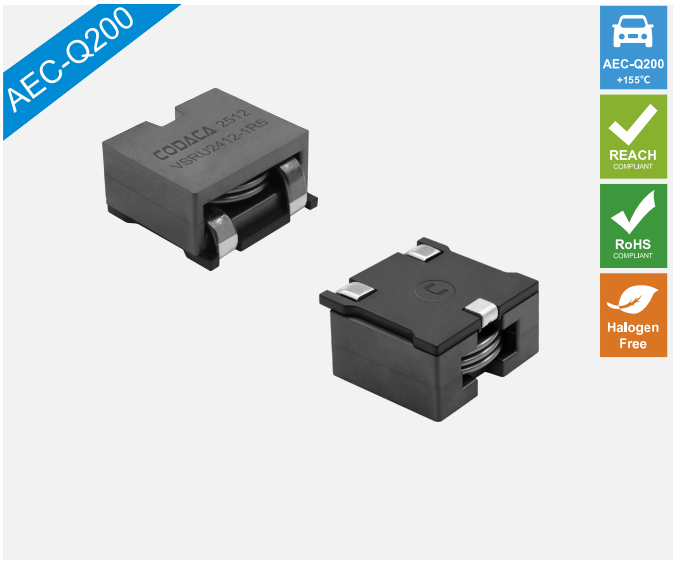
High Current Power Inductor
VSRU24 Series



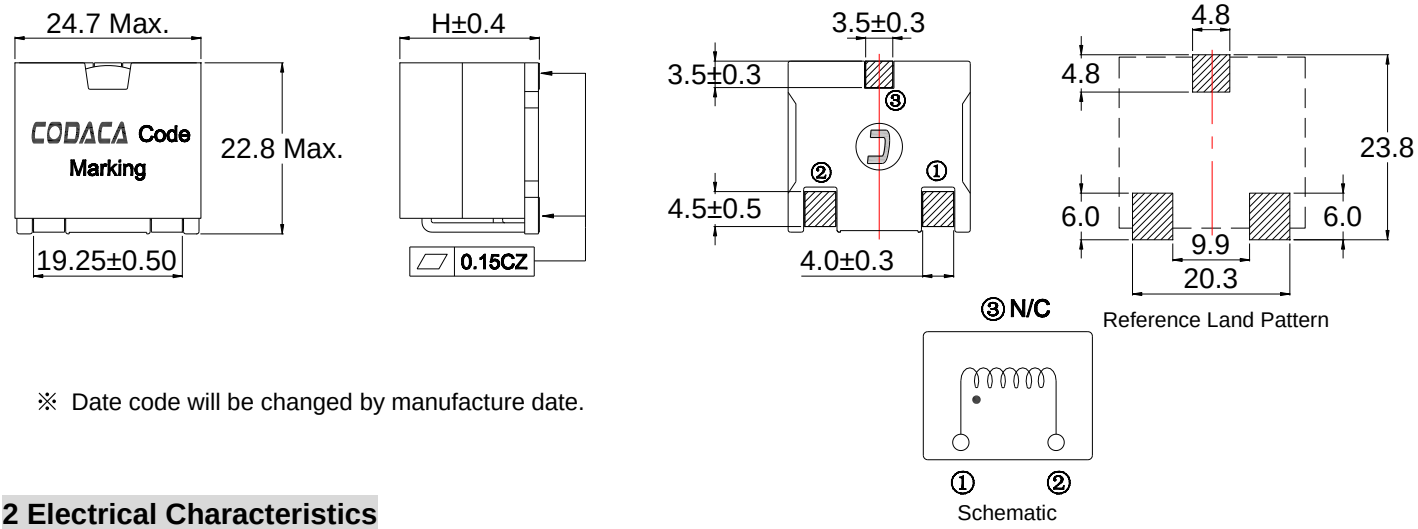
Outline:
- Symmetrical air gap structure design, better DC bias capability.
- Flat wire winding, good heat dissipation and low temperature rise.
- Three-terminal welding structure, reliable welding better vibration resistance.

Features:
- Environmental: REACH, RoHS compliant, Halogen free.
- Weight: 22.0~43.0g.
- Moisture Sensitivity: Level (MSL) 1
  (Unlimited floor life at 5~40°C, RH≤70% relative humidity).
- Operating temperature: -55°C~+155°C
  (Including Self-heating).
- Storage temperature: -55°C~+155°C.

Application:
- DC-DC converters.
- VRM (Voltage Regulator Modules) converters.
- PoL (Point of Load) converters.
- Solar converters.

Construction	Wire

1 Product Dimensions (mm)



※ Date code will be changed by manufacture date.

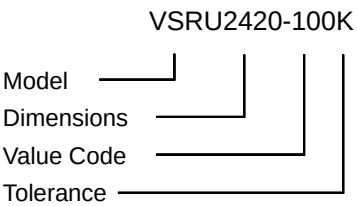
2 Electrical Characteristics

Part No.	Inductance (μH)※1 ±10%	D.C.R. (mΩ) Typ.	D.C.R. (mΩ) Max.	Isat (A)※2 Typ. (25℃)	Isat (A)※2 Typ. (100℃)	Irms (A)※3 Typ.	Height (mm) ±0.40
VSRU2412-1R0K	1.00	0.42	0.50	78.5	71.8	56.3	12.45
VSRU2412-1R5K	1.50	0.57	0.68	79.3	70.3	50.3	12.45
VSRU2415-2R2K	2.20	0.76	0.91	67.9	61.1	47.5	15.35
VSRU2415-3R3K	3.30	0.95	1.14	58.7	52.0	41.3	15.35
VSRU2417-4R7K	4.70	1.14	1.37	46.4	40.5	39.1	18.25
VSRU2417-6R8K	6.80	1.33	1.60	37.9	34.0	36.5	18.25
VSRU2417-150K	15.0	2.80	3.36	24.6	22.1	24.7	17.90
VSRU2420-100K	10.0	1.73	2.08	31.1	27.3	33.2	21.30
VSRU2420-200K	20.0	3.25	3.90	21.5	19.0	24.5	20.90
VSRU2420-300K	30.0	3.53	4.24	15.7	13.5	23.1	20.90

All data is tested on 25℃ ambient temperature

1. Inductance measure condition at 100kHz, 0.1V.
2. Isat: the actual value of DC current when the Inductance decrease 20% of its initial Value.
3. Irms: The actual value of DC current when the Temperature rise is ΔT40℃(Ta=25℃).

3 How to Order

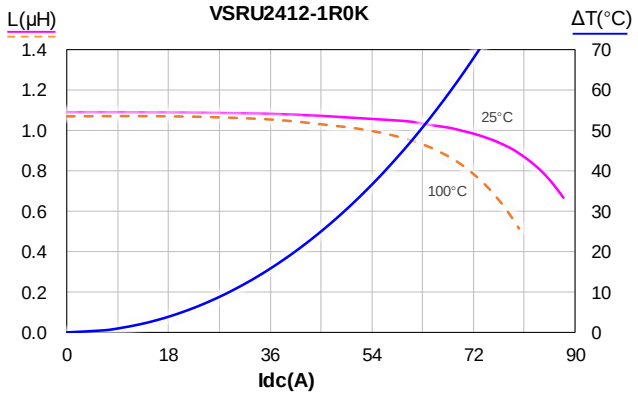


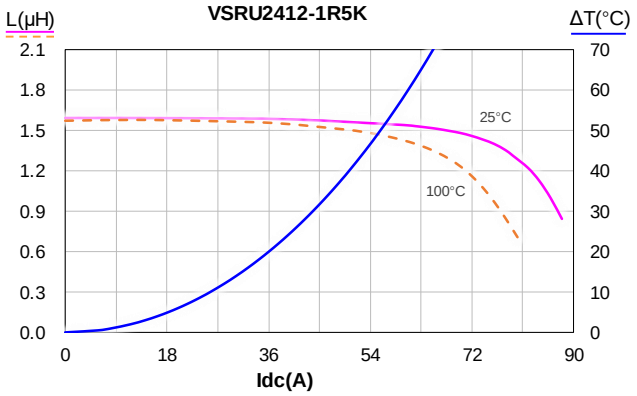
CODACA ELECTRONIC CO., LTD
TEL: +86 755 89585372
http://www.codaca.com E-mail: info@codaca.com

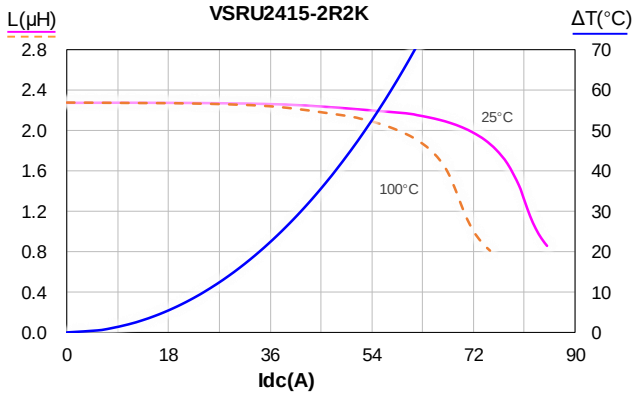
This product is not authorized for use in any application related to safety.
Specification subject to change without notice. Please check website for latest information.

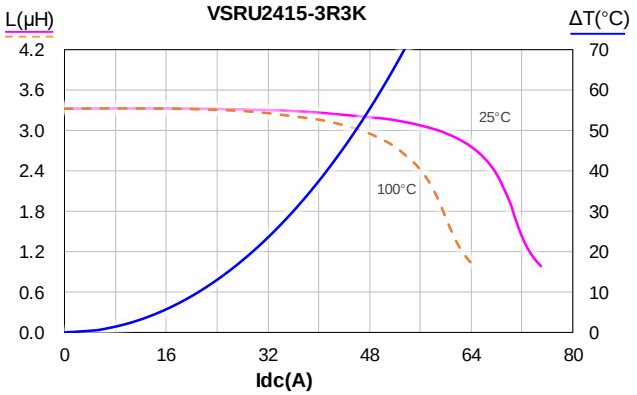
Revised: 11/03/2026

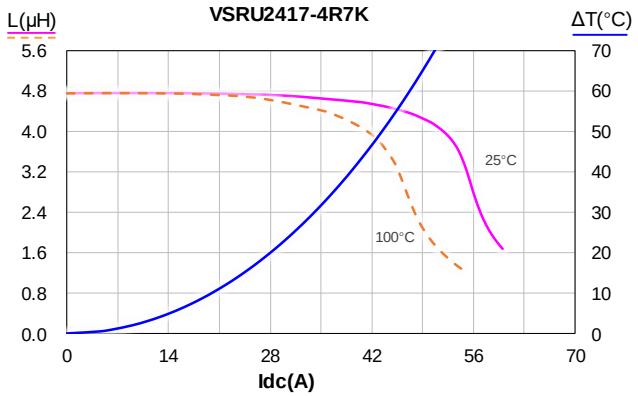
4 Saturation Current vs Temperature Rise Current Curve

