Wire Wound Chip Common Mode Coil
ACML3225B Series
绕线共模电感ACML3225B系列

Operating Temp : -40~125℃
工作温度：-40~125℃

BASIC INFORMATION 基本信息

Features 特性

▶High common mode impedance at high frequency effects
绕线工艺、小尺寸、低封装高度
▶Excellent noise suppression performance
高频共模阻抗高、噪声抑制性能优良
▶20Ω~2000Ω are optional for different noise level and signal frequency
高可靠性、满足AEC-Q200测试要求

Applications 用途

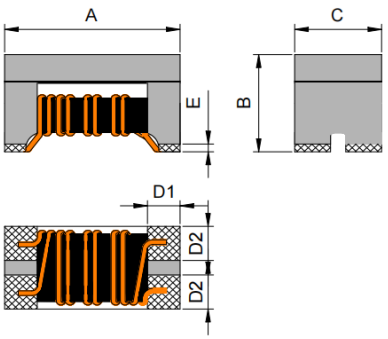
▶For automotive USB 2.0/HDMI 2.0 signal lines and general signal lines
用于汽车USB2.0/HDMI2.0信号线、一般信号线
▶For automotive USB 3.0/HDMI 2.0 signal lines and ultra-high-speed differential signal processing
用于汽车USB3.0/HDMI2.0信号线、超高速差分信号处理
▶For common-mode noise filtering of in-vehicle CAN-BUS signal lines
用于车载CAN-BUS信号线共模噪音滤波
▶For common-mode noise suppression in multimedia systems, Ethernet, and A2B
用于多媒体系统、以太网、A2B上的共模噪音滤除
▶For common-mode noise filtering of in-vehicle CAN-FD systems
用于车载CAN-FD系统共模噪音滤除

PART NUMBERING SYSTEM 品名系统

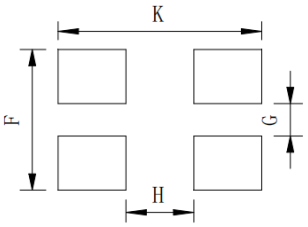
A	CML	3225B	-	101	-	2P	-	T
①	②	③		④		⑤		⑥

① Car specifications 车规类
② Common mode winding inductor 共模绕线电感
③ External Dimensions 外形尺寸
④ Inductance 感值
⑤ 2 Line 两个绕线绕组
⑥ Taping Package 编带

SHAPES AND DIMENSIONS 外形尺寸



(Unit:mm)



Recommended Land Pattern
推荐焊盘

A	B	C	D1	D2	E	F	G	H	K
3.2±0.20	2.5 Max	2.5±0.20	0.80 Ref	0.80 Ref	0.25Max	2.8 Ref	0.6 Ref	2.0 Ref	3.7 Ref

Please be sure to request delivery specificationsthat provide further details on the features and specifications of the productsfor proper and safe use.
为了确保您能够正确、安全地使用产品，请务必索取能进一步确认详细特性、规格的产品规格书。
Please note that the contents may change without any prior notice due to reasons such as upgrading.
本规格书内容可能因为产品改良等原因而变更，恕不另行通知。

CHARACTERISTICS SPECIFICATION TABLE 特性规格表

Model 产品型号	Inductance 电感值 (μH)	Tolerance 公差 (%)	DCR 直流电阻 (mΩ)Max.	Impedance 阻抗 (mΩ)Typ.	Impedance 阻抗 (mΩ)Min.	Rated Current 额定电流 (mA)Max.	Rated Voltage 额定电压 (Vdc)Max.	Withstand Voltage 耐压 (Vdc)	Insulation Resistance 绝缘电阻 (MΩ)Min.
ACML3225B-110-2P-T	11	+50/-30	400	550000	300000	300	80	125	10
ACML3225B-220-2P-T	22	+50/-30	500	1100000	500000	250	80	125	10
ACML3225B-510-2P-T	51	+50/-30	700	2600000	1000000	200	80	125	10
ACML3225B-101-2P-T	100	+50/-30	2000	4000000	2200000	150	80	125	10

