

Features

- Magnetic shielded structure: excellent resistance to EMI
- Flat wire winding : achieve a low D.C. Resistance
- Low loss, high efficiency, wide application frequency and application scope
- Lightweight design, save space, suitable for high density SMT
- Operating temperature: -40°C to $+125^{\circ}\text{C}$



Application

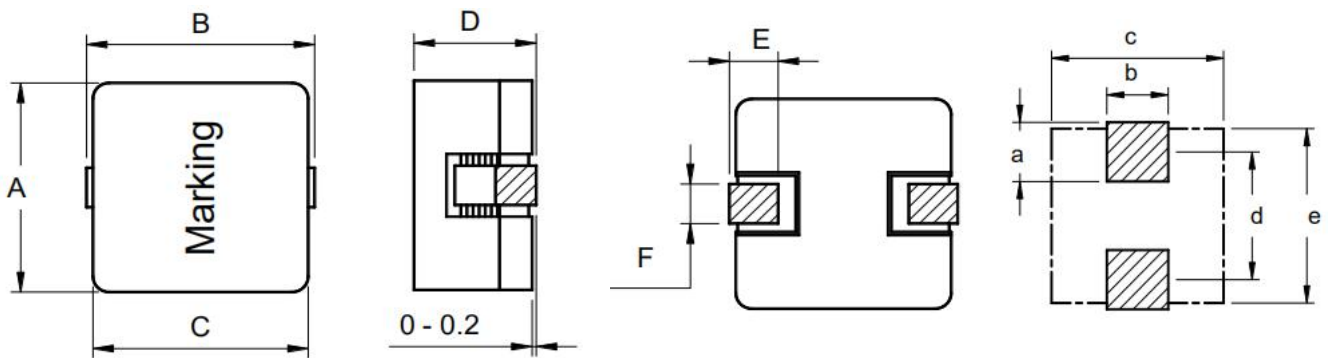
- Industrial computers, laptops
- Motherboards
- DC-DC converter
- Filters

Product Identification

KHC 1040 - 2R2 M
 ① ② ③ ④

- ① Series KHC: High Current with Flat wire SMD Power Inductor
- ② Size 1040: 10.2x10.2x4.0 mm
- ③ Inductance: 2R2: 2.2 uH; R47: 0.47 uH
- ④ Inductance Tolerance M: $\pm 20\%$

SHAPE AND DIMENSIONS



Unite:mm

Series	A	B	C	D	E	F	a Typ	b Typ	c Typ	d Typ	e Typ
1040	10.2 \pm 0.5	10.5 \pm 1.0	10.2 \pm 0.5	4.0 \pm 0.2	2.5 \pm 1.0	2.0+1.0/-0.5	3.5	5.0	10.7	8.0	10.7

SPECIFICATIONS

KHC1040 Series

Part Number	Inductance ±20%	DC Resistance		Saturation Current*3	Heat Rating Current *4
	@100KHz 0.1v	Typ.	Max.	Typ.	Typ.
units	uH	mΩ		A	A
Symbol	L	DCR		Isat	Irms
KHC1040-R15M	0.15	0.58	0.60	60.0	25.0
KHC1040-R30M	0.30	1.10	1.20	50.0	22.0
KHC1040-R56M	0.56	1.60	1.80	30.0	20.0
KHC1040-1R0M	1.00	3.30	3.60	20.0	16.0
KHC1040-1R5M	1.50	5.30	5.80	17.0	14.0
KHC1040-2R0M	2.00	7.30	8.00	13.0	11.0
KHC1040-2R8M	2.80	10.6	11.7	11.0	9.50
KHC1040-4R3M	4.30	14.1	15.5	8.00	8.00
KHC1040-5R6M	5.60	20.6	22.7	7.50	6.70

