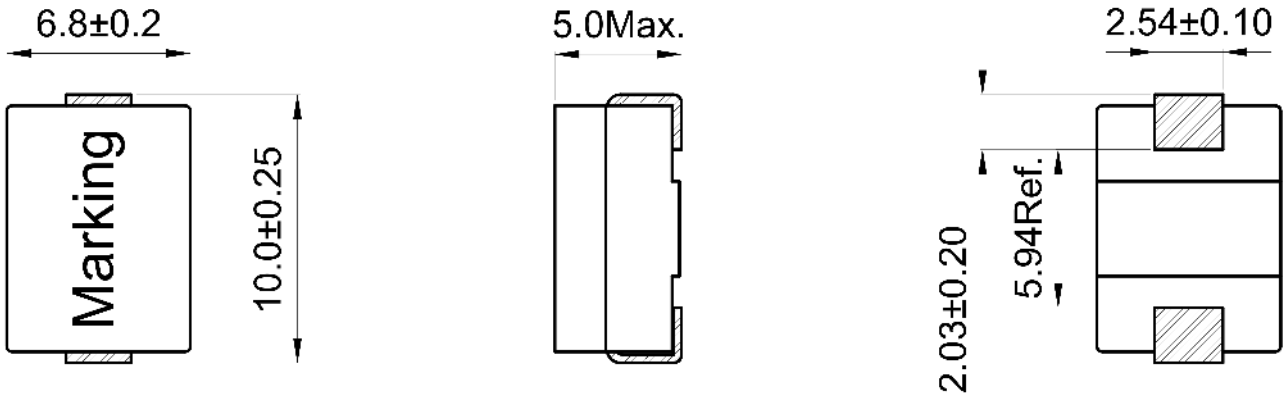
ANHUI-TIGER
Passive Components

High Current Power Inductor
TGQU1050 Series

Outline:
产品概要

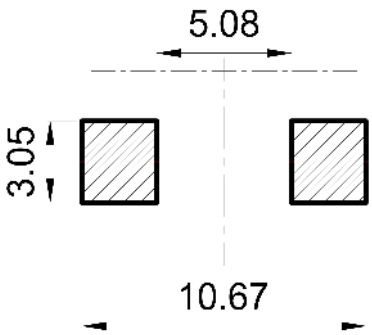
- High energy storage and Super low DCR, Low profile, SMD type.
  高能量存储和超低直流电阻，小体积，SMD 型。
- Designed for high current power supply applications.
  专为大电流电源应用而设计。
- High current DC-DC converters.
  大电流 DC-DC 转换器。
- VRM, multi-phase buck regulators.
  VRM,多相降压调节器。
- PDA, Notebook computers, Routers, Servers, Battery powered devices, Telecom soft switches switches, Base stations.
  PDA，笔记本电脑，路由器，服务器，电池供电设备，电信交换机、基站。
- Operating temperature : -40℃～+125℃
  (Including coil's temperature rise)
  工作温度：-40℃～+125℃ (包含线圈发热)

1 Appearance and Dimensions (mm)
外形尺寸(mm)

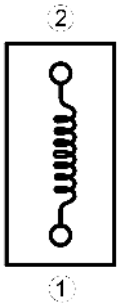


2 Marking
印字标识

3 Reference Land Pattern (mm)
参考基板尺寸 (mm)



4 Schematic
原理图



Tel:86-13605604993 Email: sale@tiger-transformer.com

5 Electrical Characteristics
电气特性

Part No. 型　号	Inductance (μH) 电感值 ※1 ±10%~±15%	D.C.R. (mΩ) 直流电阻		Saturation Current (A) 饱和电流 ※2	Temperature rise current (A) 温升电流 ※3
		Typical	Max	Typical	Typical
TGQU1050-R08L※	0.08※	0.230	0.248	90.0	37.0
TGQU1050-R10L※	0.10※	0.230	0.248	73.0	37.0
TGQU1050-R12L※	0.12※	0.230	0.248	60.0	37.0
TGQU1050-R16L※	0.16※	0.230	0.248	53.0	37.0
TGQU1050-R20K	0.20	0.230	0.248	43.0	37.0
TGQU1050-R22K	0.22	0.230	0.248	33.0	37.0
TGQU1050-R25K	0.25	0.230	0.248	25.0	37.0