Notes 注意事项

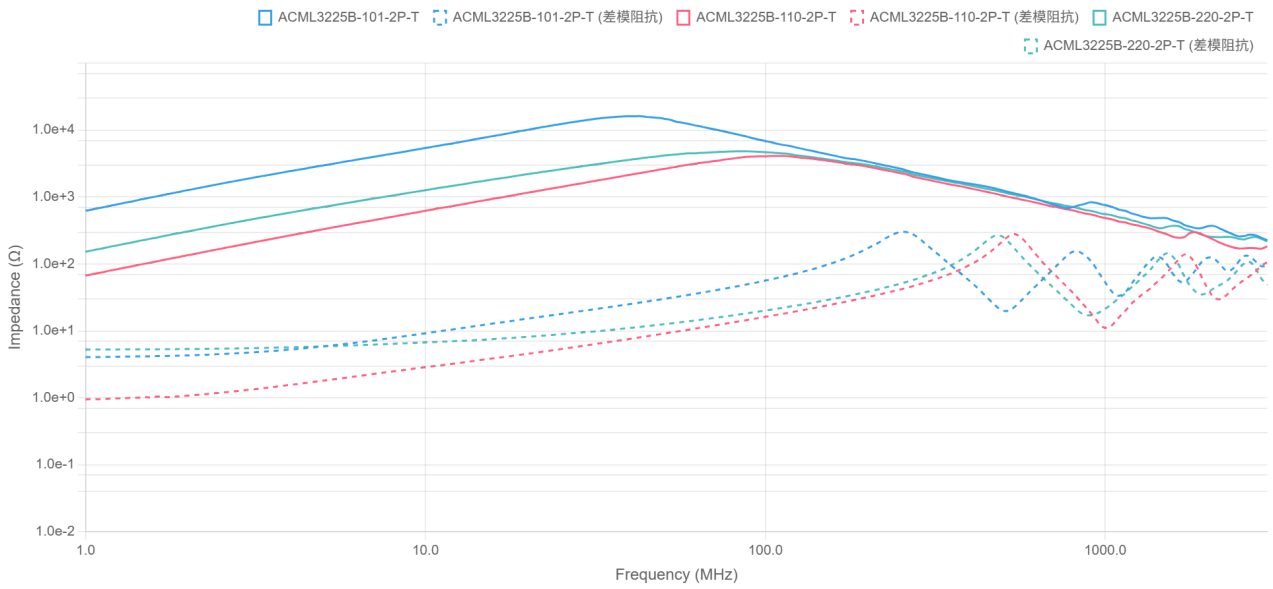
1.All data is tested under the condition of ambient temperature of 25℃.
所有数据基于环境温度25℃条件下测试。
2.Inductance test condition is 100kHz, 0.1V.
电感测试条件为100kHz, 0.1V。
3.Saturation current: the actual DC current value applied when the inductance value drops by 30% from its initial value.
饱和电流：电感值下降其初始值的30%时所加载的实际直流电流值。
4.Temperature rise current: the actual DC current value applied to raise the product temperature by ΔT=40℃ (Ta=25℃).
温升电流：使产品温度上升到ΔT=40℃时所加载的实际直流电流值(Ta=25℃)。
5.Special reminder: Circuit design, component layout, printed circuit board (PCB) size and thickness, and heat dissipation system can all affect the product temperature.
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。
6.Please make sure to verify the heat dissipation status of the product in the final application.
请务必在最终应用时，验证产品发热状况。

