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AN ISO 9001: 2015 CERTIFIED MANUFACTURER
AN ISO 45001 : 2018 MANUFACTURER
AN ISO 14001 : 2015 MANUFACTURER
AN IATF 16949 : 2016 MANUFACTURER

SPECIFICATIONS FOR APPROVAL

Customer: 立创

Name of Product: Thick Film Chip Resistors - RCA Series
（厚膜电阻 - RCA 系列）

相关业务 Sales Executive	工程部 Engineering	品质部 Quality Control	核准 Approval
客户确认 Customer Approval	客户确认 Customer Approval	客户确认 Customer Approval	客户确认 Customer Approval

* A member of the Hong Kong Resistors Manufactory Group of Companies *

Date:30 - Jul - 2025 Revision:R5

Thick Film Chip Resistors
（厚膜电阻）

本公司产品符合RoHS、REACH、TSCA、POPs、PAHs等环保标准。

The products of our company comply with environmental protection standards such as RoHS、REACH、TSCA、POPs、PAHs etc.

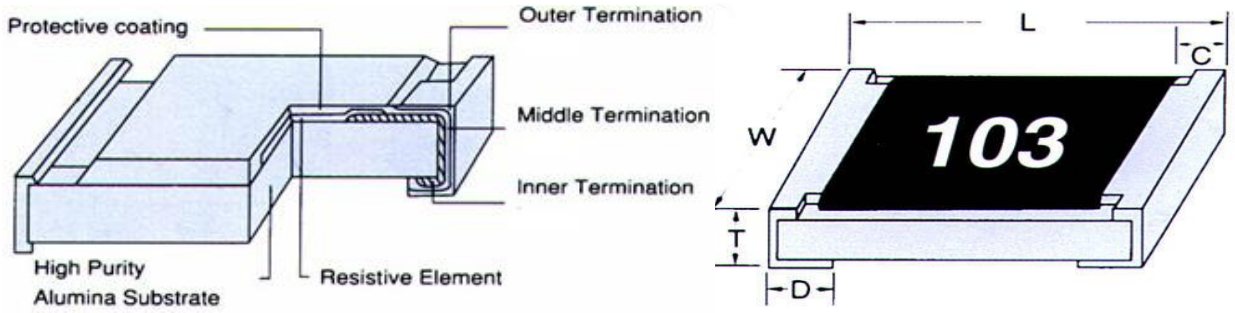
特性 *(Features)*

- 特别设计的正面导体层
  Special design on the front conductivity layer.
- 更具性价比的产品
  Competitive pricing.
- 符合JIS-C 5201各测试条件
  Compatible with JIS-C 5201 testing standard.

料号编码 *(Part Number)*

RCA	05	27K	J	LF
Type 型号	Size 尺寸 01 : 0201 02 : 0402 03 : 0603 05 : 0805 06 : 1206 10 : 1210 20 : 2010 25 : 2512	Value 阻值	Tolerance 精度 F : ±1% J : ±5%	Lead Free 不含铅 符合7C-1 豁免条款

构造图 (*Configuration*)

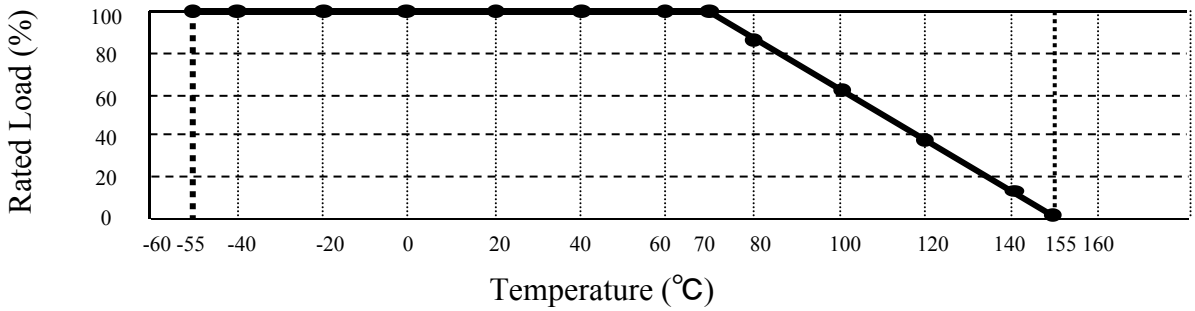


尺寸 (*Dimensions*)