■ All data is tested based on 25℃ ambient temperature.
所有数据基于环境温度 25℃条件下测试。

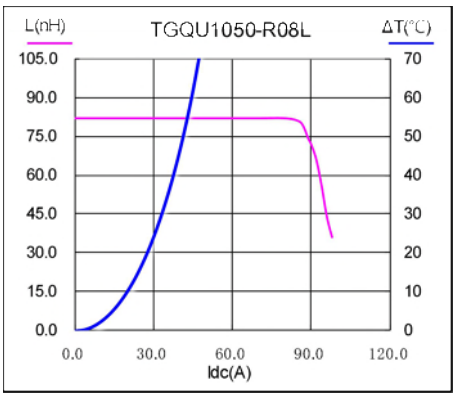
※1 Inductance measure condition at 100kHz, 1V,(K= ±10% tolerance. L=±15% tolerance).
电感测试条件为 100kHz,0.1V, (公差 K=±10%.公差 L=±15%)。

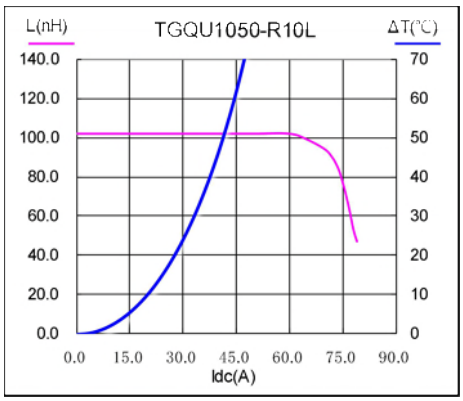
※2 Saturation current：the actual value of DC current when the inductance decrease 30% of its initial value.
饱和电流：电感值下降其初始值的 30%时所加载的实际直流电流值。

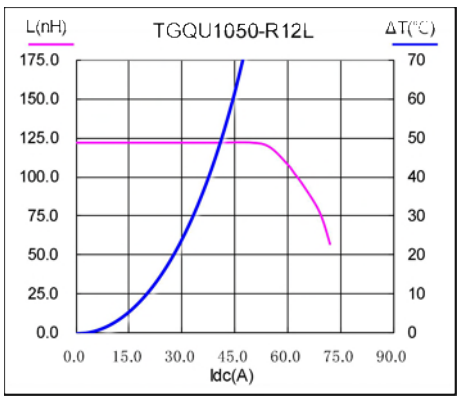
※3 Temperature rise current：the actual value of DC current when the temperature rise is ΔT40℃(Ta=25℃).
温升电流：使产品温度上升到ΔT40℃时所加载的实际直流电流值(Ta=25℃)。

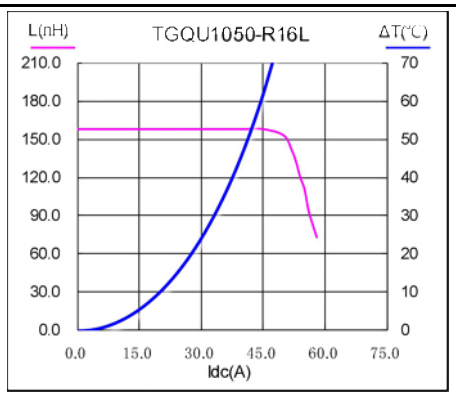
※ Special remind：Circuit design, component placement, PCB size and thickness, cooling system and etc. all will affect the product temperature. Please verify the product temperature in the final application.
特别提醒：线路设计，组件布局，印刷线路板(PCB)尺寸及厚度，散热系统等均会影响产品温度。请务必在最终应用时，验证产品发热状况。