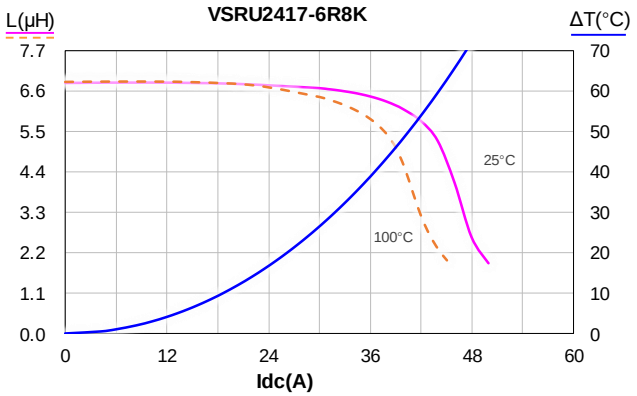


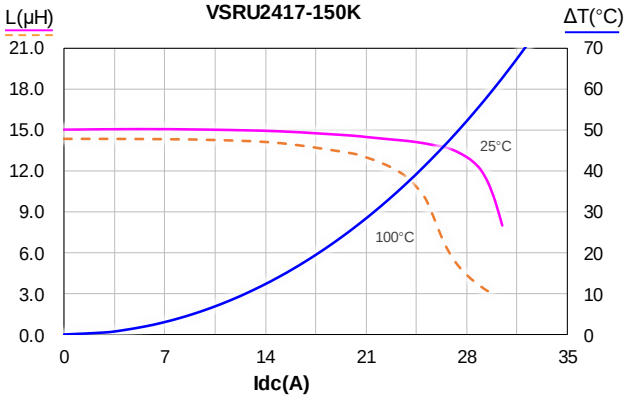


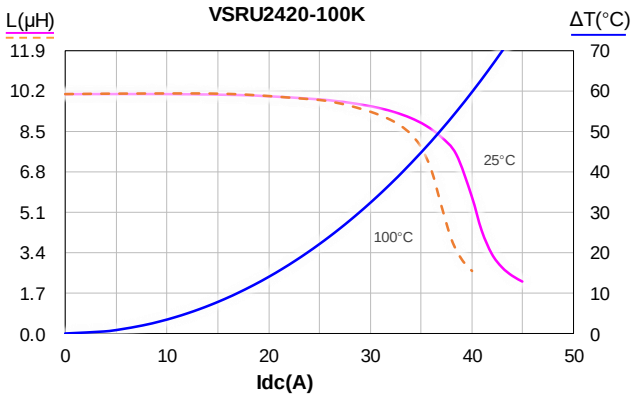


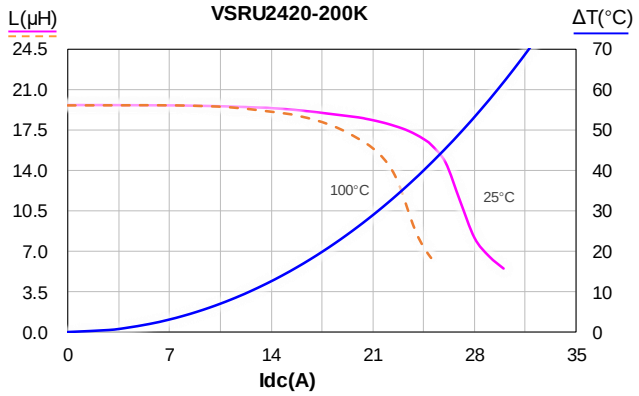


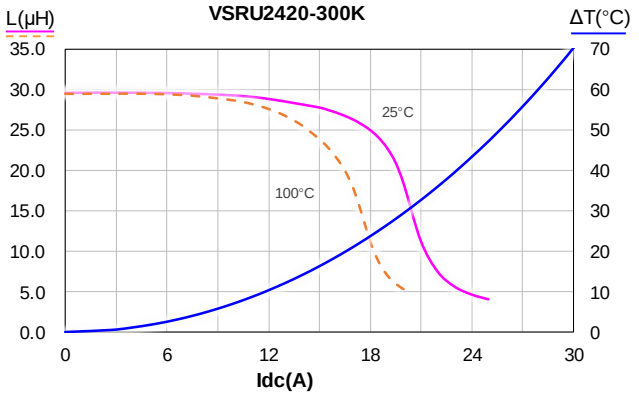




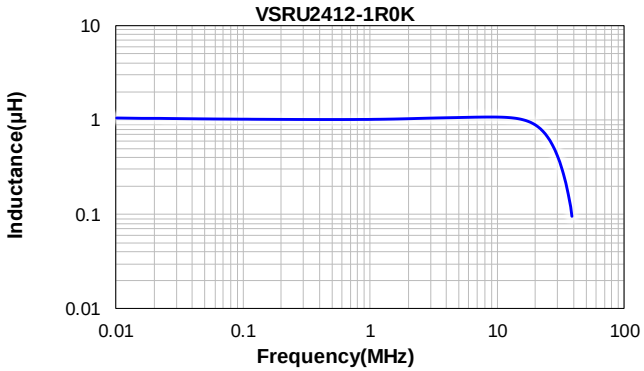


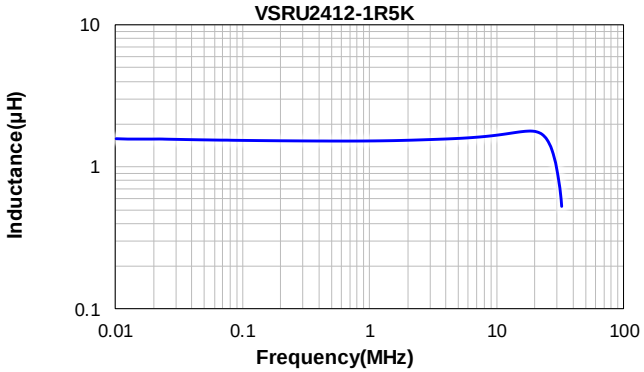


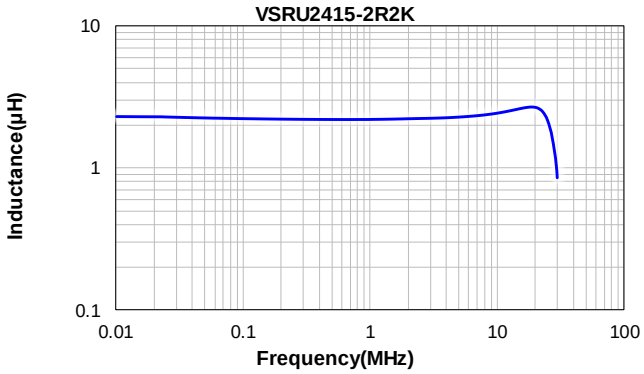