(unit: mm)

Size	L	W	T	C	D
0201	0.60 ±0.03	0.30 ±0.03	0.23 ±0.03	0.15 ±0.05	0.15 ±0.05
0402	1.00 ±0.10	0.50 ±0.05	0.35 ±0.05	0.20 ±0.10	0.25 ±0.10
0603	1.60 ±0.10	0.80 ±0.10	0.45 ±0.10	0.25 ±0.15	0.30 ±0.15
0805	2.00 ±0.10	1.25 ±0.10	0.50 ±0.10	0.35 ±0.20	0.40 ±0.20
1206	3.10 ±0.10	1.55 ±0.10	0.55 ±0.10	0.45 ±0.20	0.40 ±0.20
1210	3.10 ±0.10	2.50 ±0.10	0.55 ±0.10	0.45 ±0.25	0.45 ±0.25
2010	5.00 ±0.20	2.50 ±0.15	0.55 ±0.10	0.60 ±0.25	0.50 ±0.25
2512	6.35 ±0.20	3.10 ±0.15	0.55 ±0.10	0.60 ±0.25	0.60 ±0.25

功率衰减曲线 (*Power Derating Curve*)



当使用于环境温度 70℃ 以上时,额定功率将如上图之曲线衰减。

For resistors operated in ambient temperatures above 70℃, power rating must be derated in accordance with the curve as above.

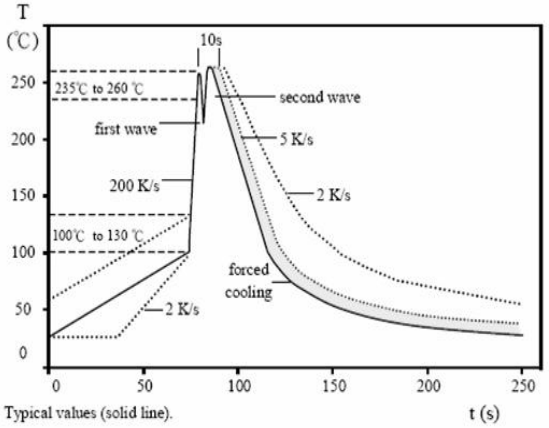
额定 (*Rating*)

型号 Type		RCA01	RCA02	RCA03	RCA05	RCA06	RCA10	RCA20	RCA25
尺寸 Size		0201	0402	0603	0805	1206	1210	2010	2512
额定功率 Power Rating at 70℃		1/20W	1/16W	1/10W	1/8W	1/4W	1/3W	3/4W	1W
最高使用电压 Max RCWV		25V	50V	75V	150V	200V	200V	200V	200V
最高过负荷电压 Max Overload Voltage		50V	100V	150V	300V	400V	500V	500V	500V
最高使用电流 Maximum work - load		0.5A	1A	1A	2A	2A	2A	2A	2A
使用温度范围 Operating Temperature Range		-55~+155℃							
标准阻值范围 Standard Resistance Range	0Ω	0~50mΩ							
	±1% (E-96)	1Ω~10MΩ		1Ω~10MΩ					
	±5% (E-24)	1Ω~10MΩ		1Ω~22MΩ					

