

# MDCA Series

## SMD Power Inductor

### Size 5030



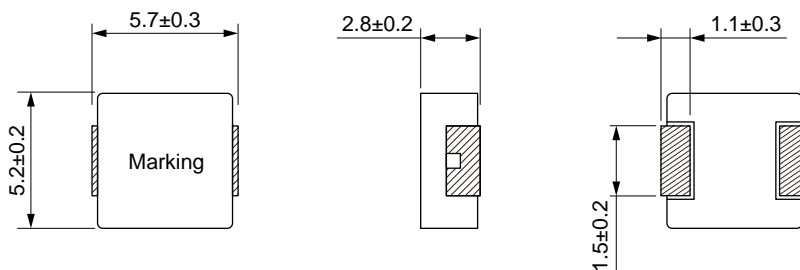
#### FEATURES

- Carbonyl Powder.
- Compact design.
- High current, low DCR, high efficiency.
- Very low acoustic noise and very low leakage flux noise.
- High reliability.
- 100% Lead(Pb)-Free and RoHS compliant.
- AEC-Q200 qualified
- Operating temperature: -55 to +125 °C (including self-temperature rise)
- Quantity: 2000pcs

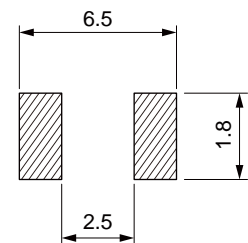
#### APPLICATION

- Note PC power system, incl. IMVP-6
- DC/DC converter

#### Dimensions: [mm]



#### Land Pattern: [mm]



#### Electrical Properties:

Part No	Inductance @ 100KHz/1V (μH)	Tolerance	Temperature Rise Current Typ. (A)	Saturation Current Typ. (A)	DC Resistance Typ. (mΩ)	DC Resistance Max. (mΩ)
MDCA5030-R10N	0.10	±30%	23.0	27.0	2.50	3.00
MDCA5030-R20N	0.20	±30%	16.0	25.0	2.60	3.20
MDCA5030-R22M	0.22	±20%	15.5	21.0	3.70	4.40
MDCA5030-R33M	0.33	±20%	14.0	18.0	4.30	5.00
MDCA5030-R47M	0.47	±20%	12.0	16.0	6.40	7.40
MDCA5030-R68M	0.68	±20%	8.50	14.0	10.0	12.0
MDCA5030-1R0M	1.00	±20%	7.00	11.0	13.0	14.0
MDCA5030-1R2M	1.20	±20%	6.50	11.0	14.0	16.0
MDCA5030-1R5M	1.50	±20%	6.00	10.0	16.0	25.0
MDCA5030-2R2M	2.20	±20%	5.50	9.00	25.0	35.0
MDCA5030-3R3M	3.30	±20%	5.00	8.00	32.0	38.0
MDCA5030-3R6M	3.60	±20%	4.90	7.00	46.0	54.0
MDCA5030-4R7M	4.70	±20%	4.60	6.00	50.0	53.0
MDCA5030-5R6M	5.60	±20%	4.25	4.50	55.0	63.0
MDCA5030-6R8M	6.80	±20%	4.00	4.30	68.0	76.2

Part No	Inductance @ 100KHz/1V (μH)	Tolerance	Temperature Rise Current Typ. (A)	Satura on Current Typ. (A)	DC Resistance Typ. (m )	DC Resistance Max. (m )
MDCA5030-100M	10.0	±20%	2.75	3.50	110	128
MDCA5030-150M	15.0	±20%	2.10	2.60	165	190
MDCA5030-180M	18.0	±20%	2.00	2.30	195	230
MDCA5030-220M	22.0	±20%	1.90	1.70	220	250
MDCA5030-330M	33.0	±20%	1.60	1.60	380	440

Saturation Current will cause L to drop approximately 30%

Temperature Rise Current: The actual value of DC current when the temperature rise is  $\Delta T=40^{\circ}\text{C}$

### Typical Electrical Characteristics:

