# MDCA Series

SMD Power Indutor

Size 3012



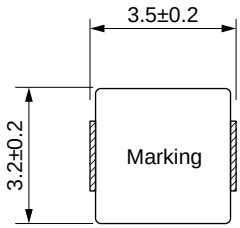
## FEATUERS

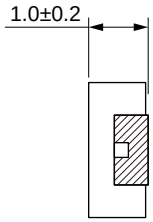
- Carbonyl Powder.
- Compact design.
- High current， low DCR，
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- High reliability.
- 100% Lead(Pb)-Free and RoHS compliant.
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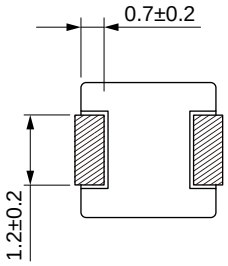
## APPLICATION

- Note PC power system， incl. IMVP-6
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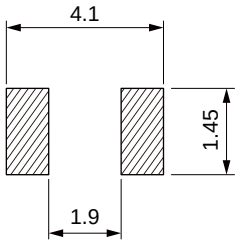
## Dimensions: [mm]




## Land Pattern: [mm]




## Electrical Properties:

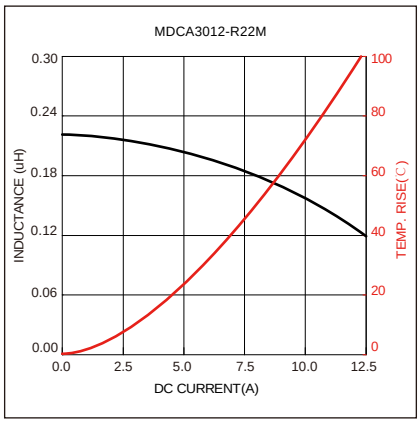
| Part No | Inductance @ 100KHz/1V | Tolerance | Temperature Rise Current Typ. | Current Typ. | DC Resistance Typ. | DC Resistance Max. |
|---|---|---|---|---|---|---|
| MDCA3012-R22M | 0.22 | ±20% | | 10.0 | 14.0 | 17.0 |
| MDCA3012-R33M | 0.33 | ±20% | 6.2 | 9.2 | 16.0 | 20.0 |
| MDCA3012-R36M | 0.36 | ±20% | 6.0 | | | 23.0 |
| MDCA3012-R47M | 0.47 | ±20% | | 7.2 | | 30.0 |
| | | ±20% | | 6.6 | 31.0 | 36.0 |
| MDCA3012-R68M | 0.68 | ±20% | 4.0 | 6.1 | 34.0 | 40.0 |
| MDCA3012-R82M | 0.82 | ±20% | | | 41.0 | 48.0 |
| MDCA3012-1R0M | 1.00 | ±20% | 3.3 | | | 60.0 |
| | | ±20% | 3.0 | 4.0 | 71.0 | |
| MDCA3012-2R2M | 2.20 | ±20% | 2.7 | 3.4 | 98.0 | |
| MDCA3012-3R3M | 3.30 | ±20% | 2.0 | 3.1 | 191 | 210 |
| MDCA3012-4R7M | 4.70 | ±20% | 1.6 | 2.8 | 266 | 293 |
| | | ±20% | | 2.2 | 310 | 360 |
| MDCA3012-6R8M | 6.80 | ±20% | 1.4 | 2.0 | 360 | 400 |

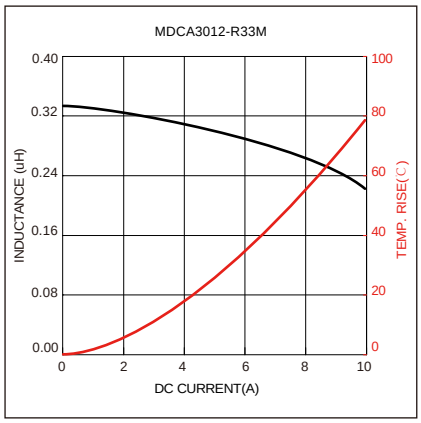

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**714-325-4789 Contact@kohergroup.com**

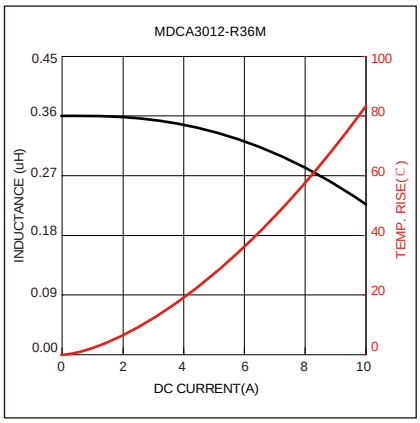
| Part No | Inductance @ 100KHz/1V | Tolerance | Temperature Rise Current Typ. | Current Typ. | DC Resistance Typ. | DC Resistance Max. |
|---|---|---|---|---|---|---|
| MDCA3012-8R2M | 8.20 | ±20% | 1.2 | 1.7 | 420 | 463 |
| MDCA3012-100M | 10.0 | ±20% | 1.0 | 1.4 | 498 | |