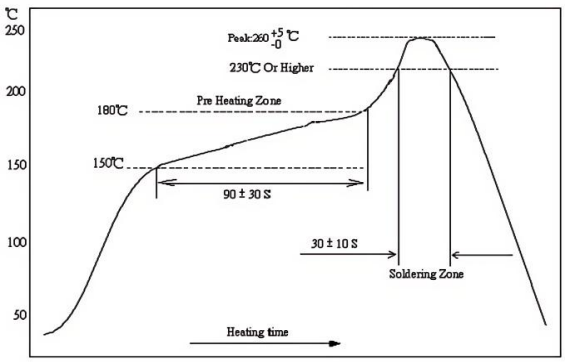
* 工作电压根据阻值按公式V=√(P*R)计算，或者采用上面提供的最高使用电压。
The working voltage is calculated based on the resistance value following the formula of V=√(P*R) or to its maximum extent as indicated above.

* 过负荷电压根据阻值按公式V=2.5√(P*R)计算，或者采用上面提供的最高过负荷电压。
The overload voltage is calculated based on the resistance value following the formula of V=2.5√(P*R) or to its maximum extent as indicated above.

焊接温度曲线 (*Soldering Temperature Curve*)



波峰焊(WAVE Soldering)



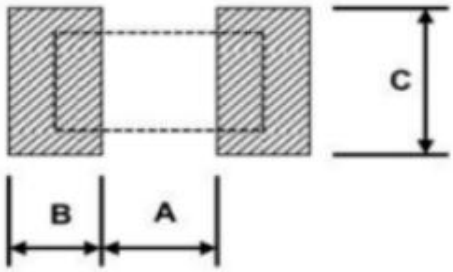
回流焊(IR Reflow Soldering)

规格说明及测试方法 *(Specifications and Test Methods)*

ITEM	SPECIFICATIONS	TEST METHOD
可焊性 Solderability	Over 95% of termination must be covered with solder	**JIS C 5201 4.17 / MIL-STD-202G METHOD 208H / IEC 60115-1 4.17** Reflow Soldering：Bath temperature:(260±5)℃,Immersion time:(30±10)s WAVE Soldering：Bath temperature:(235±10)℃,Immersion time:(10±1)s
耐焊性 Resistance to Solder Heat	J : △ R ≦ ±(1% + 0.05Ω) F: △R≦±(0.5% + 0.05Ω) No mechanical damage	**JIS C 5201 4.18 / MIL-STD-202G METHOD 210F / IEC 60115-1 4.18** The temperature of the solder bath shall be (260±5)℃,The immersion time shall be(5±0.5)s or(10±1)s as prescribed by the detail specification
温度系数 Temperature Coefficient of Resistance (TCR)	0402以下规格(0402 & 0201)： 1Ω~10Ω;>3.3M：±400ppm/℃ 10Ω(excluding 10Ω)~3.3M: ±200ppm/℃ 0603以上规格(0603 or above)： 1Ω~10Ω;>1M：±200ppm/℃ 10Ω(excluding10Ω)~1M：±100ppm/℃	**JIS C 5201 4.8 / MIL-STD-202G METHOD 304 / IEC 60115-1 4.8** At 25 ℃/-55 ℃ and 25 ℃/+125 ℃, 25 ℃ is the reference temperature
短时间过负荷 Short Time Overload	J : △ R ≦ ±(2% + 0.05Ω) F: △ R ≦ ±(1% + 0.05Ω)	**JIS C 5201 4.13/IEC 60115-1 4.13** 2.5×Rated voltage or Max. Overload Voltage for 5 sec. measure resistance after 30 minutes
恒温恒湿 Load Life Humidity	J : △ R ≦ ±(3% + 0.05Ω) F: △ R ≦ ±(1% + 0.05Ω)	**JIS C 5201 4.24/MIL-STD-202G Method 106G / IEC 60115-1 4.24** Maintain the temperature of the resistor at 40±2℃ and 90～95% RH with the rated voltage applied.Cycle ON for 1.5 hours and OFF for 0.5 hour for1000+48/-0 hours. After 1～4 hour, measure the resistance value.
耐久性 Load Life	J : △ R ≦ ±(3% + 0.05Ω) F: △ R ≦ ±(1% + 0.05Ω)	**JIS C 5201 4.25/MIL-STD-202G Method 108A / IEC 60115-1 4.25** 70 ±2℃， Max. working voltage for 1000 hrs with 1.5 hrs “ON” and 0.5 hrs “OFF”.
高低温 Temperature Cycle	J : △ R ≦ ±(1% + 0.05Ω) F: △R≦±(0.5% + 0.05Ω) No mechanical damage	**JIS C 5201 4.19/MIL-STD-202G Method 107G / IEC 60115-1 4.19** Repeat 5 cycles as follows -55℃(30 min.)+25℃(2～3 min.) +125℃(30 min.)+25℃(2～3 min.)
绝缘阻抗 Insulation Resistance	Between termination and coating must be over 1000MΩ	**JIS C 5201 4.6 / MIL-STD-202G Method 302 / IEC 60115-1 4.6** Test voltage: 100±15V
弯曲强度 Bending Strength	J : △ R ≦ ±(1% + 0.05Ω) F: △R≦±(0.5% + 0.05Ω) No mechanical damage	**JIS C 5201 4.33 / MIL-STD-202G Method 211A / IEC 60115-1 4.33** Resistance change after bended on the 90mm PCB. Bend: 3mm for 0201、0402、0603、0805 、1206、1210 2mm for 2010、2512

