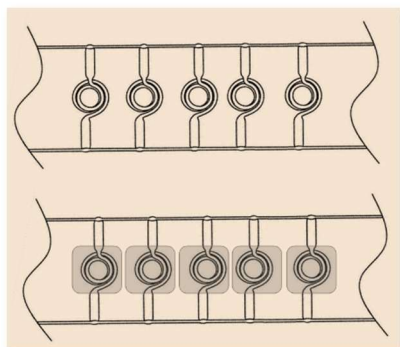
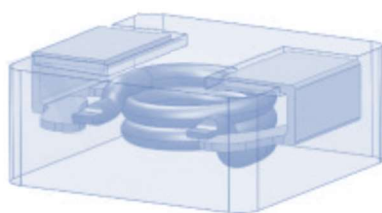


# ABOUT MOLDING POWER CHOKES



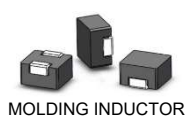
Molding power choke is an inductor made by die-casting a round wire coil or a flat wire coil into a metal magnetic powder. It is divided into plug-in type and SMD patch type. Its pins are also the pins of the coil itself, which are directly formed on the surface of the base.



Its structure is designed for SMD, which can not only damage the inductor body, but also improve production efficiency. Compared with the traditional SMD inductor, it has higher inductance and smaller leakage inductance.

Molding power chokes are more reliable than traditional inductors and NR inductors, and can have a larger current in the same size. The working frequency can reach 5MHz. The fully shielded structure has better magnetic shielding effect. The magnetic powder core and the coil are closely combined to avoid noise. Through the production of fully automated equipment, the consistency and stability of the product is very high, which is suitable for high reliability products.

## Performance Comparison



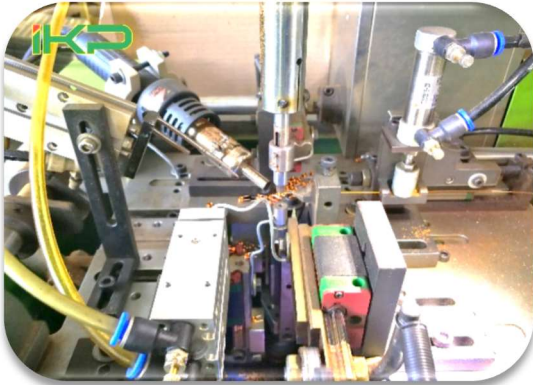
MOLDING INDUCTOR



TRADITIONAL SMD INDUCTOR

	MOLDING INDUCTOR	TRADITIONAL SMD INDUCTOR
Magnetic Shielding Effect	Excellent	Normal
Thermal Stability	Excellent	Weak
Saturation Current	High	Low
Leakage Inductance	Low	High
Working Frequency	High	Low
Productivity	Excellent	Normal
Product Consistency	Excellent	Normal
Product Stability	Excellent	Normal
DC Impedance	Low	High
Product Durability	Excellent	Normal
Beep Noise	Weak	Normal
Application Reliability	Excellent	Normal

Molding Power Choke Process



1. coil winding



2. assembling



3. soldering



4. molding



5. cutting



6. shaping



7. testing



8. packaging

Products Category

Small Size										
2*2		3*3		4*4		5*8				
0212	0218	0312	0320	0412	0420	0512	0515	0518	0520	0530

Normal Size													
6*6					10*10					13*13			
0612	0615	0618	0624	0630	0650	1015	1030	1036	1040	1045	1335	1350	1360

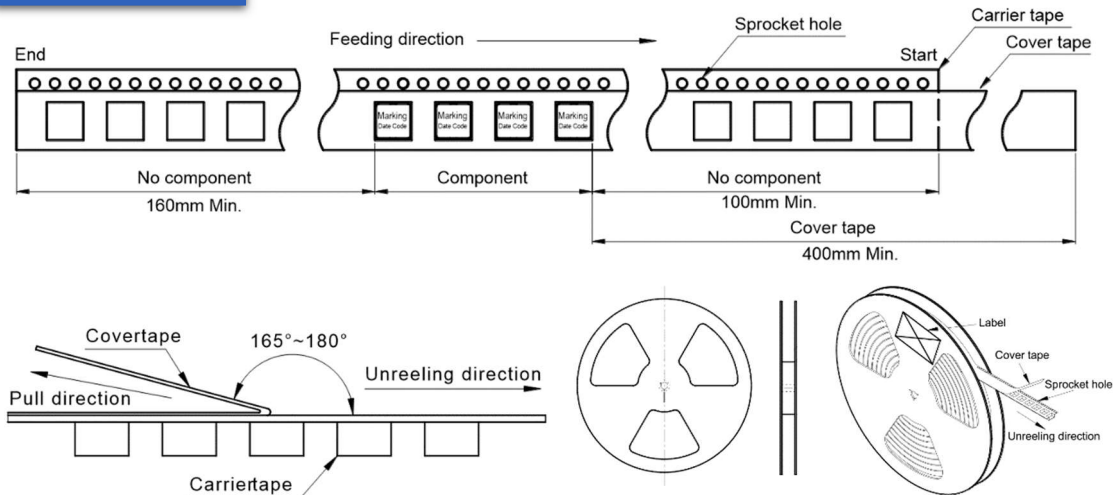
  

Big Size				Other Size		
13*17	15*15	17*17	22*22	8*8		
custom	1550	1770	custom	0814	0824	0850

