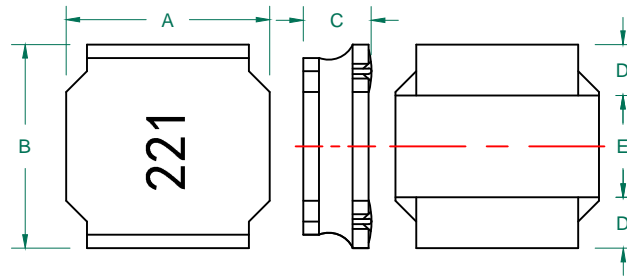


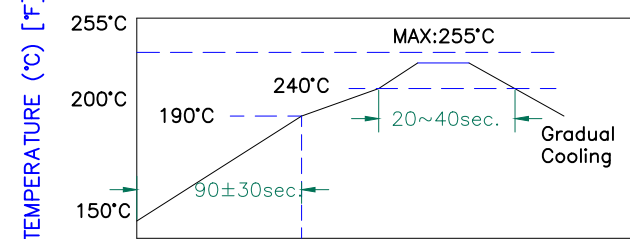
# TYS4018221M-10

## PHYSICAL DIMENSIONS:

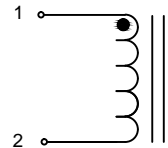
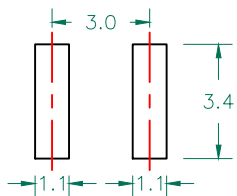
|   |             |
|---|-------------|
| A | 4.00 ± 0.20 |
| B | 4.00 ± 0.20 |
| C | 1.80 MAX.   |
| D | 0.95 ± 0.20 |
| E | 2.10 ± 0.20 |



## RECOMMENDED SOLDERING CONDITIONS



## LAND PATTERNS FOR REFLOW SOLDERING



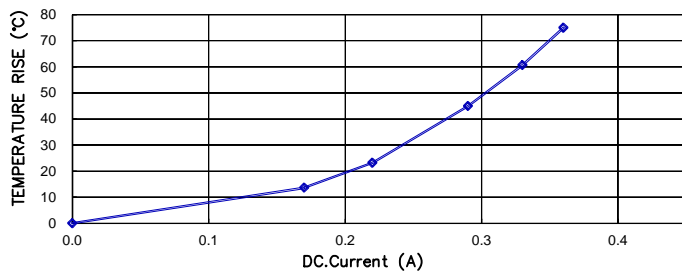
**RoHS**

## ELECTRICAL SPECIFICATION

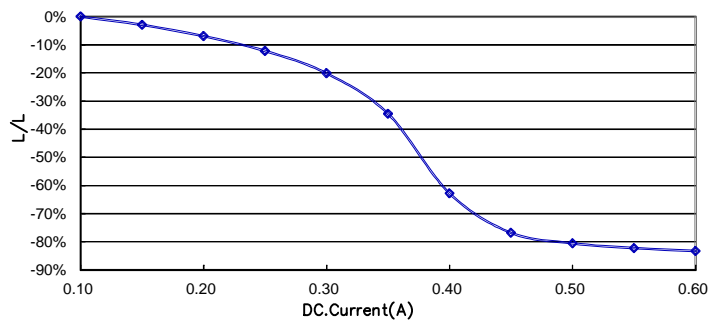
|  | Min | Nom   | Max   |
|--|-----|-------|-------|
| INDUCTANCE (uH)<br>L @ 100 KHz/1V<br>± 20% | 176 | 220   | 264   |
| DCR (Ω)                                    |     | 4.000 | 5.200 |

|                                 |      |
|---------------------------------|------|
| Saturation Current(A)           | 0.27 |
| SRF (MHz)                       | 4    |
| Temperature Rise<br>Current (A) | 0.17 |

## CHARACTERISTICS OF TEMPERATURE RISE



## CURRENT VS INDUCTANCE DROP IN RATES



**UNCONTROLLED DOCUMENT**

NOTES: UNLESS OTHERWISE SPECIFIED

1. OPERATING TEMPERATURE RANGE: -40°C TO +125°C (INCLUDING SELF-HEATING) .
2. STORAGE TEMPERATURE RANGE (PACKAGING CONDITIONS): -10°C TO +40°C AND RH 70% (MAX.)
3. UNLESS OTHERWISE SPECIFIED, THE STANDARD ATMOSPHERIC CONDITIONS FOR MEASUREMENT/TEST AS:
  - A. AMBIENT TEMPERATURE: 20±15°C.
  - B. RELATIVE HUMIDITY: 65%±20%.
4. DEFINITION OF SATURATION CURRENT (ISAT): DC CURRENT AT WHICH THE INDUCTANCE DROPS ≤30% FROM ITS VALUE WITHOUT CURRENT.
5. DEFINITION OF TEMPERATURE RISE CURRENT (IRMS): DC CURRENT THAT CAUSES THE TEMPERATURE RISE ( ΔT ≤40°C) FROM 20°C AMBIENT.

| DIMENSIONS ARE IN mm . |                               |          |     | This print is the property of Laird Tech. and is loaned in confidence subject to return upon request and with the understanding that no copies shall be made without the written consent of Laird Tech. All rights to design or invention are reserved. |                  | <b>Laird</b>   |           |
|------------------------|-------------------------------|----------|-----|---|------------------|----------------|-----------|
|                        |                               |          |     | PROJECT/PART NUMBER:  | REV              | PART TYPE:     | DRAWN BY: |
|                        |                               |          |     | TYS4018221M-10  | B                | POWER INDUCTOR | QIU       |
| B                      | CHANGE TEMP FROM -25°C~+125°C | 12/19/12 | QIU | DATE:   | 05/07/12         | SCALE:         | NTS       |
| A                      | ORIGINAL DRAFT                | 05/07/12 | QIU | CAD #   | TYS4018221M-10-B | TOOL #         | -         |
| REV                    | DESCRIPTION                   | DATE     | INT | SHEET: 1 of 1   |                  |                |           |