

### Description

- High current carrying capacity, Low core losses
- Magnetically shielded, low EMI
- 125 °C maximum total temperature operation
- Halogen Free
- RoHS compliant
- Powder iron core material
- Frequency range up to 5 MHz



### Applications

- Voltage Regulator Module (VRM)
- Multi-phase regulators
- Point-of-load modules
- Smart phone POL modules
- SSD modules
- Notebook regulators
- Battery power systems
- Graphics cards
- Data networking and storage systems

### Environmental Data

- Storage temperature range: -55°C to +125°C
- Operating temperature range: -55°C to +125 ° C (ambient plus self-temperature rise)
- Solder reflow temperature: J-STD-020 compliant

### Packaging

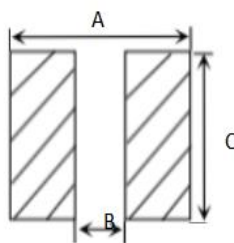
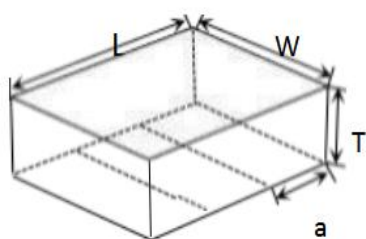
- Supplied in tape and reel packaging.

### Product Identification

|             |               |            |          |
|-------------|---------------|------------|----------|
| <u>GXTC</u> | <u>252010</u> | <u>xxx</u> | <u>M</u> |
| ①           | ②             | ③          | ④        |

- ① Series name
- ② Dimensions
- ③ Inductance Value
- ④ Inductance Tolerance ( M= ± 20% )

## Dimensions-mm



单位: mm

| Series      | L      | W      | T      | a       | A   | B   | C   |
|-------------|--------|--------|--------|---------|-----|-----|-----|
| GXTC-252010 | 2.5±0. | 2.0±0. | 1.0MAX | 0.9±0.2 | 2.6 | 0.7 | 2.1 |

## Electrical Characteristics

| Part Number       | Inductance     | DC Resistance |      | Heating Rating Current | Saturation Current |
|-------------------|----------------|---------------|------|------------------------|--------------------|
|                   | L (uH)         | DCR(mΩ)       |      | A                      | A                  |
|                   | ±20%,1MHz,0.1V | Typ           | Max  | Typ                    | Typ                |
| GXTC-252010-R22-M | 0.22           | 12            | 17   | 6.8                    | 8.6                |
| GXTC-252010-R24-M | 0.24           | 12            | 175  | 6.7                    | 8.5                |
| GXTC-252010-R33-M | 0.33           | 13            | 19   | 6.5                    | 7.6                |
| GXTC-252010-R47-M | 0.47           | 15            | 22   | 6.1                    | 6.9                |
| GXTC-252010-R68-M | 0.68           | 23            | 27   | 5.6                    | 5.9                |
| GXTC-252010-1R0-M | 1.0            | 25            | 30   | 4.5                    | 5.3                |
| GXTC-252010-1R5-M | 1.5            | 45            | 55   | 3.4                    | 4.3                |
| GXTC-252010-2R2-M | 2.2            | 62            | 70   | 2.4                    | 3.3                |
| GXTC-252010-3R3-M | 3.3            | 86            | 100  | 2.5                    | 2.8                |
| GXTC-252010-4R7-M | 4.7            | 160           | 180  | 2.0                    | 2.6                |
| GXTC-252010-6R8-M | 6.8            | 270           | 320  | 1.6                    | 2.4                |
| GXTC-252010-100-M | 10.0           | 500           | 560  | 1.05                   | 1.55               |
| GXTC-252010-220-M | 22.0           | 1100          | 1300 | 0.85                   | 1.1                |

### Notes:

1. All test data is referenced to 25 °C ambient
2. Operating temperature range - 55°C to + 125 °C
3. Idc(A):DC current (A) that will cause an approximate ΔT of 40 °C
4. Isat(A):DC current (A) that will cause L0 to drop approximately 30 %
5. 50V DC shall be applied for 60s between the terminal and the Core
6. The part temperature (ambient + temp rise) should not exceed 125 °C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.