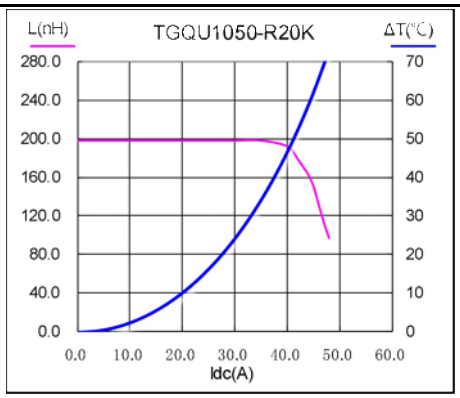
6 Saturation Current vs Temperature Rise Current Curve
饱和电流 vs 温升电流曲线

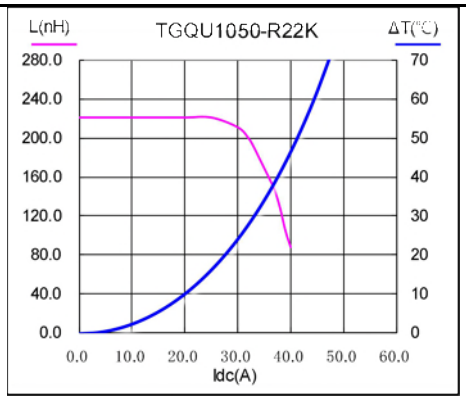


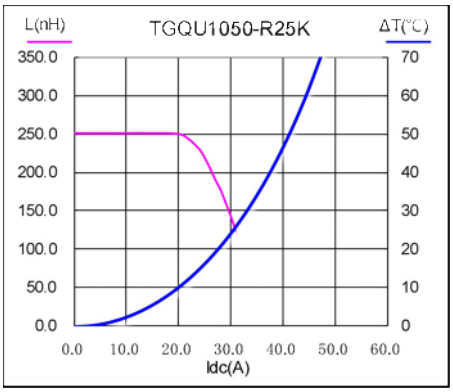





L(nH)
TGQU1050-R16L
ΔT(℃)
210.0
180.0
150.0
120.0
90.0
60.0
30.0
0.0
70
60
50
40
30
20
10
0
0.0 15.0 30.0 45.0 60.0 75.0
Idc(A)

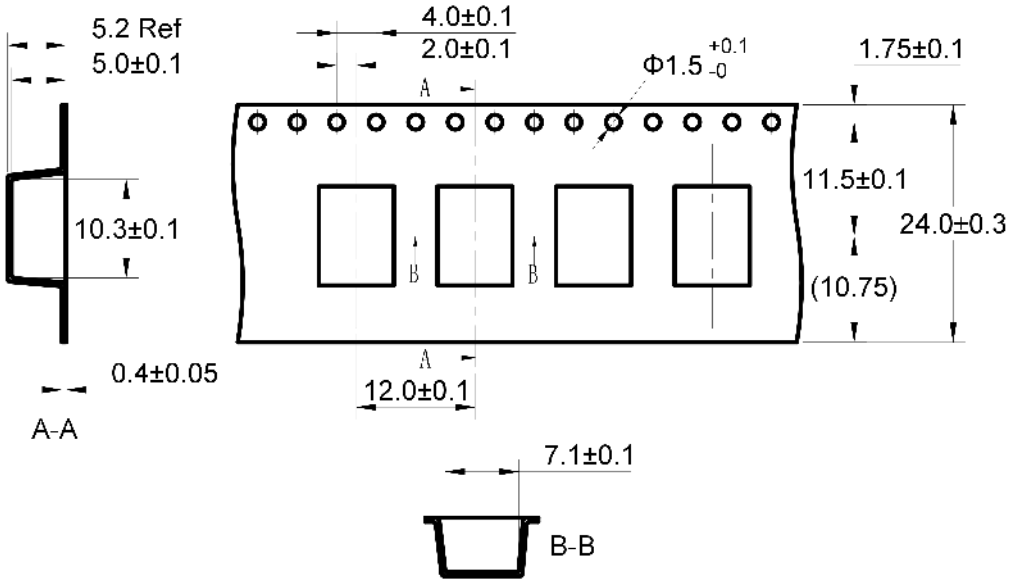

L(nH)
TGQU1050-R20K
ΔT(℃)
280.0
240.0
200.0
160.0
120.0
80.0
40.0
0.0
70
60
50
40
30
20
10
0
0.0 10.0 20.0 30.0 40.0 50.0 60.0
Idc(A)


