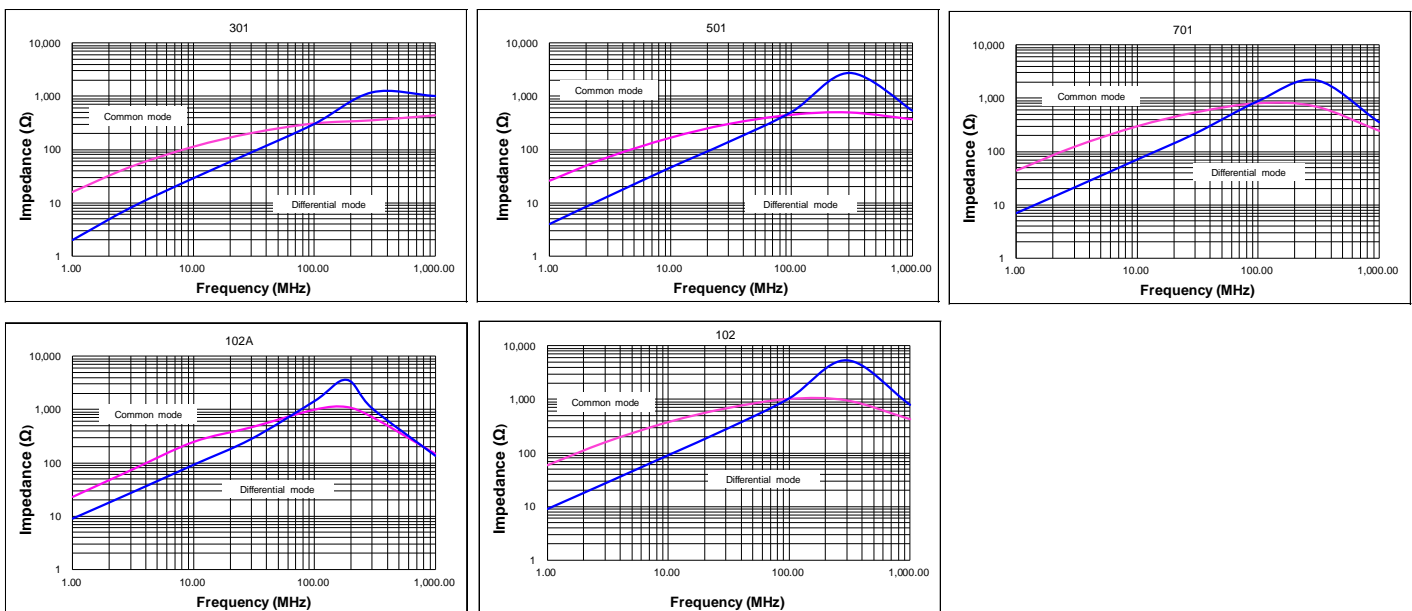
■ All data is tested based on 25°C ambient temperature.

※1 Inductance measure condition at 100KHz,0.1V.

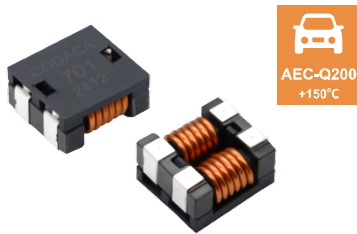
※2 Impedance measure condition at 100MHz,0.5V.

※3 Rated current: the value of DC current when the temperature rise is ΔT40°C(Ta=25°C).

#### Impedance vs Frequency Curve



### VSTP0950

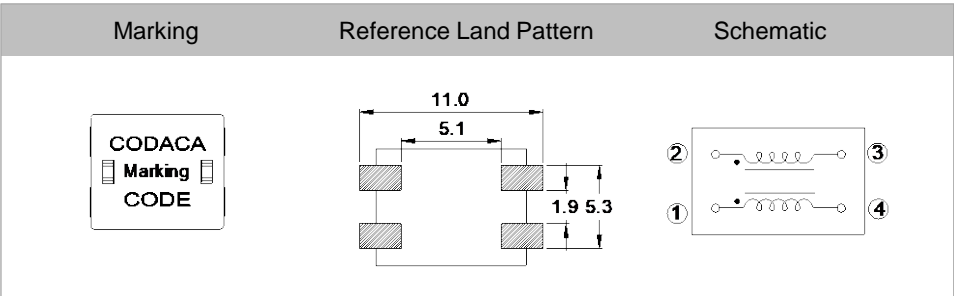
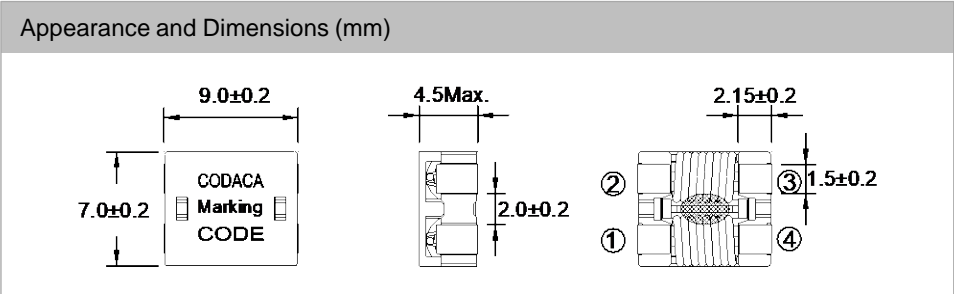