*** 客户对VCR 电压系数、高电压、高脉冲、抗硫化、高功率等特殊参数有任何要求时，请选用我们对应系列的电阻产品。**

焊盘尺寸建议（*Recommend Land Pattern*）



规格	A (mm)	B（mm）	C (mm)
0201	0.30	0.28	0.40
0402	0.50	0.45	0.60
0603	0.90	0.60	0.90
0805	1.30	0.70	1.35
1206	2.00	0.90	1.65
1210	2.00	0.90	2.80
2010	3.60	0.90	2.80
2512	4.80	1.60	3.50

字码编码说明 (*Markings*)

1.1. ±5% (IEC E–24系列 Series)0603、0805、1206及以上规格(0201/0402无字码)均用三字码表示。
No markings on 0402. Markings on the other sizes are expressed by a 3-digit code in its exact value.
E. G.： 6R8=6.8Ω；100=10×10^0=10Ω；472=47×10^2=4700Ω=4.7KΩ。

1.2. ±1% 阻值表示规则 (+/-1% Resistance value markings)
a. 0805、1206及以上规格 ±1% 阻值均用四字码表示。
Markings on sizes 0805, 1206 and above are expressed by a 4-digit code.
E. G.：82R5=82.5Ω；1000=100×10^0=100Ω；2212=221×10^2=22100Ω=22.1KΩ。
b. 0603 ±1%(IEC E–96系列)阻值均采用三代码表示。前两位为阻值的数字代码；后一位为英文大写字母，表示倍率(10^n次幂)。
Markings on 0603 ±1%(IEC E–96 Series) are expressed by a 3-digit code; the first two digits represent the value code and the last capital letter represents the multiplier.
E-96系列阻值的数字代码如下表： The coding system of the E-96 series is as follows :