L(nH)
TGQU1050-R22K
ΔT(℃)
280.0
240.0
200.0
160.0
120.0
80.0
40.0
0.0
70
60
50
40
30
20
10
0
0.0 10.0 20.0 30.0 40.0 50.0 60.0
Idc(A)


L(nH)
TGQU1050-R25K
ΔT(℃)
350.0
300.0
250.0
200.0
150.0
100.0
50.0
0.0
70
60
50
40
30
20
10
0
0.0 10.0 20.0 30.0 40.0 50.0 60.0
Idc(A)

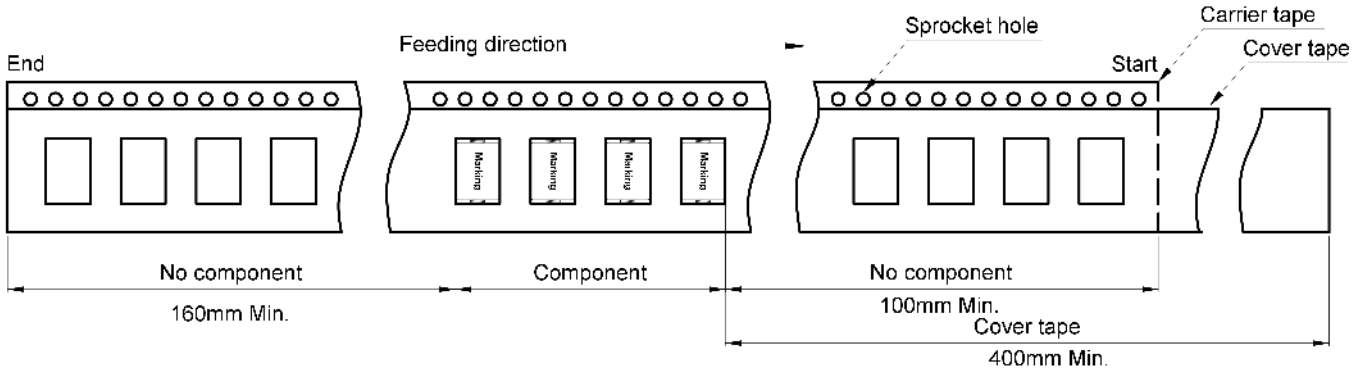
7 Packing Specification
包装规格

7.1 Carrier Tape Dimensions (mm)
载带尺寸(mm)



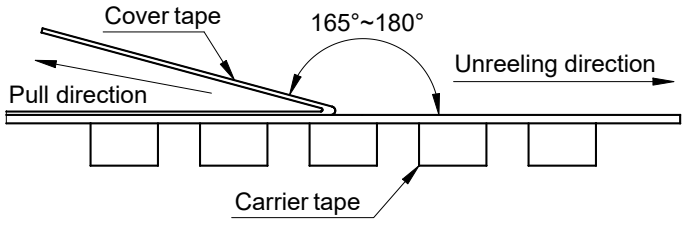
※ Packing is referred to the international standard IEC 60286-3.
包装参照国际标准 IEC 60286-3。