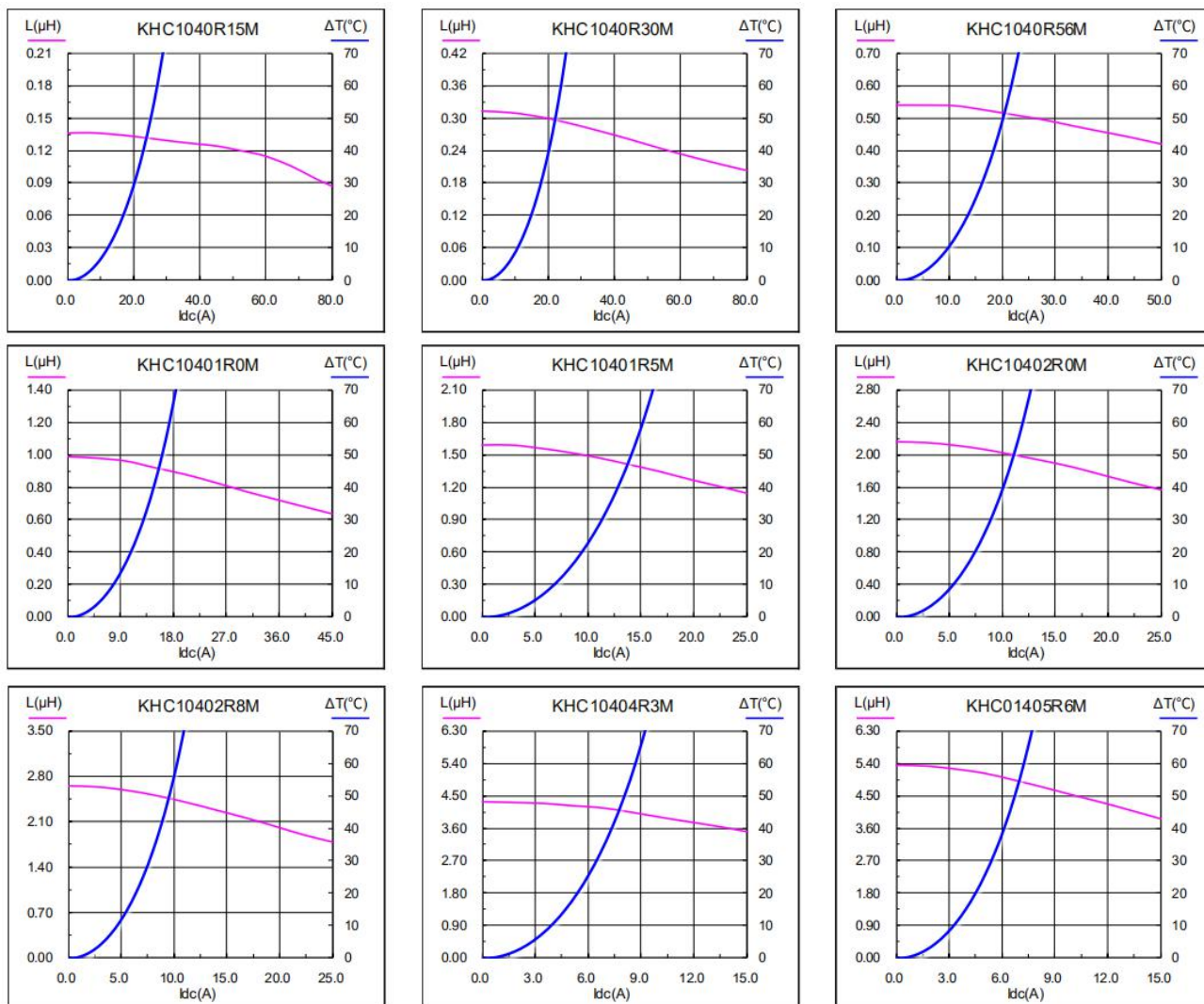
Note:

- All data is tested based on 25°C ambient temperature
- Inductance measure condition at 100kHz,0.1V
- Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value
- Temperature rise current: the actual value of DC current when the temperature rise is $\Delta T 50^{\circ}\text{C}$ ($T_a=25^{\circ}\text{C}$)
- Special remind: Circuit design, component placement, PWB size and thickness, cooling system and etc
- All will affect the product temperature. Please verify the product temperature in the final application

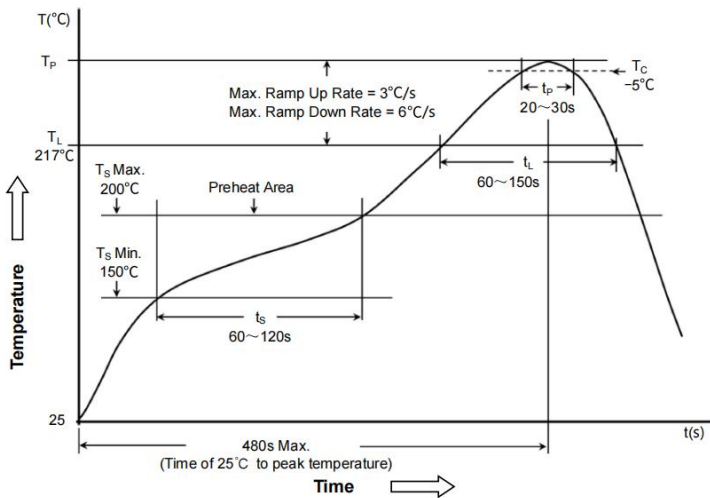
TYPICAL ELECTRICAL CHARACTERISTICS

KHC1040 Series

Saturation current VS temperature rise current curve



SOLDERING SPECIFICATION



	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
	1.6~2.5mm	260 °C	250 °C	245 °C
	≥2.5mm	250 °C	245 °C	245 °C

- Reflow is referred to standard IPC/JEDEC J-STD-020D

NOTICE OF USE

- Product in packing storage condition : temperature 5~40°C, RH<=70%;
- storage of KONEN Electronic products for longer than 12 months is not recommended, Within other effects, the terminals may suffer degradation, resulting in bad solderability. Therefore, all products shall be used within the period of 12 months based on the day of shipment;
- Do not keep products in unsuitable storage conditions, such as areas susceptible to high temperatures, high humidity, dust or corrosion;
- Always handle products with care;
- Don't touch electrodes directly with bare hands as oil secretions may inhibit soldering. Always ensure optimum conditions for soldering;
- 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;
- 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;
- Hi-Pot test with higher voltage than spec value will damage insulating material and shorten its life;
- If using in potting compound, the magnet wire coating might be damaged, please consult with us;
- Refrain from rinsing coils. If necessary, please consult with us.