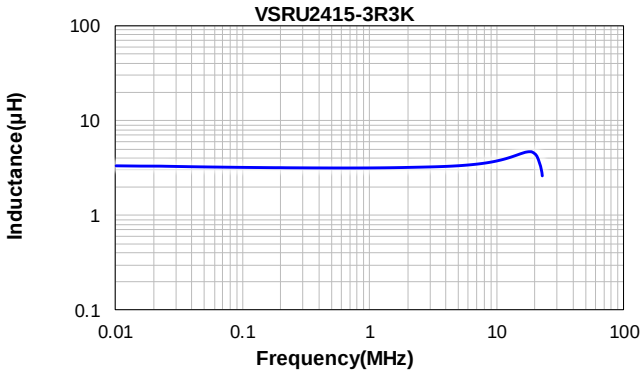


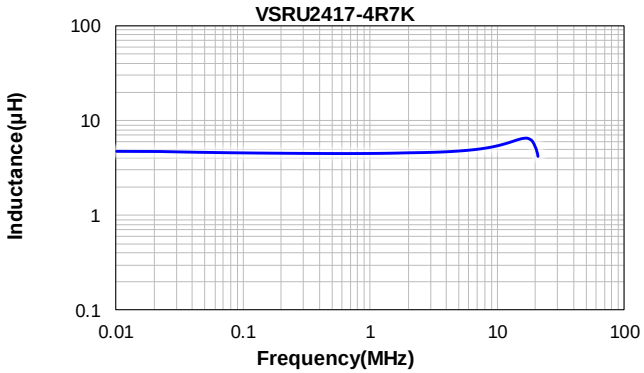
5 Inductance vs Frequency Curve

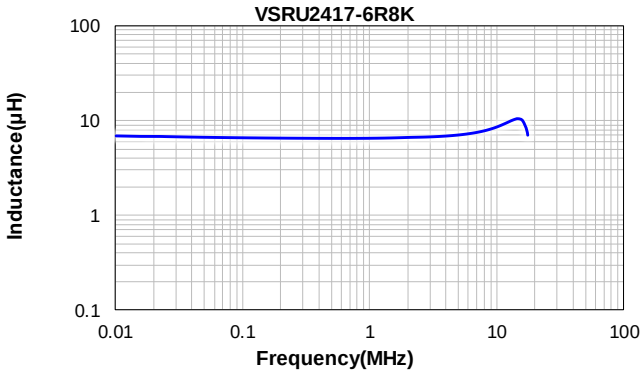


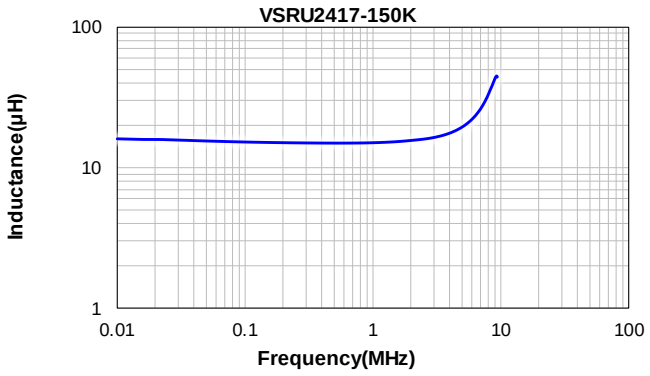


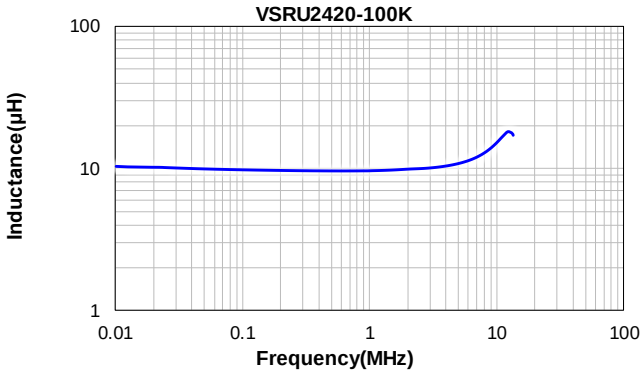


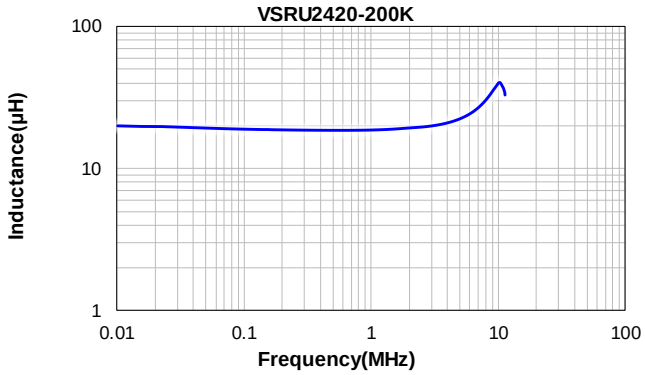


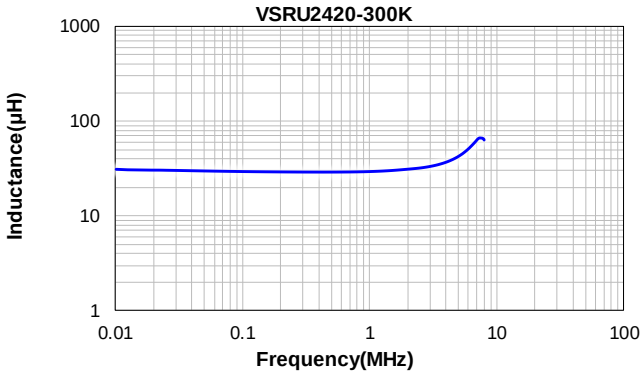




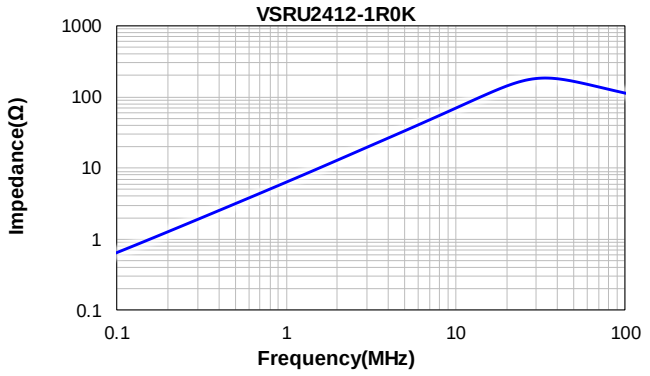