Test Equipment Information 测试设备信息

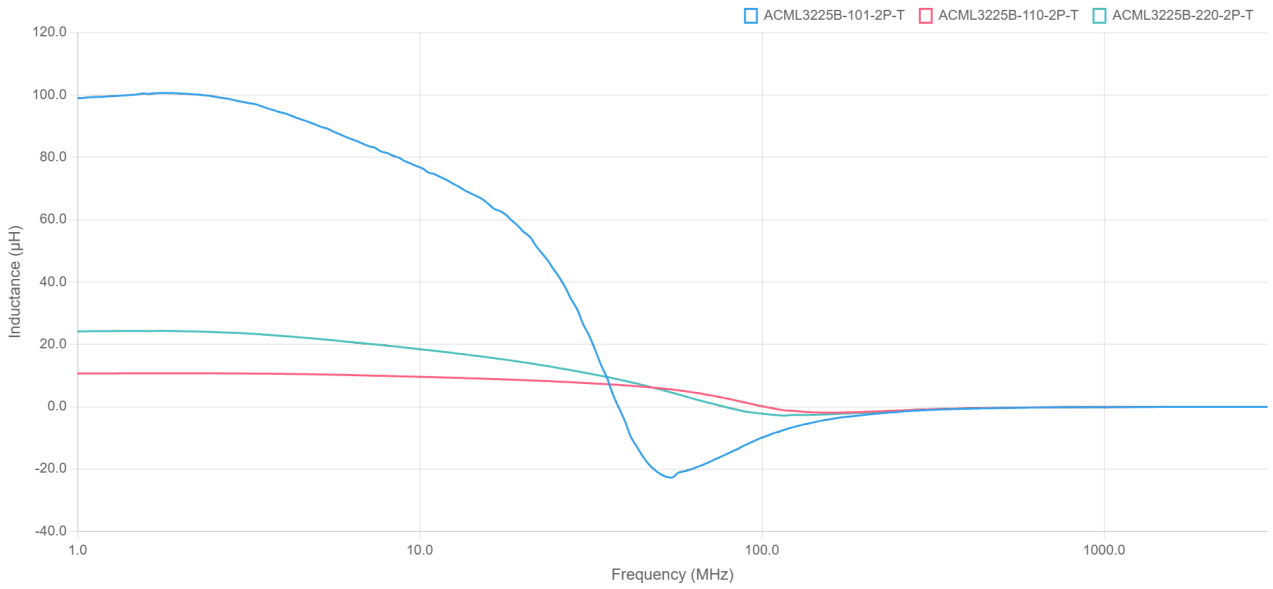
NO. 序号	Measurement Item 测量项目	Equipment Model 设备型号	Manufacturer 制造商
1	L	4284A	Keysight
2	DCR	34420A	Keysight
3	Rated Current	4284A+42841A	Keysight
4	Insulation Resistance	4339B	Keysight
5	Withstamd Voltage	19301A	Chroma
6	Z	E4991B	Keysight