7.2 Tape Direction
捆包方向

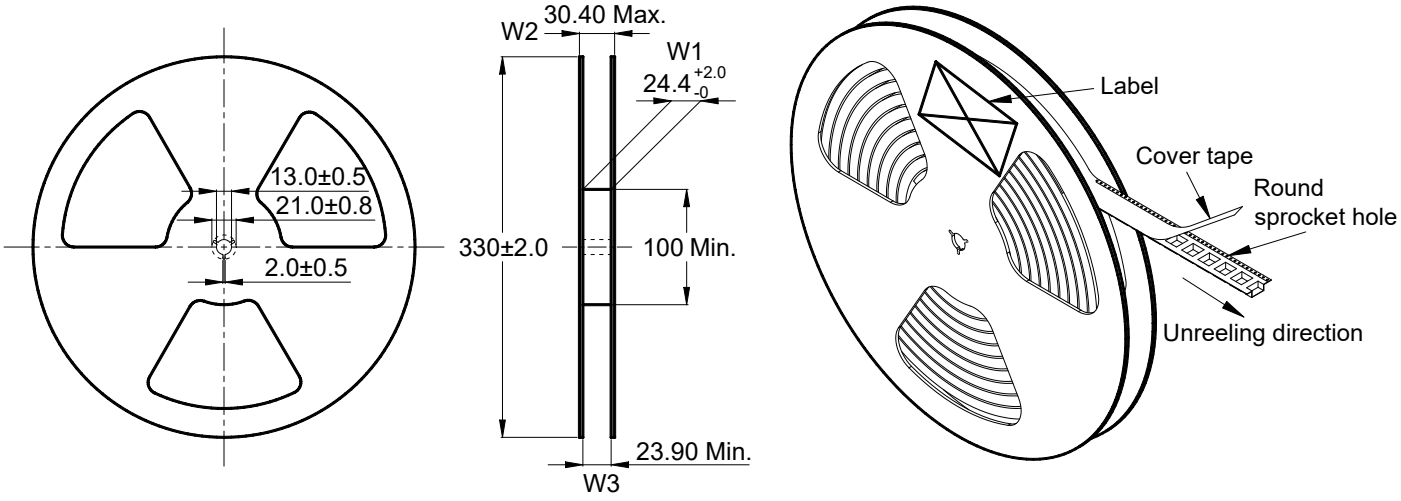


7.3 Cover Tape Peel Off Condition
盖带剥离条件

- Cover tape peel force shall be 0.1 to 1.3N.
  盖带剥离力度为 0.1～1.3N。
- Reference peel speed 300±10mm/min.
  参考剥离速度 300±10mm/分钟。



7.4 Reel Dimensions (mm)
卷盘尺寸(mm)



7.5 Carton Dimensions and Packing Quantity
包装箱尺寸和包装数量

■ Inner Carton：340×340×95mm
内包装盒

■ Out Carton ：355×355×385mm
外包装箱

Product Series 产品系列	Quantity / Reel 数量 / 卷	Inner Carton Quantity 内盒 包装数量	Out Carton Quantity 外箱 包装总数量
TGQU1050	1000pcs	(1000×2) = 2000pcs	(2000×3) = 6000pcs