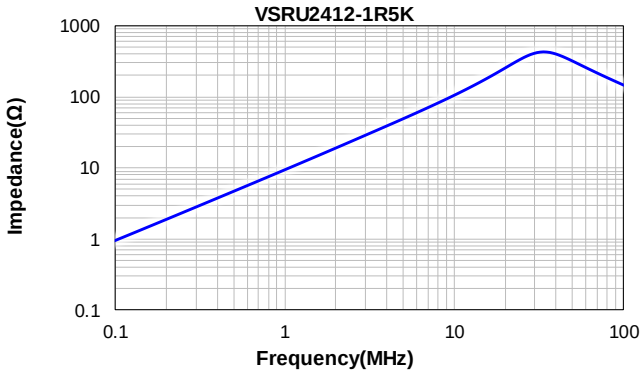


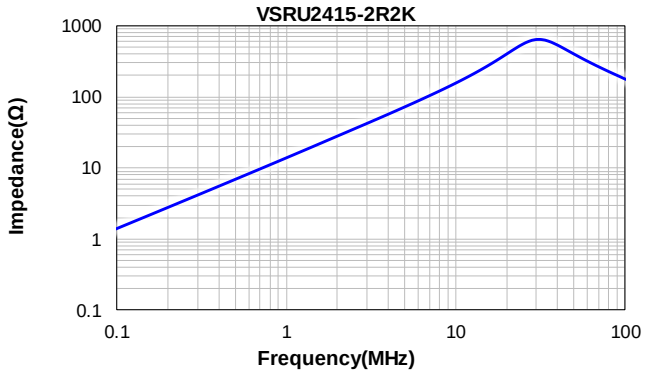


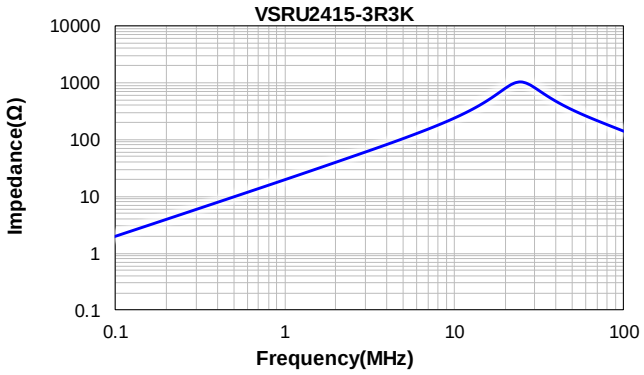


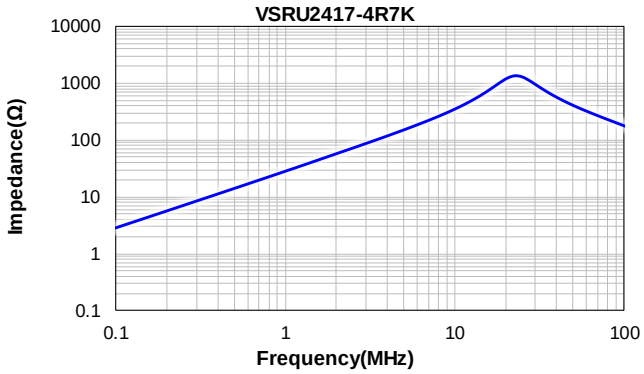
6 Impedance vs Frequency Curve

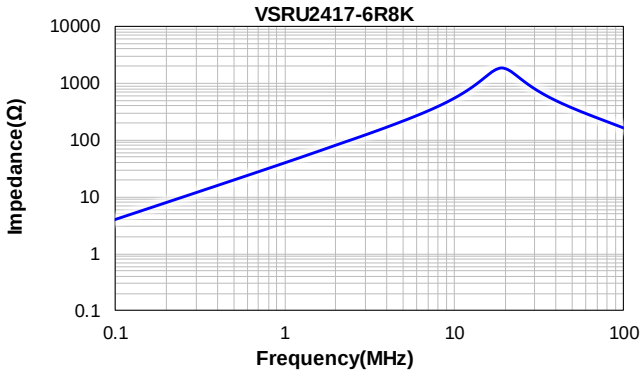









VSRU2417-4R7K
Impedance(Ω)
10000
1000
100
10
1
0.1
0.1
1
10
100
Frequency(MHz)


VSRU2417-6R8K