TYPICAL ELECTRICAL CHARACTERISTICS 典型电气特性

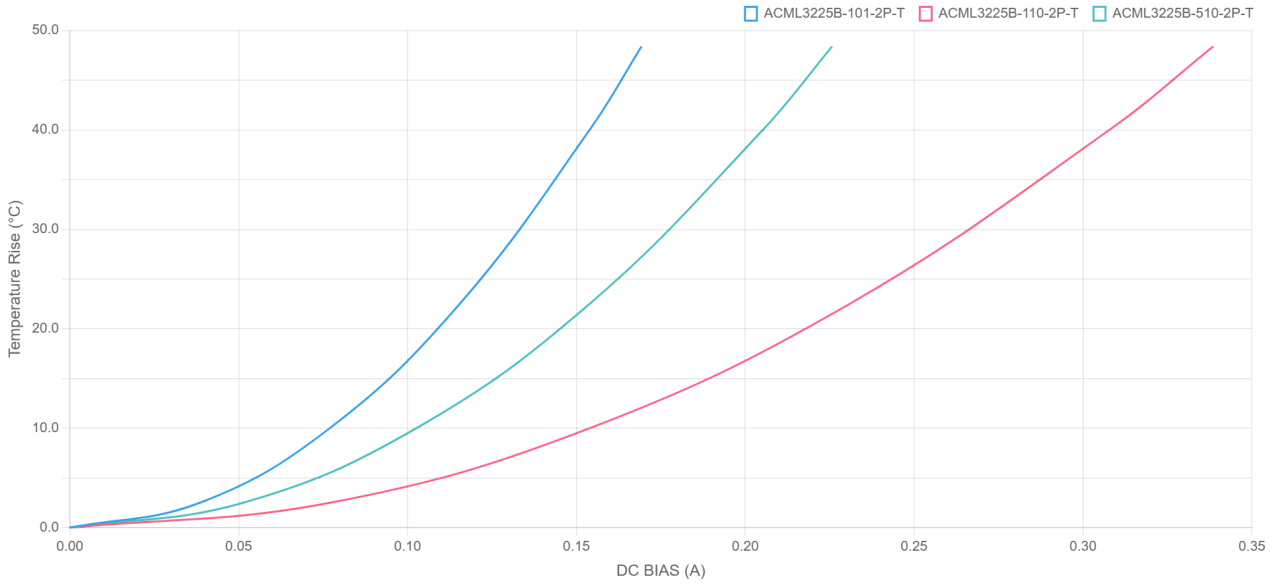
Z FREQUENCY CHARACTERISTICS 阻抗频率特性



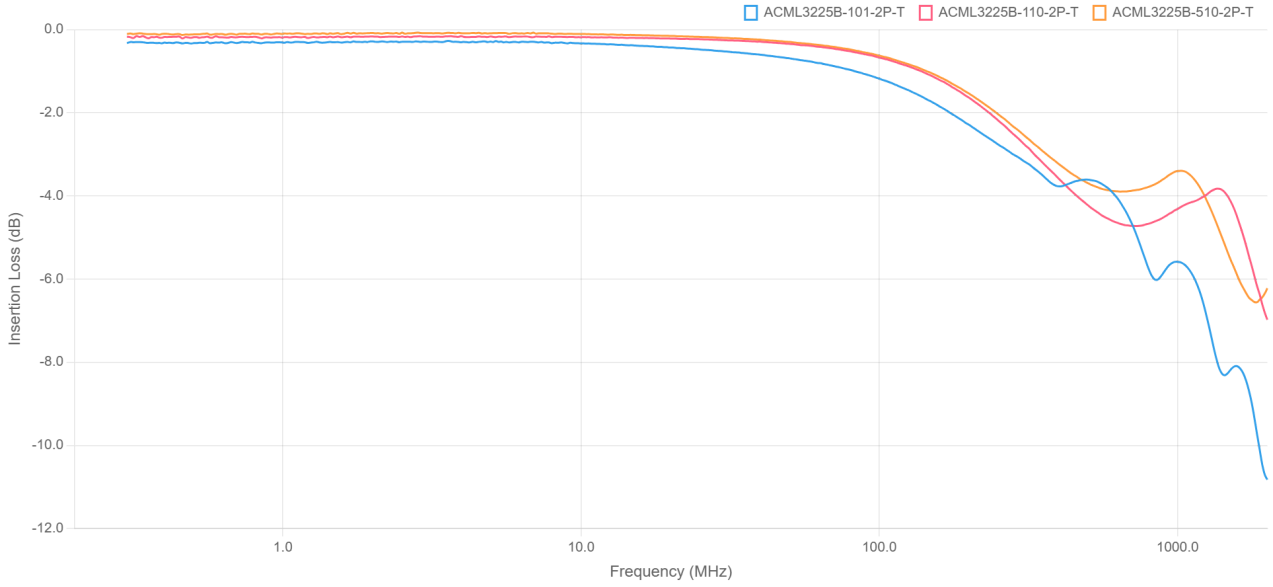
L FREQUENCY CHARACTERISTICS 感值频率特性



TEMPERATUREVS. DC BIAS CHARACTERISTICS 温升电流曲线

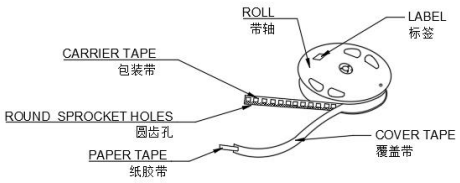


INSERTION LOSS CHARACTERISTICS 插入损耗曲线



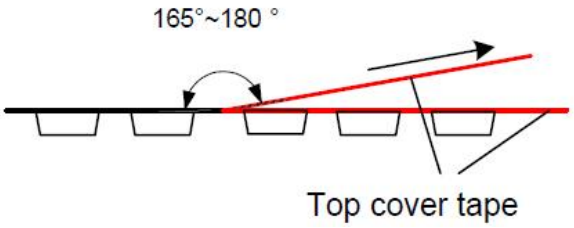
PACKAGE 包装

Packaging 包装



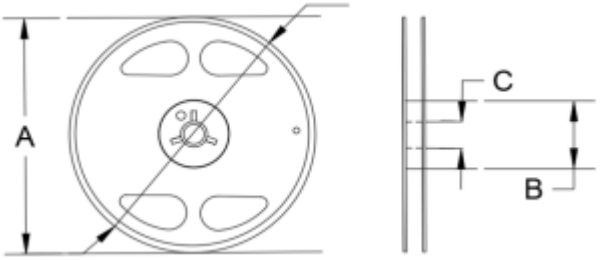
The force for tearing off cover tape is 20 to 100 grams in the arrow direction.
撕下盖带的力是按箭头方向20~100克。

