



深圳市佑驰电子有限公司

Specification for Approval

产品名称: 一体系列电感

规格型号: TCMA-1090-100-M-1A

产品编号: _____

日期: 2024-01-23

- 1、本承认书的内容更改需经过双方确认，任何一方单独的修改均视为无效。
- 2、本承认书在送达客户后，请给予承认并即签回，如无签回下订单的，我司有权以此承认书标准生产，并表示购买方默认许可。

核准	审核	制作



REVISION					
REV	DESCRIPTION	DATE	DESIGNED	CHECKED	APPROVED
A0	文件建立	2024-01/23	吕秀秀	Bowen	Darren

High Current, Power Inductors

TCMA-1090-100-M-1A Power Choke



■ Description

- AEC-Q200 qualified
- Halogen Free
- 125°C maximum total temperature operation
- 10.4x9.4x11.05mm maximum surface mount package
- Magnetically shielded, low EMI
- High current carrying capacity, Low core losses
- RoHS compliant

■ Applications

- Automotive applications

■ 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

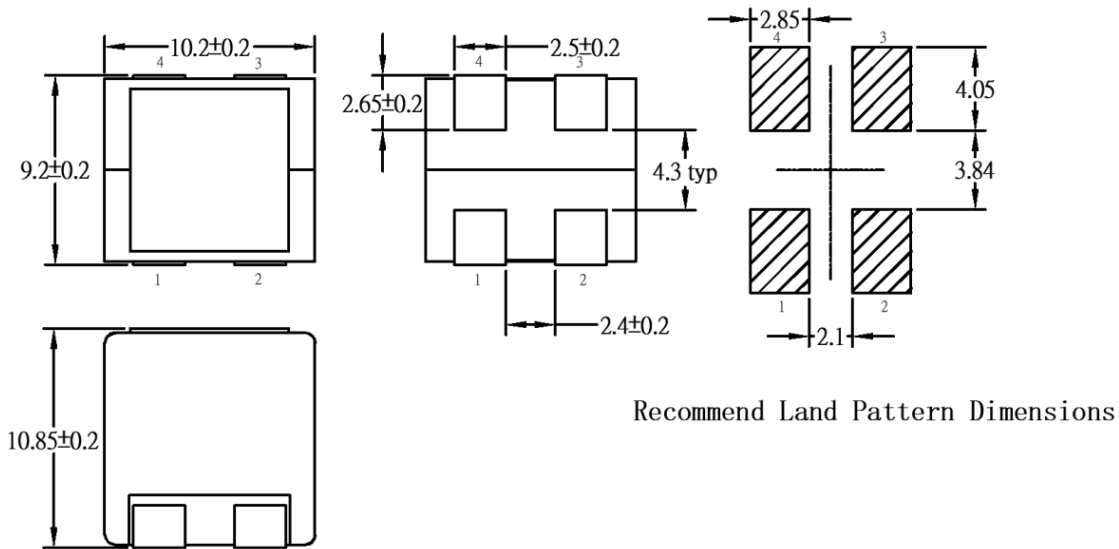
■ Product Identification

① ② ③ ④ ⑤

TCMA – 1090 – 100 – M – 1A

- ① Product Series
- ② Dimensions: 10.4x9.4x11.05mm
- ③ Inductance: 100=10.0μH
- ④ Tolerance: M=±20%
- ⑤ Automotive: 1A

■ Product Dimension – mm



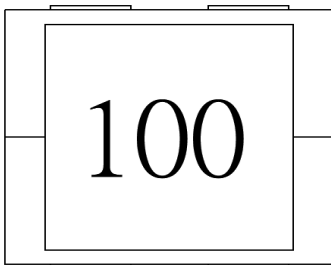
Recommend Land Pattern Dimensions

■ Marking

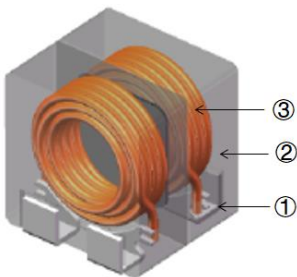
The inductor is marked with a 3-digit code

Example - -10.0→100

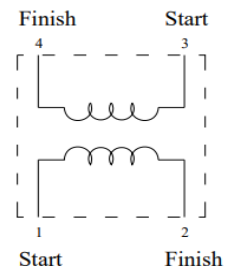
Note: Using Laser for marking



■ Material List



■ Schematics



NO.	Part Name	Material
1	Electrode	Cu+Sn platingC1100R, Sn: $6.5 \pm 1.5\mu\text{m}$
2	Core	Metal composite core
3	Coil	Copper wire, 220