7.6 Label Making
标签标识

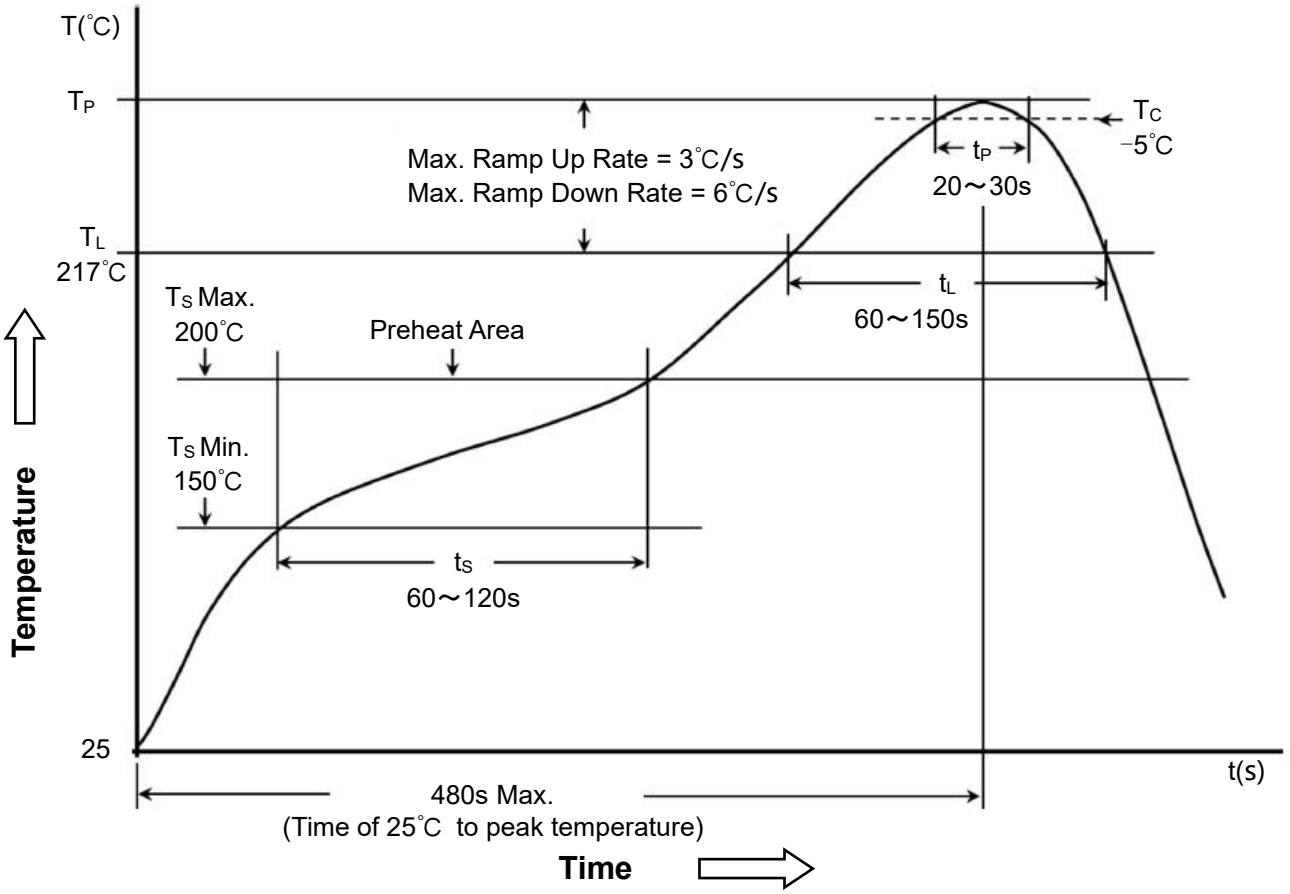
The following items will be marked on the tray of product label and shipping label.
以下项目将明确标识于产品吸塑盘标签以及运输标签上。

Production Label
产品标签
■ Packing No.
包装流水号
■ Quantity
数 量
■Shipment Date
出货日期
■ Part No.
产品型号
■Customer Part No.
客户型号
■ Customer Po No.
客户订单号

Shipping Label
运输标签
■ Packing No.
包装流水号
■ Quantity
数 量
■Shipment Date
出货日期
■ Part No.
产品型号
■Customer Part No.
客户型号
■ Customer Po No.
客户订单号

8 Soldering Specification
焊接规格

8.1 Reflow Profile for SMT Components
SMT 回流焊温度曲线



8.2 Classification of Peak Package Body Temperature (T_P)
封装体峰值温度(T_P)分类

	Package Thickness 封装厚度	Package Volume 封装体积		
		<350 mm^3	350～2000 mm^3	>2000 mm^3
PB-Free Assembly 无铅装配	<1.6mm	260°C	260°C	260°C
	1.6～2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

※ Reflow is referred to standard IPC/JEDEC J-STD-020D.
回流焊参照标准 IPC/JEDEC J-STD-020D。