阻值	代码	阻值	代码	阻值	代码	阻值	代码	阻值	代码	阻值	代码	阻值	代码	阻值	代码
100	**01**	133	**13**	178	**25**	237	**37**	316	**49**	422	**61**	562	**73**	750	**85**
102	**02**	137	**14**	182	**26**	243	**38**	324	**50**	432	**62**	576	**74**	768	**86**
105	**03**	140	**15**	187	**27**	249	**39**	332	**51**	442	**63**	590	**75**	787	**87**
107	**04**	143	**16**	191	**28**	255	**40**	340	**52**	453	**64**	604	**76**	806	**88**
110	**05**	147	**17**	196	**29**	261	**41**	348	**53**	464	**65**	619	**77**	825	**89**
113	**06**	150	**18**	200	**30**	267	**42**	357	**54**	475	**66**	634	**78**	845	**90**
115	**07**	154	**19**	205	**31**	274	**43**	365	**55**	487	**67**	649	**79**	866	**91**
118	**08**	158	**20**	210	**32**	280	**44**	374	**56**	499	**68**	665	**80**	887	**92**
121	**09**	162	**21**	215	**33**	287	**45**	383	**57**	511	**69**	681	**81**	909	**93**
124	**10**	165	**22**	221	**34**	294	**46**	392	**58**	523	**70**	698	**82**	931	**94**
127	**11**	169	**23**	226	**35**	301	**47**	402	**59**	536	**71**	715	**83**	953	**95**
130	**12**	174	**24**	232	**36**	309	**48**	412	**60**	549	**72**	732	**84**	976	**96**

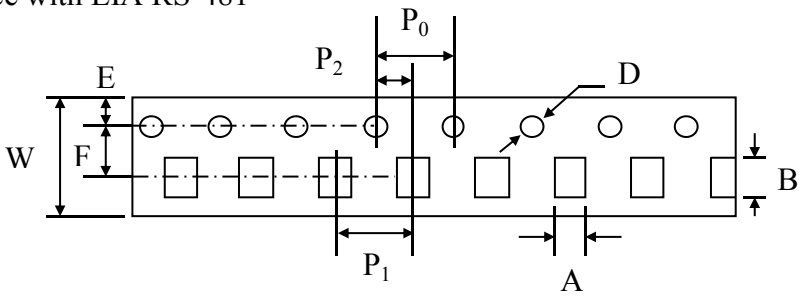
倍率字母代码如下表：(Multiplier code)

Code	A	B	C	D	E	F	G	X	Y	Z
Multiplier	10^0	10^1	10^2	10^3	10^4	10^5	10^6	10^{-1}	10^{-2}	10^{-3}

E. G.： 01Y=100× 10^{-2}=1Ω；68A=499×10^0=499Ω；02D=102×10^3=102KΩ
c. 任何 1%电阻其阻值不在 E-96 范围系列中，则其字码表示与E-24系列+/-5%字码相同。仅用标签注明误差。
Any resistance values of 1% tolerance but not included in the E-96 series, the value markings are the same as +/-5% tolerance with labelling identification.
E. G.：120=12×10^0=12Ω；475=47×10^5=4.7MΩ。

包装及卷包规格 (*Tape and Reel Package*)