Cover Tape 盖带



Peel-off speed: 300mm/min.
剥离速度：300mm/min。

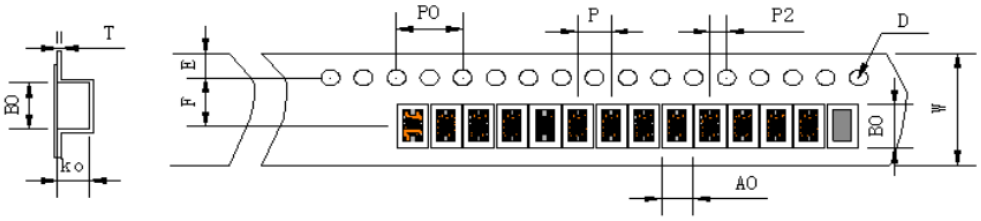
Reel Dimensions 卷轴尺寸



Item 项目	Dimension 尺寸
A	178±1
B	60±1
C	13±0.5

(Unit:mm)

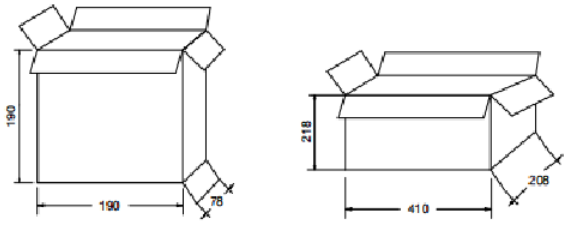
Tape Dimensions 载带尺寸



(Unit:mm)

Spec	W	A0	B0	K0	D	F	E	P	P0	P2	T
ACML3225	12.0±0.3	2.90±0.1	3.5±0.1	2.7±0.1	1.5+0.1/-0	5.5±0.1	1.75±0.1	4.0±0.10	8.0±0.1	2.0±0.1	0.30±0.05

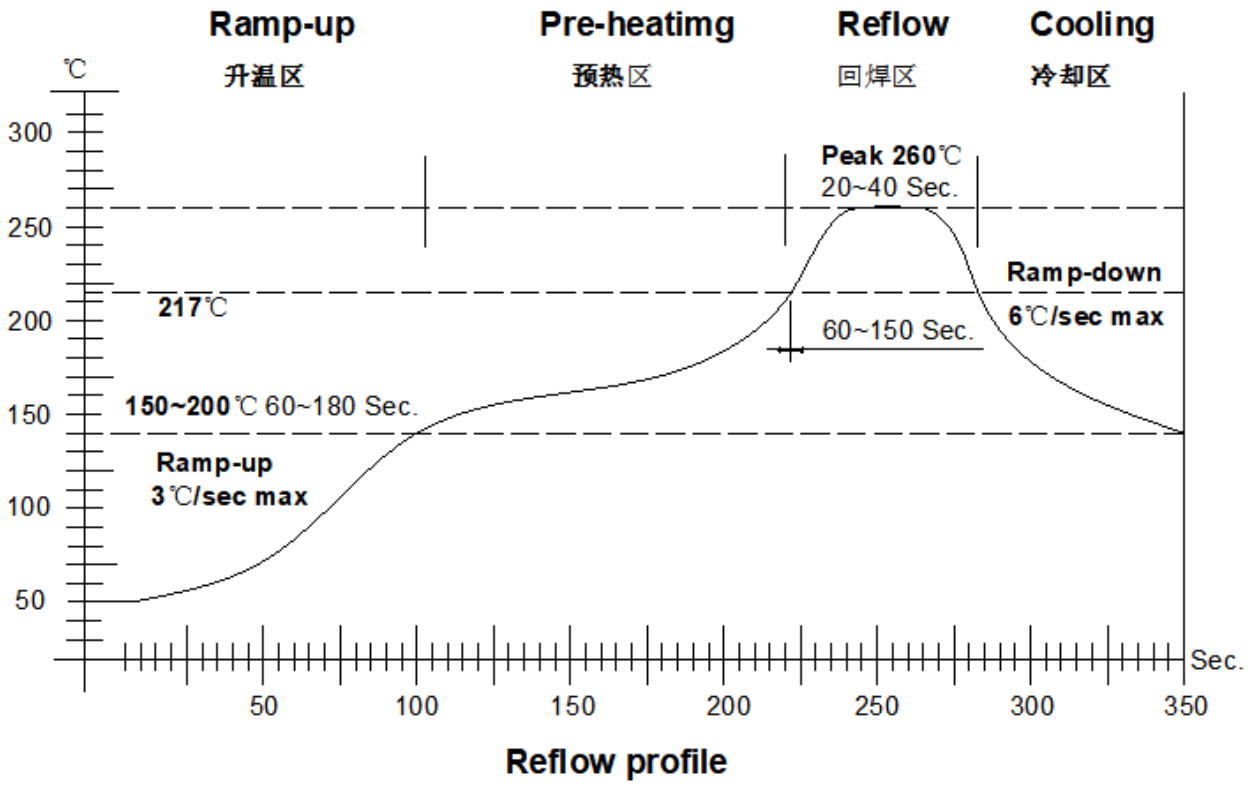
Packaging Quantity 包装数量



Reel 卷盘	Box 盒装	Carton 箱装
1000	4000	20000
1Reel	4Reel/Box	5Box/Carton

(Unit:mm)

