

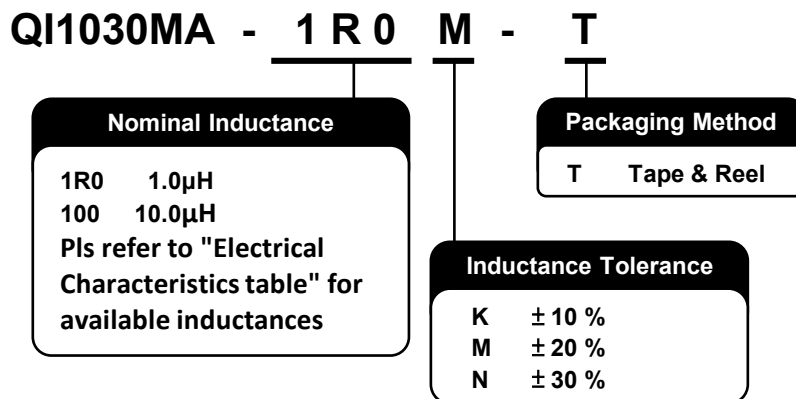
### Features

- High performance (Isat) realized by metal bust core.
- Shielded construction.
- Handles high transient current spikes without saturation.
- Ultra Low buzz noise, due to composite construction.
- New technology hot-pressing.
- Ultra-high current, untra-low loss.
- External dimensions (L x W x H) : 11.1 x 10.0 x 3.0 mm
- RoHS compliant.
- AEC-Q200 qualified.
- Operating temperature range -55°C~+125°C.

### Applications

- Automotive applications
- High current POL converter
- Battery powered devices
- DC/DC converters in distributed power systems

### Ordering Information



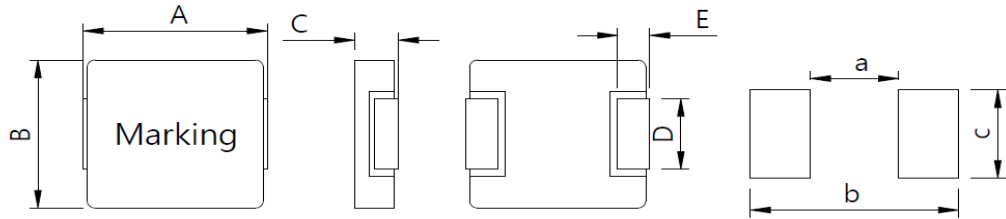
### Electrical Characteristics

| P/N             | Inductance<br>( $\mu$ H) | Test Freq.<br>(KHz/1.0V) | Tolerance<br>( $\pm$ %) | DCR<br>(m $\Omega$ ) Max. | Isat<br>(A)Typ. | Irms<br>(A) Typ. |
|-----------------|--------------------------|--------------------------|-------------------------|---------------------------|-----------------|------------------|
| QI1030MA-R22M-T | 0.22                     | 100                      | 20                      | 1.2                       | 50              | 30               |
| QI1030MA-R33M-T | 0.33                     | 100                      | 20                      | 1.6                       | 32              | 23               |
| QI1030MA-R36M-T | 0.36                     | 100                      | 20                      | 1.6                       | 28              | 23               |
| QI1030MA-R47M-T | 0.47                     | 100                      | 20                      | 2.5                       | 26              | 22               |
| QI1030MA-R68M-T | 0.68                     | 100                      | 20                      | 4.0                       | 23              | 20               |
| QI1030MA-R82M-T | 0.82                     | 100                      | 20                      | 5.0                       | 21              | 17               |
| QI1030MA-1R0M-T | 1.0                      | 100                      | 20                      | 6.0                       | 20.5            | 15               |
| QI1030MA-1R5M-T | 1.5                      | 100                      | 20                      | 7.5                       | 19              | 13               |
| QI1030MA-2R2M-T | 2.2                      | 100                      | 20                      | 9.0                       | 14              | 11               |
| QI1030MA-3R3M-T | 3.3                      | 100                      | 20                      | 17                        | 12              | 9.0              |
| QI1030MA-4R7M-T | 4.7                      | 100                      | 20                      | 22.5                      | 10              | 7.0              |
| QI1030MA-8R2M-T | 8.2                      | 100                      | 20                      | 45                        | 7.0             | 5.0              |
| QI1030MA-100M-T | 10                       | 100                      | 20                      | 80                        | 6.5             | 4.5              |

#### Note :

- All test data is referenced to 25°C ambient.
- Isat: DC current at which the inductance drops approximate 30%TYP from its value without current.
- Irms: DC current that causes the temperature rise ( $\Delta T=40^{\circ}\text{C}$ ) from 25°C ambient.
- L tested by Wayne kerr 3260B LCR meter with Wayne kerr 3260B bias current source or equivalent.
- DCR tested by Milli-ohmmeter.
- Absolute maximum voltage 30VDC.

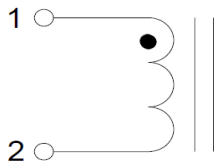
### Shape And Dimensions



SUGGESTED PCB LAYOUT

| A        | B      | C      | D     | E     | a<br>(Typ.) | b<br>(Typ.) | c<br>(Typ.) |
|----------|--------|--------|-------|-------|-------------|-------------|-------------|
| 11.1±0.4 | 10±0.3 | 3 Max. | 3±0.5 | 2±0.5 | 5.4         | 13.6        | 4.1         |

(Unit: mm)



SCHEMATIC DRAWING

### Packing Specification

| pcs / reel | Reel Size | Inner box (400*350*140mm) | Carton outside (430*380*320mm) |
|------------|-----------|---------------------------|--------------------------------|
| 1K         | 13"       | 6K                        | 12K                            |