Application & Size Guide

APPLICATIONS	SIZE
Mainboard	0650,1040etc.
High Current POL Converters	0618,0624,0630 etc.
LED	0210,0630,1040,1335,1350,1360 etc.
Digital Products (camera, vidicon etc.)	0530,0618,0624,0630,1030,1040 etc.
Mobile Phone, Lap Top	0212,0312,0412,0512,0618 etc.
Server Applications	0650,1030,1040,1050,1350,1360 etc.
Medical Apparatus & Instruments	0530,0618,0624,0630,1030,1040,1050,1335,1350,1360,etc.
Office Supplies (printer, duplicator etc.)	0530,0624,0630,1030 etc.

Packaging



\*\*Packaging is referred to the international standard IED 60286-3

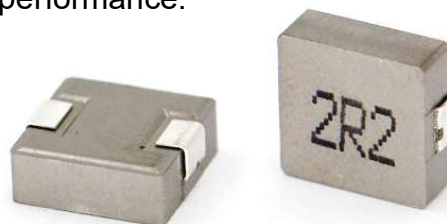


## Alloy Powder Molding Power Inductor/Choke

### 0612 Series

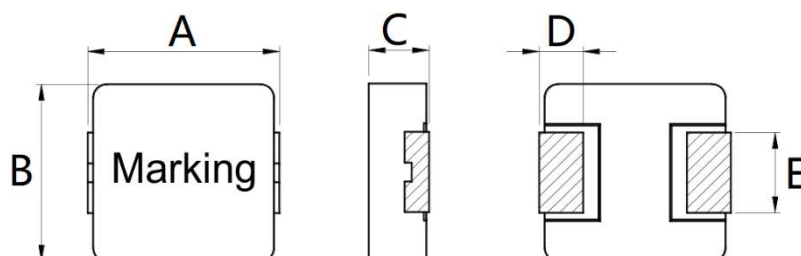
#### FEATURES:

- Magnetic shielded structure, outstanding EMI performance.
- Withstand high current and temperature
- High-performance metal alloy powder
- Meet international quality
- High precision and strong reliability
- Exquisite workmanship and high production capacity
- RoHS compliant and halogen free
- Adequate inventory, timely delivery and high cost performance.



#### EXTERNAL DIMENSIONS: (unit: mm)

A	7.4 MAX
B	6.6±0.20
C	1.2 MAX
D	1.6±0.3
E	3.0±0.2



#### HOW TO ORDER

MPC - 0612 - 4R7 - M

①    ②    ③    ④

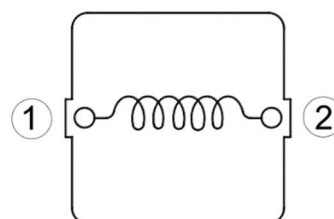
① Molding Power Choke

② Model (Dimensions)

③ Inductance

④ Tolerance: "J" = ±5%; "K" = ±10%; "M" = ±20%

#### ELECTRICAL SCHEMATIC



## ELECTRICAL CHARACTERISTICS

PART NO.	L0 Inductance ( $\mu\text{H} \pm 20\%$ )	Heat Rating Current I <sub>rms</sub> (A)	Saturation Current I <sub>sat</sub> (A)	DCR (m $\Omega$ )	
				TYP.	MAX.
MPC-0612-R56M	0.56	6.0	11.0	13.5	16.0
MPC-0612-R68M	0.68	5.5	10.0	14.7	17.0
MPC-0612-R82M	0.82	5.0	9.0	19.1	22.0
MPC-0612-1R0M	1.0	6.0	7.0	22.3	26.0
MPC-0612-2R2M	2.2	3.5	5.0	64.0	67.0
MPC-0612-3R3M	3.3	3.0	4.0	80.0	92.0
MPC-0612-4R7M	4.7	2.0	3.5	120.0	130.0
MPC-0612-100M	10	1.5	2.5	250.0	290.0

\*\*Note 1: All test data is referenced to 25°C ambient

\*\*Note 2: I<sub>dc</sub>: DC current (A) that will cause an approximate  $\Delta T$  of 40°C

\*\*Note 3: I<sub>sat</sub>: DC current (A) that will cause L0 to drop approximately 30%

\*\*Special remind: Circuit design, components placement, PWB size and thickness, cooling system etc. all will affect the product temperature. Please verify the product temperature in the final application.