Operating temperature range: -40°C ~ +125°C

#### Construction



#### Wire

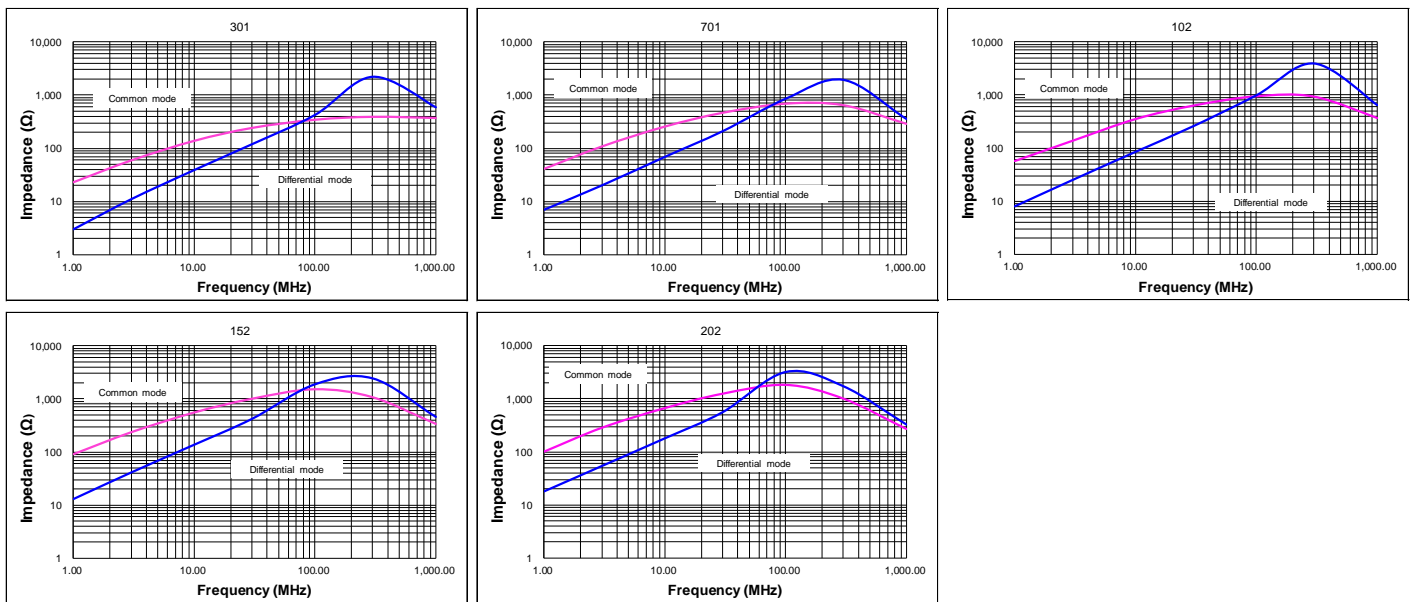


### Electrical Characteristics

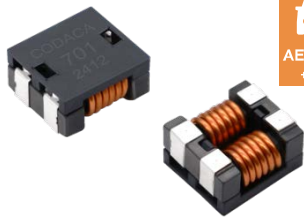
Part No.	Inductance (μH) ※1		Impedance (Ω) ※2		D.C.R. (mΩ)		Rated Current(A) ※3	Rated Voltage(V)	Insulation Resistance (MΩ)
	Min.	Typ.	Min.	Typ.	Typ.	Max.			
VSTP0950-301	1.00	2.40	180	300	4.65	6.00	6.00	80.0	10.0
VSTP0950-701	3.00	7.30	500	700	7.20	9.50	5.00	80.0	10.0
VSTP0950-102	4.00	8.80	750	1000	8.82	11.50	4.00	80.0	10.0
VSTP0950-152	7.00	14.0	1100	1500	11.2	16.0	5.40	80.0	10.0
VSTP0950-202	9.80	17.0	1400	2000	19.7	26.0	2.50	80.0	10.0

■ All data is tested based on 25°C ambient temperature.  
 ※1 Inductance measure condition at 100KHz,0.1V.  
 ※2 Impedance measure condition at 100MHz,0.5V.  
 ※3 Rated current: the value of DC current when the temperature rise is ΔT40°C(Ta=25°C).

### Impedance vs Frequency Curve



### VSTP1260



Operating temperature range: -40°C ~ +125°C

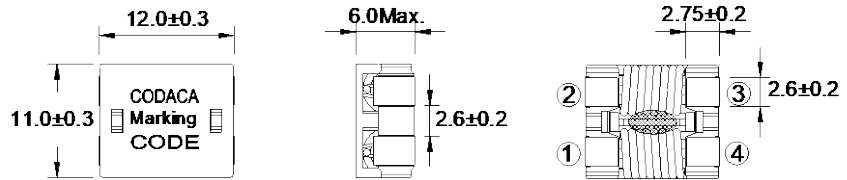
Construction



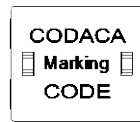
Wire



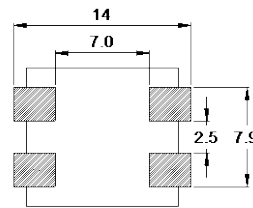
### Appearance and Dimensions (mm)



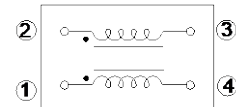
### Marking



### Reference Land Pattern



### Schematic



### Electrical Characteristics

Part No.	Inductance (μH) ※1		Impedance (Ω) ※2		D.C.R. (mΩ)		Rated Current(A) ※3	Rated Voltage(V)	Insulation Resistance (MΩ)
	Min.	Typ.	Min.	Typ.	Typ.	Max.			
VSTP1260-351	2.20	3.70	240	350	2.08	2.70	10.0	80.0	10.0
VSTP1260-701	5.00	10.0	500	700	3.30	4.50	8.00	80.0	10.0
VSTP1260-102	13.2	22.0	750	1000	7.76	10.5	6.00	80.0	10.0
VSTP1260-172	17.5	28.6	1200	1700	9.50	12.5	4.80	80.0	10.0
VSTP1260-202	18.0	29.8	1400	2000	13.5	17.5	4.00	80.0	10.0

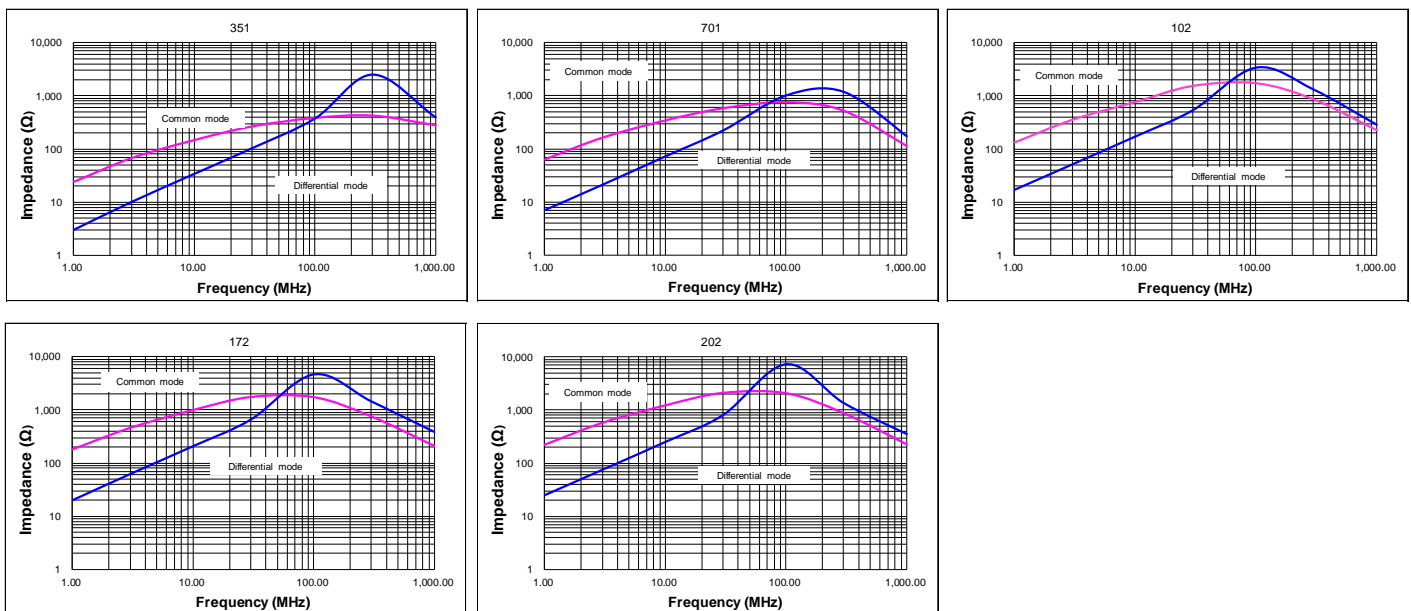
■ All data is tested based on 25°C ambient temperature.

※1 Inductance measure condition at 100KHz,0.1V.

※2 Impedance measure condition at 100MHz,0.5V.

※3 Rated current: the value of DC current when the temperature rise is ΔT40°C(Ta=25°C).

### Impedance vs Frequency Curve



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