■ Electrical Requirements

Part No.	Inductance	DC Resistance		Heating Rating Current	Saturation Current	Rated Voltage
	L0 (μH)	DCR (m Ω)		Idc (A)	Isat (A)	(V)
	±20 %, 100 kHz, 1V	TYP.	MAX.	TYP.	TYP.	Max.
TCMA-1090-100-M-1A	10.0	18.0	22.0	5.8	9.6	75

Notes

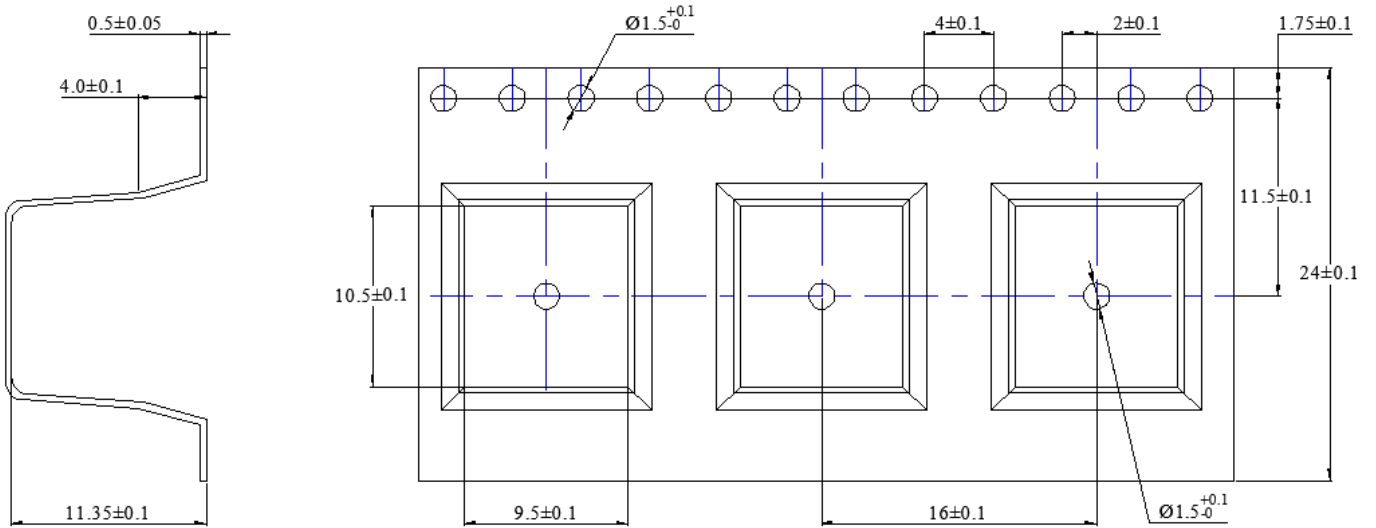
1. All test data is referenced to 25 °C ambient
2. Operating temperature range - 55 °C to + 125 °C
3. I_{dc}(A):DC current (A) that will cause an approximate ΔT of 40 °C(reference ambient temperature is 25 °C)
4. I_{sat}(A):DC current (A) that will cause L0 to drop approximately 25 %
5. The part temperature (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.

■ Electrical Characteristics

Wayne kerr 3260B/G LCR Meter Wayne kerr 3265B Bias Current Source	Temperature: 26 ± 3°C Humidity: < 70% RH Frequency: 100 KHZ, 1.0V
<p style="text-align: center;">TCMA-1090-100-M-1A</p>	

