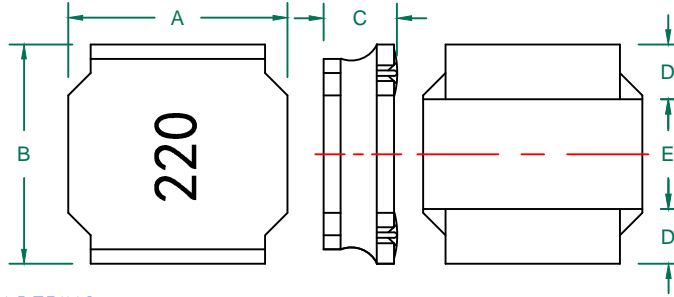


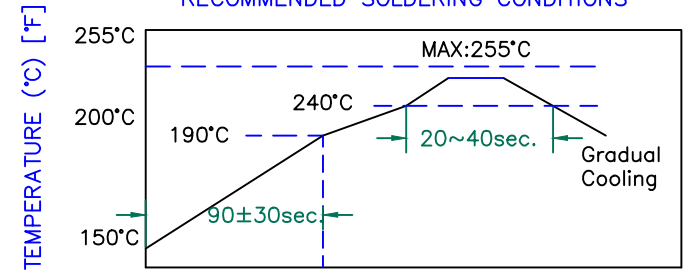
# TYS5040220M-10

## PHYSICAL DIMENSIONS:

|   |      |        |              |
|---|------|--------|--------------|
| A | 5.00 | ±      | 0.20         |
| B | 5.00 | ±      | 0.20         |
| C | 4.00 | +<br>- | 0.20<br>0.30 |
| D | 1.60 | ±      | 0.30         |
| E | 1.80 | ±      | 0.30         |



## RECOMMENDED SOLDERING CONDITIONS

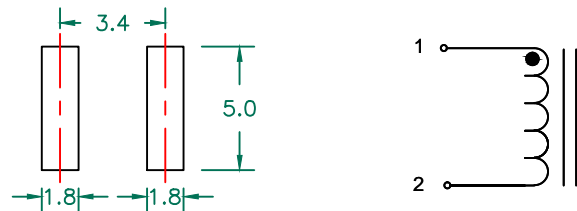


## ELECTRICAL SPECIFICATION

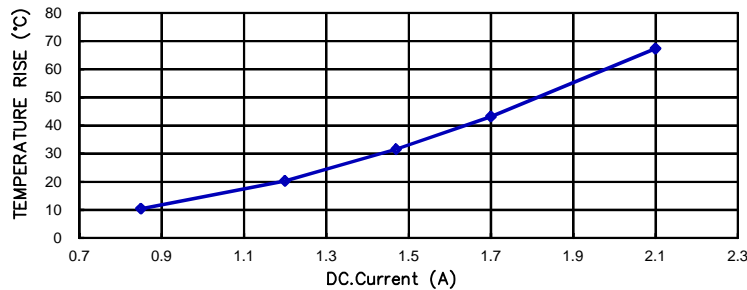
|   | Min  | Nom   | Max   |
|---|------|-------|-------|
| INDUCTANCE (uH)<br>L @ 100 KHz/1V<br>±20% | 17.6 | 22.0  | 26.4  |
| DCR (Ω)                                   |      | 0.129 | 0.155 |

|                              |      |
|------------------------------|------|
| Saturation Current(A)        | 1.60 |
| SRF (MHz)                    | 11   |
| Temperature Rise Current (A) | 1.50 |

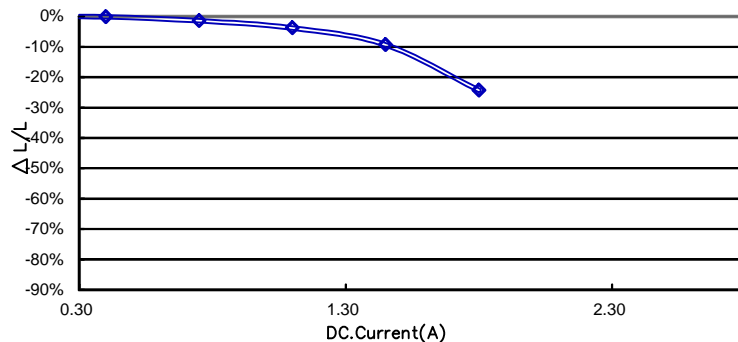
## LAND PATTERNS FOR REFLOW SOLDERING



## CHARACTERISTICS OF TEMPERATURE RISE



## CURRENT VS INDUCTANCE DROP IN RATES



**RoHS**

## NOTES:

- OPERATION TEMPERATURE RANGE: -40°C~+125°C (INCLUDING SELF-HEATING).
- STORAGE TEMPERATURE RANGE (PACKAGING CONDITIONS): -10°C TO +40°C AND RH 70% (MAX.)
- UNLESS OTHERWISE SPECIFIED, THE STANDARD ATMOSPHERIC CONDITIONS FOR MEASUREMENT/TEST AS:  
A. AMBIENT TEMPERATURE: 20±15°C.  
B. RELATIVE HUMIDITY: 65%±20%.
- SATURATION CURRENT IS THE DC CURRENT AT WHICH THE INDUCTANCE DROPS OFF APPROXIMATELY 30% FROM ITS VALUE WITHOUT CURRENT.(AMBIENT TEMPERATURE 25±5°C)
- TEMPERATURE RISE CURRENT (IRMS):  
DC CURRENT THAT CAUSES THE TEMPERATURE RISE (ΔT ≤40°C) FROM 25°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. |            |                |        |
|------------------------|-------------------------------|----------|-----|---|------------|----------------|--------|
|                        |                               |          |     |   |            |                |        |
|                        |                               |          |     |   |            |                |        |
| PROJECT/PART NUMBER:   |                               |          |     | REV   | PART TYPE: | DRAWN BY:      |        |
| C                      | CHANGE DIMENSIONS C/D/E       | 08/18/16 | QIU | TYS5040220M-10  | C          | POWER INDUCTOR | QIU    |
| B                      | CHANGE TEMP FROM -25°C~+125°C | 12/21/12 | QIU | DATE:   | 05/31/12   | SCALE:         | NTS    |
| A                      | ORIGINAL DRAFT                | 05/31/12 | QIU | CAD #   |            | TOOL #         |        |
| REV                    | DESCRIPTION                   | DATE     | INT | TYS5040220M-10-C  |            |                | 1 of 1 |