## SMT Power Inductor

## SIG4012 Type

## Features

- RoHS compliant.
- Halogen free compliant.
$\square$ Low profile ( 1.2 mm max. height ), SMD type.
Shielded
- Self-leads, suitable for high density mounting.
- High energy storage and low DCR.
$\square$ Provided with embossed carrier tape packing.
- Ideal for power source circuits, DC-DC converter, DC-AC inverters inductor applications.
- In addition to the standard versions shown here, customized inductors are available to meet your exact requirements.


## Mechanical Dimension:

RECOMMENDED PAD PATTERNS


UNIT : mm/inch
$A=3.9 \pm 0.2 / 0.154 \pm 0.008$
$\mathrm{B}=3.9 \pm 0.2 / 0.154 \pm 0.008$
$\mathrm{C}=1.2 / 0.047 \mathrm{Max}$.
$\mathrm{D}=1.2 \pm 0.2 / 0.047 \pm 0.008$
$E=2.5 \pm 0.2 / 0.098 \pm 0.008$

Electrical Characteristics: $25^{\circ} \mathrm{C}: 1 \mathrm{MHz}, 1.0 \mathrm{~V}$

| PART NO. | $\begin{gathered} L^{1} \\ (\mathrm{uH}) \end{gathered}$ | $\begin{gathered} \text { DCR } \\ (\mathrm{m} \Omega) \text { Max. } \end{gathered}$ | $\begin{gathered} \text { Isat }^{2} \\ (\text { Adc) } \end{gathered}$ | $\begin{aligned} & 1 \mathrm{r}^{3} \\ & (\mathrm{Adc}) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| SIG4012-1R0 | 1.0 | 60 | 2.80 | 3.10 |
| SIG4012-1R5 | 1.5 | 70 | 2.40 | 2.80 |
| SIG4012-2R2 | 2.2 | 80 | 1.90 | 2.60 |
| SIG4012-3R3 | 3.3 | 102 | 1.60 | 2.30 |
| SIG4012-4R7 | 4.7 | 126 | 1.40 | 1.80 |
| SIG4012-6R8 | 6.8 | 156 | 1.20 | 1.70 |
| SIG4012-8R2 | 8.2 | 190 | 1.10 | 1.40 |
| SIG4012-100 | 10.0 | 240 | 1.00 | 1.30 |
| SIG4012-220 | 22.0 | 492 | 0.70 | 0.95 |
| SIG4012-330 | 33.0 | 780 | 0.53 | 0.60 |
| SIG4012-470 | 47.0 | 1020 | 0.46 | 0.50 |

1. Tolerance of inductance: $\pm 20 \%$ for $1.0 \sim 47.0 \mathrm{uH}$.
2. Isat is the DC current which cause the inductance drop $30 \%$ typical of its nominal inductance without current.
3. Ir is the DC current which cause the surface temperature of the part increase less than $40^{\circ} \mathrm{C}$.
4. Rated current : Value obtained when current flows and the temperature has risen to $40^{\circ} \mathrm{C}$ or when DC current flows and the nominal value of inductance has fallen by $30 \%$, whichever is smaller.
5. Operating temperature: $-40^{\circ} \mathrm{C}$ to $125^{\circ} \mathrm{C}$ (including self-temperature rise).