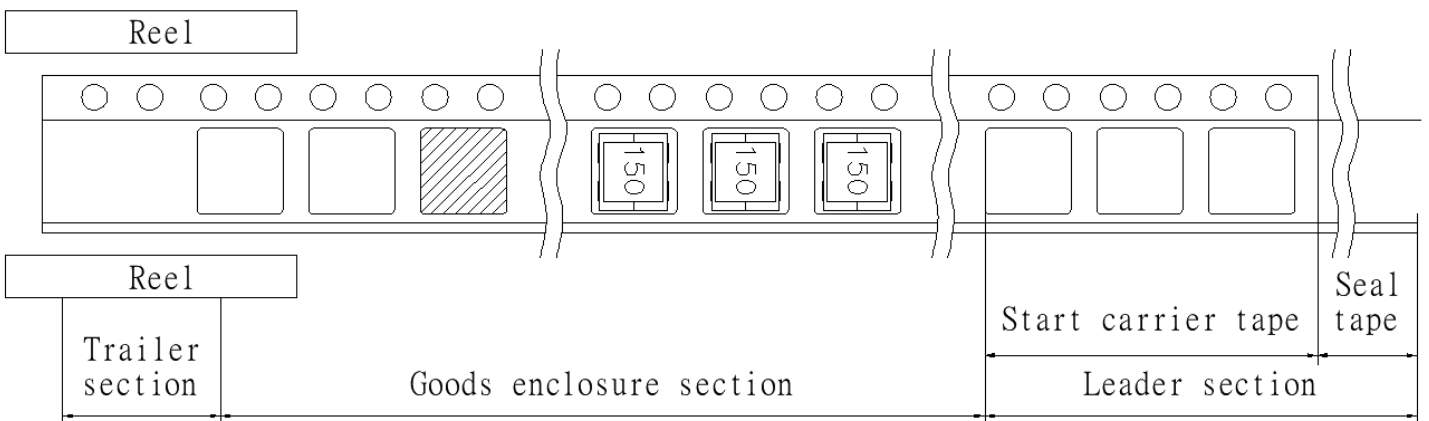
■Packaging

•Tape Packaging Dimensions-mm



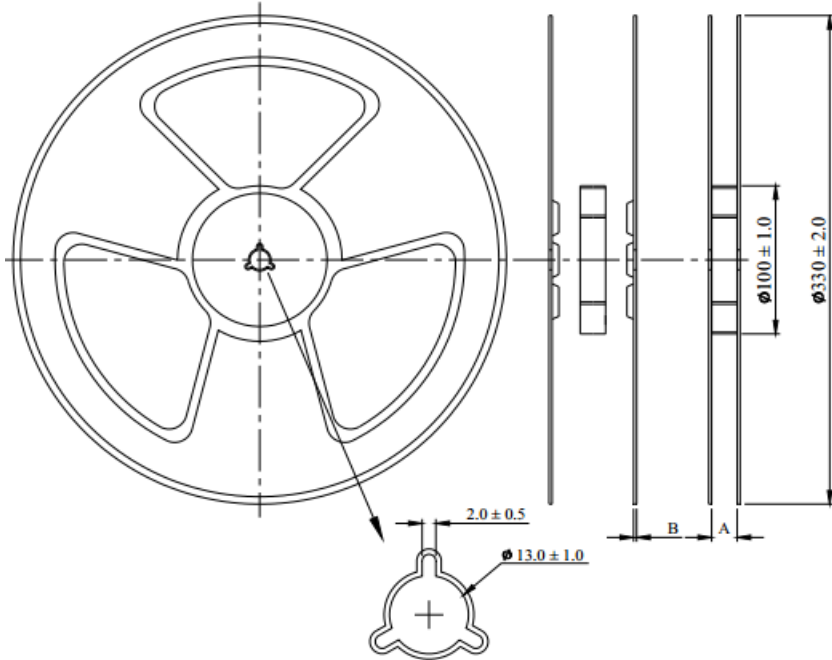
A0	B0	K0	t
9.5 ± 0.10	10.5 ± 0.10	11.35 ± 0.1	0.5 ± 0.05

•Taping dimension and tape direction , Leader ,Trailer, section dimension



Leader section	Min.400mm
Carrier tape start size	Min.100mm
Trailer section size	Min.160mm

• Reel Dimensions-mm

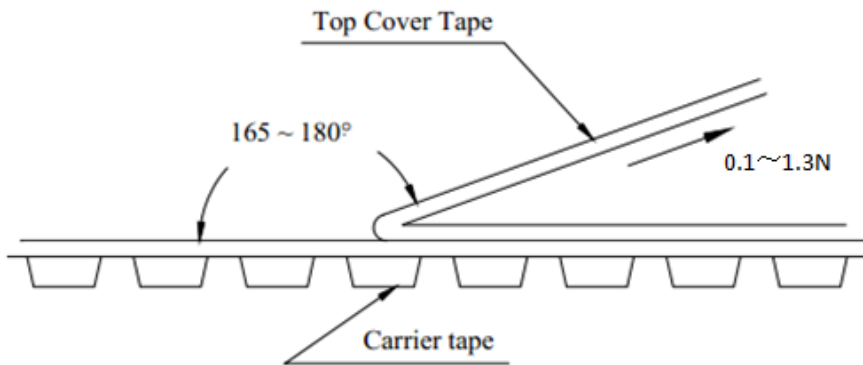


Unit	A	B
mm	24.5 ± 0.2	2.0 ± 0.2

• Peel force of top cover tape

The peel speed shall be about 300mm/minute

The peel force of top cover tape shall be between 0.1 to 1.3 N



• Taping Quantity

Series	1090
PCS/Reel	300