Impedance(Ω)
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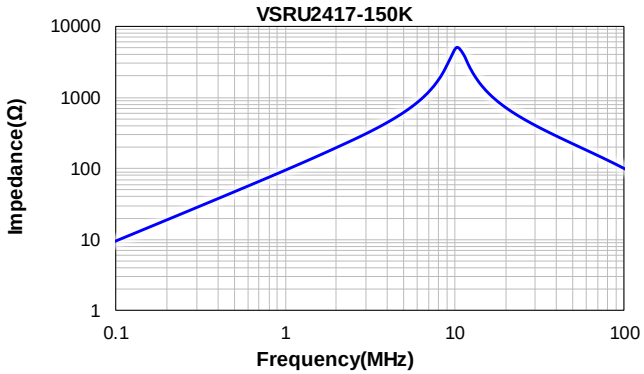
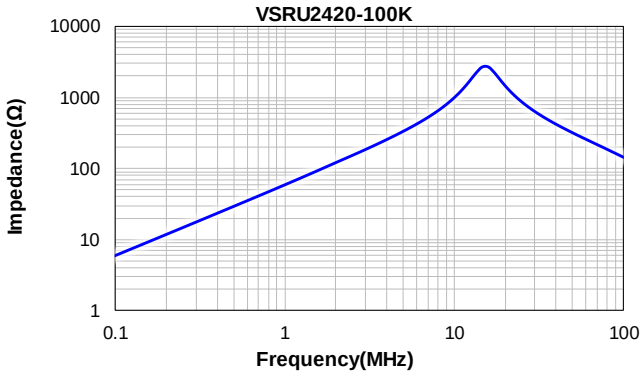
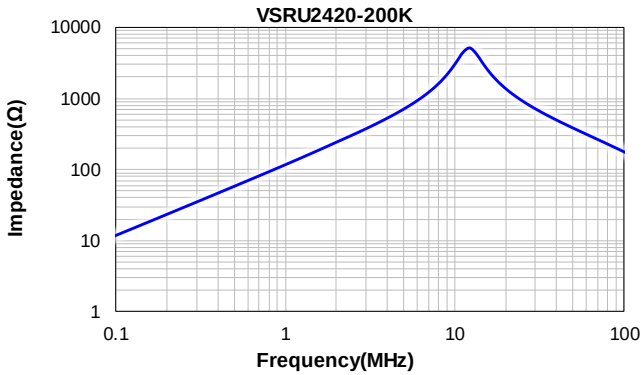
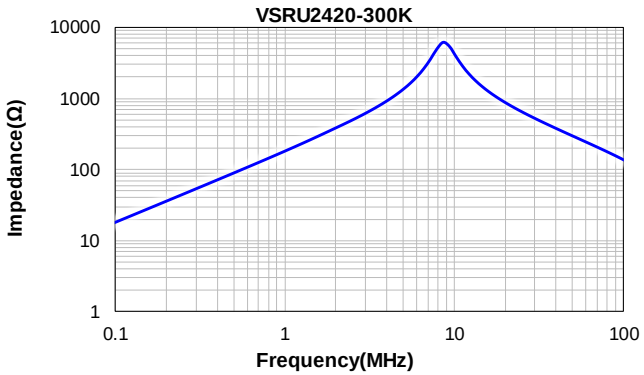
100
10
1
0.1
0.1
1
10
100
Frequency(MHz)


VSRU2417-150K
Impedance(Ω)
10000
1000
100
10
1
0.1
1
10
100
Frequency(MHz)