RECOMMENDED REFLOW PROFILE 推荐回流焊温度曲线



Reflow profile

Important Notes 注意事项

1.Do not place this product near magnets or objects with magnetic force.
请勿将本产品靠近磁铁或带有磁力的物体。
2.Do not store the product in unsuitable environments such as high temperature, high humidity, dusty, corrosive environments (salt, acid, alkali, etc.).
请勿将产品保存在高温、高湿、有灰尘、腐蚀环境 （盐、酸、碱等）等不适合环境中。
4.The product will self-heat (temperature rise) due to power-on, and sufficient margin should be left in thermal design.
产品会因通电而发热 （温度上升），在热设计方面需留有充分余量。
5.When designing the PCB, please consider the installation position of the non-magnetic shielded components to avoid failures caused by magnetic interference.
在设计PCB时，请考虑非磁屏蔽元器件的安装位置，避免磁干扰引起的故障。
6.Since the static electricity carried by the human body will be transmitted to the ground wire, please use an anti-static wrist strap.
由于人体所带的静电会传到接地线上，因此请使用防静电腕带。
7.Grease on human hands may lead to decreased solderability. Please avoid direct contact with the terminals.
人体手上有油脂可能导致可焊性下降。请避免手直接接触端子。
8.Excessive bending of the terminal will lead to disconnection, please do not bend the terminal excessively.
端子过度弯曲会导致断线，请不要过度弯曲端子。
9.The product is very sensitive to direct impact, the impact may cause damage and breakage of the product's magnetic core.
产品对直接冲击很敏感，冲击可能导致产品磁芯损伤及破损。
10.When the customer uses, if the product is potted or glued, it must be noted:
在客户使用时，如果产品被灌封或胶固定，必须注意：
▶Most potting materials will shrink when hardened, so there is a stress on the plastic skeleton or magnetic core, this stress action can negatively affect the electrical properties and in extreme cases can damage the mechanical properties of the magnetic core or plastic skeleton.
大部分灌封材料在硬化时都会收缩，因此对塑胶骨架或磁芯有施加应力，这种应力作用可以给电气特性带来负面影响，极端情况下可能损坏磁芯或塑胶骨架的机械性能。
▶It must be checked whether the use of potting materials will cause the insulation layer of the enameled wire, the performance of the plastic skeleton or the glue to be degraded or even damaged.
必须检查使用灌封材料是否会导致漆包线的绝缘层，塑胶骨架或胶水的性能降低甚至损坏。
▶The effect of potting material can change the high frequency characteristics of magnetic components.
灌封材料的影响可以改变磁性元器件的高频特性。
11.For alloy or non-coated products, if the product is placed in a humid environment for a long time, the surface of the product may rust, But it will not affect the characteristics of the product.
对于合金或非涂层产品，如果将产品长期放置在潮湿的环境中，产品的表面可能会生锈，但不会影响产品的特性。
12.This product refers to the general standard used in audio-visual entertainment, home appliances, computers, office automation, communications, power modules, LED lighting, measuring equipment, Machine tools, industrial control panels and other general electronic equipment. And the general electronic equipment should be used under the usual operation and usage methods.
本产品是指在通用标准上用于影音娱乐，家电，计算机，办公自动化，通讯，电源模块，LED照明，测量设备，机械工具，工业控制板等一般电子设备中。并且该一般电子设备要在通常的操作和使用方法下使用。
13.When this product is used in occasions other than general electronic equipment, such as: Automotive Electronic products, medical equipment,military equipment, Aerospace equipment, submarine equipment, etc., please be sure to contact the company's sales department, the company will cooperate with customer needs, and negotiate different intended use described in this product.
当本产品使用在一般电子设备以外的场合，如：车载，交通工具控制设备，医疗设备，军用设备，航空航天设备，海底设备等，请务必联系本公司销售部门，本公司会配合客户需求，一起协商不同于本产品中所记载的使用用途。
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