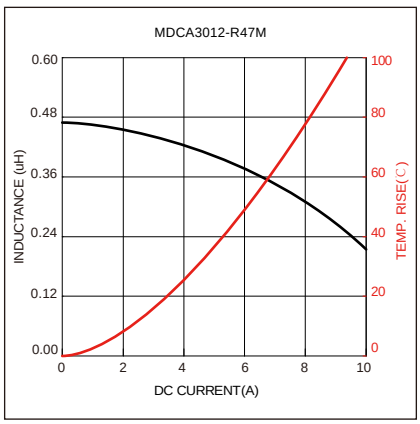
Saturation Current will cause L to drop approximately 30%
Temperature Rise Current: The actual value of DC current when the temperature rise is △T=40°C

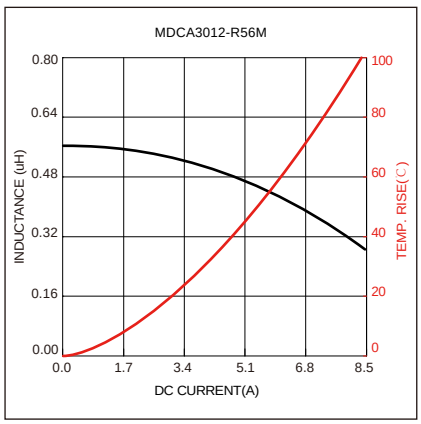
## Typical Electrical Characteristics:

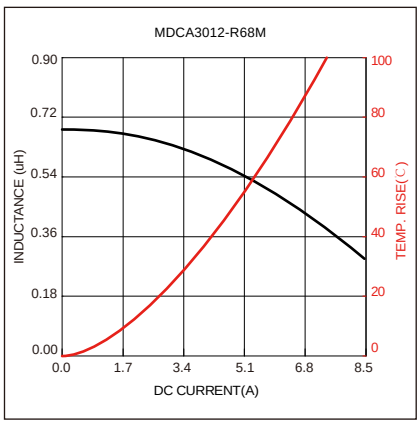


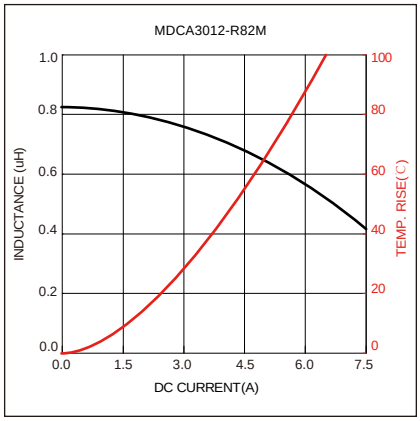



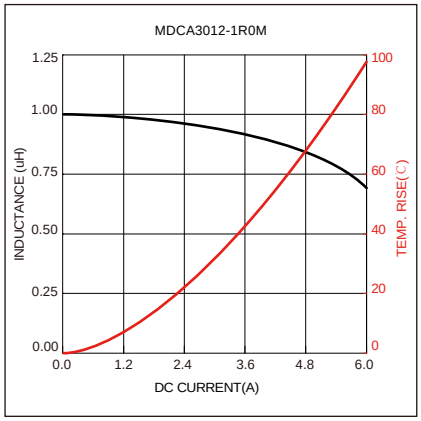



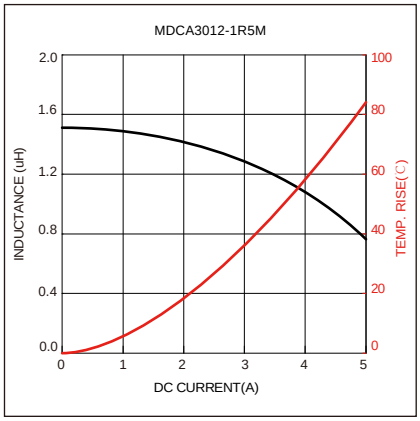



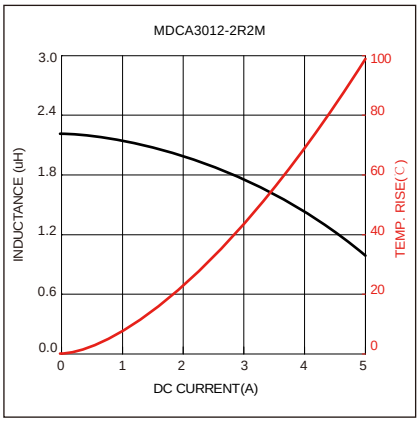



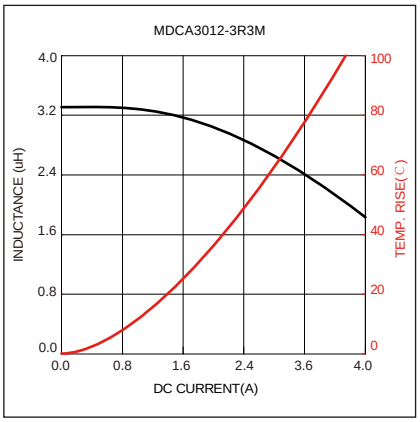



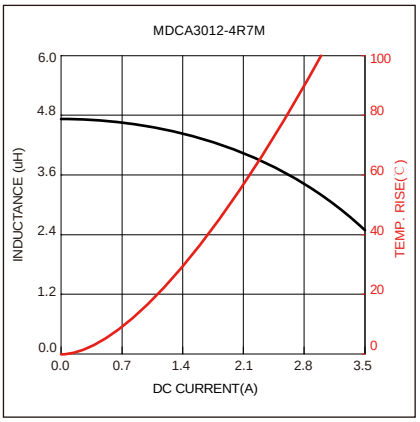



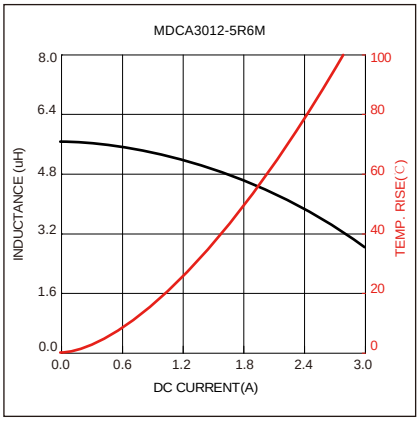



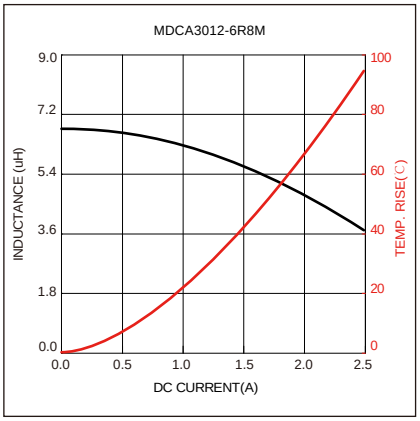



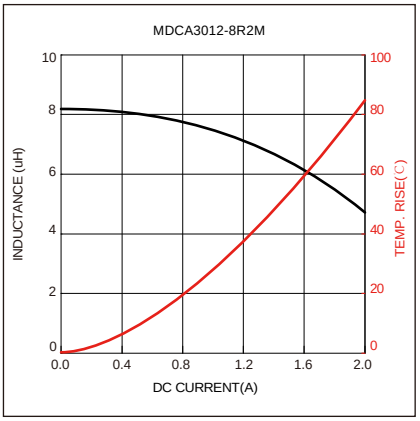

MDCA3012-2R2M
INDUCTANCE (uH)
TEMP. RISE(℃)
DC CURRENT(A)
3.0
2.4
1.8
1.2
0.6
0.0
100
80
60
40
20
0
0
1
2
3
4
5

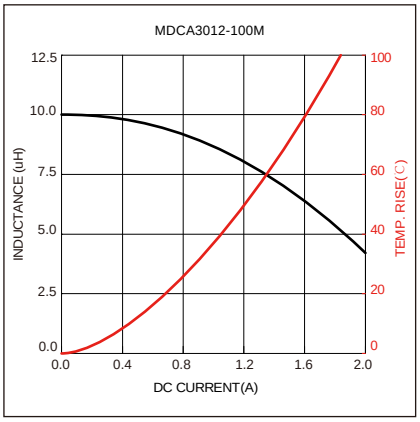

MDCA3012-3R3M
INDUCTANCE (uH)
TEMP. RISE(℃)
DC CURRENT(A)
4.0
3.2
2.4
1.6
0.8
0.0
100
80
60
40
20
0
0.0
0.8
1.6
2.4
3.6
4.0


MDCA3012-4R7M
INDUCTANCE (uH)
TEMP. RISE(℃)
DC CURRENT(A)
6.0
4.8
3.6
2.4
1.2
0.0
100
80
60
40
20
0
0.0
0.7
1.4
2.1
2.8
3.5


MDCA3012-5R6M
INDUCTANCE (uH)
TEMP. RISE(℃)
DC CURRENT(A)
8.0
6.4
4.8
3.2
1.6
0.0
100
80
60
40
20
0
0.0
0.6
1.2
1.8
2.4
3.0


MDCA3012-6R8M
INDUCTANCE (uH)
TEMP. RISE(℃)
DC CURRENT(A)
9.0
7.2
5.4
3.6
1.8
0.0
100
80
60
40
20
0
0.0
0.5
1.0
1.5
2.0
2.5


MDCA3012-8R2M
INDUCTANCE (uH)
TEMP. RISE(℃)
DC CURRENT(A)
10
8
6
4
2
0
100
80
60
40
20
0
0.0
0.4
0.8
1.2
1.6
2.0


MDCA3012-100M
INDUCTANCE (uH)
TEMP. RISE(℃)
DC CURRENT(A)
12.5
10.0
7.5
5.0
2.5
0.0
100
80
60
40
20
0
0.0
0.4
0.8
1.2
1.6
2.0