

# SMT Power Inductor (MOLDING TYPE)

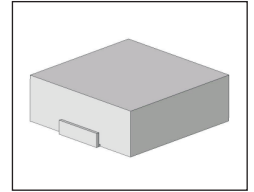
## MPL13X Type

### Features

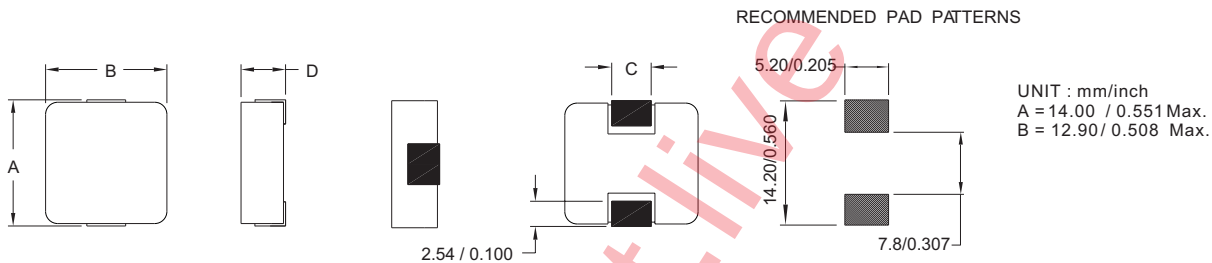
- RoHS compliant.
- Low profile, high current SMD type.
- Frequency range up to 1MHz.
- Lowest DCR/ $\mu$ H, in this package size.
- Low buzz noise due to its gap-less structure.

### Applications

- Notebook/Desktop/Server/Video Card applications.
- High current POL converters.
- Low profile, high current power supplies.
- Battery powered devices.
- Ideal for power source circuits, DC-DC converter.
- DC-AC inverters inductor application.



### Mechanical Dimension:



### Electrical Characteristics: At 25°C: 100KHz, 0.25V

| PART NO.   | L0<br>( $\mu$ H) | DCR<br>(m $\Omega$ ) TYP. | DCR<br>(m $\Omega$ ) MAX. | Isat <sup>1</sup><br>(Adc) | I <sub>r</sub> <sup>2</sup><br>(Adc) | Dimension "C"<br>mm / inch<br>$\pm 0.5 / \pm 0.02$ | Dimension "D"<br>mm / inch<br>MAX |
|------------|------------------|---------------------------|---------------------------|----------------------------|--------------------------------------|----------------------------------------------------|-----------------------------------|
| MPL133-R68 | 0.68 $\pm$ 20%   | 1.80                      | 2.30                      | 49                         | 28                                   | 4.0 / 0.157                                        | 3.5 / 0.138                       |
| MPL133-1R0 | 1.00 $\pm$ 20%   | 3.30                      | 3.60                      | 40                         | 24                                   | 2.6 / 0.102                                        | 3.5 / 0.138                       |
| MPL135-0R4 | 0.40 $\pm$ 20%   | 0.72                      | 0.85                      | 65                         | 42                                   | 4.7 / 0.185                                        | 5.0 / 0.197                       |
| MPL135-R47 | 0.47 $\pm$ 20%   | 0.85                      | 1.10                      | 65                         | 42                                   | 4.7 / 0.185                                        | 5.0 / 0.197                       |
| MPL135-R56 | 0.56 $\pm$ 20%   | 1.30                      | 1.50                      | 55                         | 38                                   | 4.7 / 0.185                                        | 5.0 / 0.197                       |
| MPL136-R36 | 0.36 $\pm$ 20%   | 0.56                      | 0.60                      | 85                         | 47                                   | 4.7 / 0.185                                        | 6.5 / 0.256                       |
| MPL136-1R0 | 1.00 $\pm$ 20%   | 1.90                      | 2.30                      | 49                         | 32                                   | 4.2 / 0.165                                        | 6.5 / 0.256                       |
| MPL136-1R5 | 1.50 $\pm$ 20%   | 2.50                      | 2.80                      | 45                         | 28                                   | 4.2 / 0.165                                        | 6.5 / 0.256                       |
| MPL136-1R8 | 1.80 $\pm$ 20%   | 2.80                      | 3.20                      | 41                         | 24                                   | 4.2 / 0.165                                        | 6.5 / 0.256                       |
| MPL136-2R2 | 2.20 $\pm$ 20%   | 3.50                      | 4.20                      | 40                         | 22                                   | 4.0 / 0.157                                        | 6.5 / 0.256                       |
| MPL136-3R3 | 3.30 $\pm$ 20%   | 3.90                      | 4.50                      | 35                         | 19                                   | 4.0 / 0.157                                        | 6.5 / 0.256                       |
| MPL136-4R7 | 4.70 $\pm$ 20%   | 6.10                      | 7.00                      | 30                         | 18                                   | 2.5 / 0.098                                        | 6.5 / 0.256                       |

1. Isat is the DC current which cause the inductance drop approximately 30% of its nominal inductance without current.
2. I<sub>r</sub> is the DC current which cause the surface temperature of the part increase approximately 40°C
3. Operating temperature range : -55°C to 125°C
4. Ambient temperature, Maximum : 85°C.



DELTA ELECTRONICS, INC.

(TAOYUAN PLANT CPBG) 252, SAN YING ROAD, KUEISAN INDUSTRIAL ZONE, TAOYUAN SHIEN, 333, TAIWAN, R.O.C.

TEL: 886-3-3591968; FAX: 886-3-3591991

<http://www.deltawww.com>