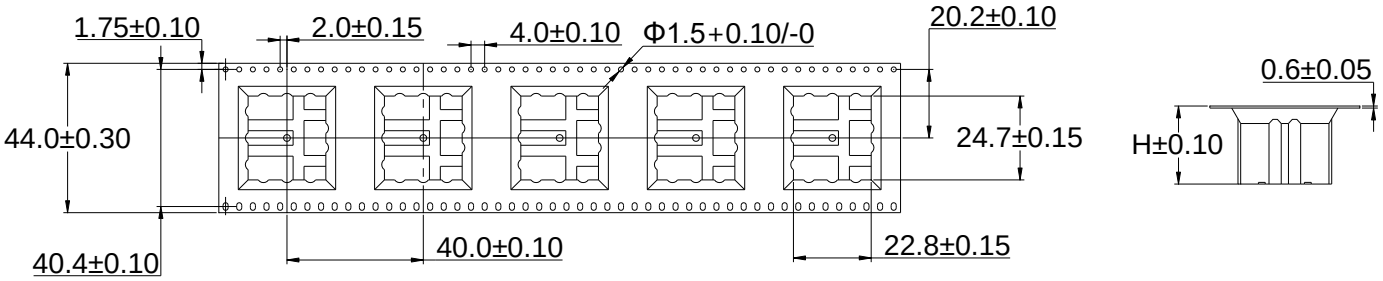

VSRU2420-100K
Impedance(Ω)
10000
1000
100
10
1
0.1
1
10
100
Frequency(MHz)


VSRU2420-200K
Impedance(Ω)
10000
1000
100
10
1
0.1
1
10
100
Frequency(MHz)


VSRU2420-300K
Impedance(Ω)
10000
1000
100
10
1
0.1
1
10
100
Frequency(MHz)

7 Packing Specification

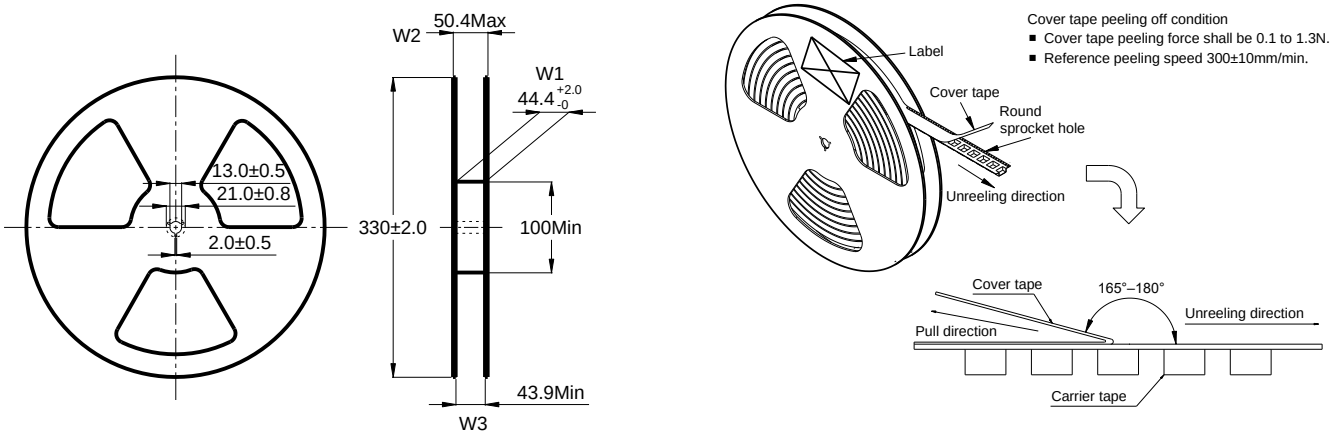
7.1 Carrier Tape Dimensions (mm)



Product Series	VSRU2412- Series	VSRU2415- Series	VSRU2417-Series	VSRU2420-Series
Hight（H）	14.1	17.1	19.9	23.0

※ Packing is referred to the international standard IEC 60286-3.

7.2 Reel Dimensions (mm)



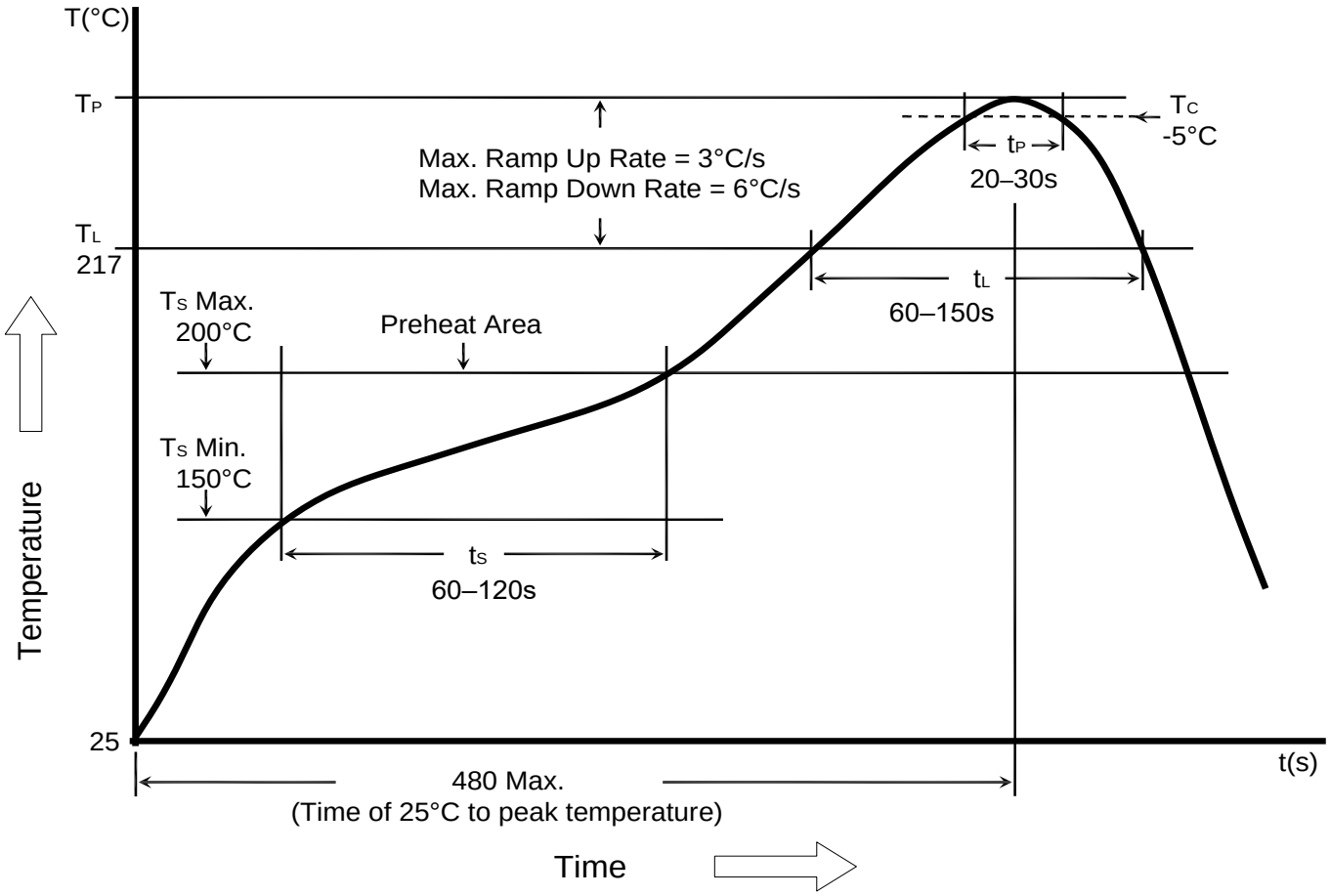
7.3 Carton Dimensions and Packing Quantity

■ Inner Carton：340×340×135mm ■ Out Carton ：360×360×295mm

Product Series	Quantity / Reel	Inner Carton Quantity	Out Carton Quantity
VSRU2412-Series	120pcs	240pcs	480pcs
VSRU2415-Series	85pcs	170pcs	340pcs
VSRU2417-Series	70pcs	140pcs	280pcs
VSRU2420-Series	60pcs	120pcs	240pcs

8 Soldering Specification

8.1 Reflow profile for SMT components



8.2 Classification of peak package body temperature (T_P)

	Package Thickness	Package Volume		
		<350 mm^3	350-2000 mm^3	>2000 mm^3
PB-Free Assembly	<1.6mm	260°C	260°C	260°C
	1.6 mm - 2.5 mm	260°C	250°C	245°C
	>2.5mm	250°C	245°C	245°C

※ Reflow is referred to standard IPC/JEDEC J-STD-020E.

9 Notice of Use

9.1 Special remind: Circuit design, component placement, PCB size and thickness, cooling system and etc. all will affect the product temperature. Please verify the product temperature in the final application.

9.2 Product in packing storage condition: temperature 5～40℃, RH≤70%.
If taking out for use, the remaining products should be sealed in plastic bags and preserved in accordance with the above conditions, to avoid oxidation of terminals (electrodes), affecting soldering status.

9.3 A storage of Codaca Electronic products for longer than 12 months is not recommended, Within other effects, the terminals may suffer degradation, resulting in bad solder ability. Therefore, all products shall be used within the period of 12 months based on the day of shipment.

9.4 Do not keep products in unsuitable storage conditions, such as areas susceptible to high temperatures, high humidity, dust or corrosion.

9.5 Always handle products with care.

9.6 Don't touch electrodes directly with bare hands as oil secretions may inhibit soldering. Always ensure optimum conditions for soldering.

9.7 When this product will be used on a similar or new project to the original one, sometimes it might be unable to satisfy the specifications due to different condition of usage.

9.8 This inductor itself does not have any protective function in abnormal condition, such as overload, short-circuit, open-circuit conditions, etc. Therefore, it shall be confirmed that there is no risk of smoke, fire, dielectric withstand voltage, insulation resistance, etc., or use in abnormal conditions protective devices or protection circuit in the end product.

9.9 Hi-Pot test with higher voltage than spec value will damage insulating material and shorten its life.

9.10 If using in potting compound, the magnet wire coating might be damaged, please consult with us.

9.11 Refrain from rinsing product. If necessary, please consult with us.

*9.12 Codaca Electronic products without "V" prefix are qualified for industrial product requirement , and with "V" prefix are qualified for AEC-Q200, but it doesn't mean that Codaca Electronic products can absolutely meet specific industry norms and quality test standards in automotive electronics or more strict application fields . Codaca Electronic will be exempted from being responsible for the consequences of using Codaca products in automotive electronic or higher application field related to safety when without being aware of it.