Taping is in accordance with EIA RS-481

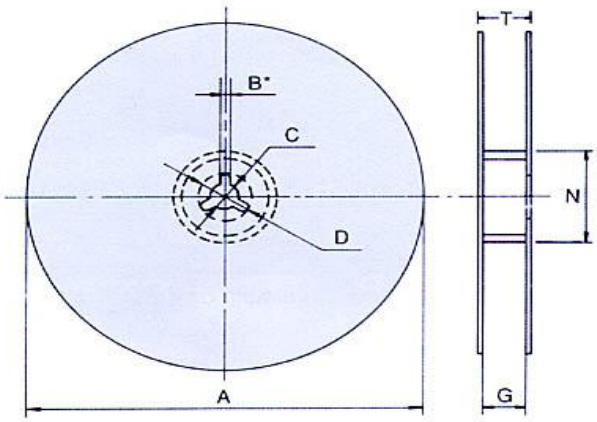


Accumulated dimensional tolerance 40±0.2mm

Size	A	B	W	F	E	P1	P2	P0	D
0201	0.40 ±0.10	0.75 ±0.10	8.00 ±0.30	3.50 ±0.05	1.75 ±0.10	2.00 ±0.10	2.00 ±0.05	4.00 ±0.10	1.50 ±0.10
0402	0.65 ±0.10	1.15 ±0.10	8.00 ±0.30	3.50 ±0.05	1.75 ±0.10	2.00 ±0.10	2.00 ±0.05	4.00 ±0.10	1.50 ±0.10
0603	1.10 ±0.20	1.90 ±0.20	8.00 ±0.30	3.50 ±0.05	1.75 ±0.10	4.00 ±0.10	2.00 ±0.05	4.00 ±0.10	1.50 ±0.10
0805	1.65 ±0.20	2.40 ±0.20	8.00 ±0.30	3.50 ±0.05	1.75 ±0.10	4.00 ±0.10	2.00 ±0.05	4.00 ±0.10	1.50 ±0.10
1206	2.00 ±0.20	3.50 ±0.20	8.00 ±0.30	3.50 ±0.05	1.75 ±0.10	4.00 ±0.10	2.00 ±0.05	4.00 ±0.10	1.50 ±0.10
1210	2.85 ±0.20	3.50 ±0.20	8.00 ±0.30	3.50 ±0.05	1.75 ±0.10	4.00 ±0.10	2.00 ±0.05	4.00 ±0.10	1.50 ±0.10
2010	2.80 ±0.20	5.50 ±0.20	12.0 ±0.30	5.50 ±0.05	1.75 ±0.10	4.00 ±0.10	2.00 ±0.05	4.00 ±0.10	1.50 ±0.10
2512	3.50 ±0.20	6.70 ±0.20	12.0 ±0.30	5.50 ±0.05	1.75 ±0.10	4.00 ±0.10	2.00 ±0.05	4.00 ±0.10	1.50 ±0.10

Size	Packaging Q'ty	
0201	10Kpcs/Reel	50Kpcs/Reel
0402	10Kpcs/Reel	50Kpcs/Reel
0603	5Kpcs/Reel	20/50Kpcs/Reel
0805	5Kpcs/Reel	20Kpcs/Reel
1206	5Kpcs/Reel	20Kpcs/Reel
1210	5Kpcs/Reel	20Kpcs/Reel
2010	4Kpcs/Reel	
2512	4Kpcs/Reel	

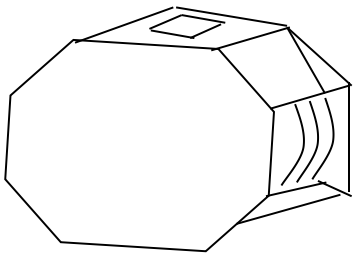
unit: mm

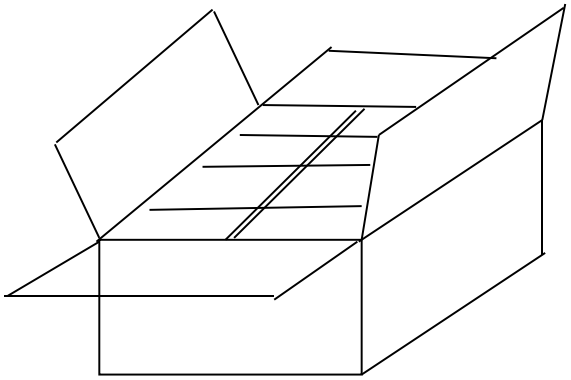


Symbol	A	N	C	D	B	G	T
Dimensions	178 ±3.0	60.0 ±2.0	13.0 ±1.0	23.5 ±3.0	4.30 ±1.0	9.0 ±2.0	11.0 ±2.0
	178 ±3.0	60.0 ±2.0	13.0 ±1.0	23.5 ±3.0	4.30 ±1.0	13.0 ±2.0	14.0 ±2.0
	329 ±3.0	100.5 ±2.0	13.3 ±1.0	24.0 ±3.0	5.20 ±1.0	11.5 ±2.0	13.0 ±2.0

贮存环境 Storage Condition	温度 Temp	湿度 Humidity	储存期 Storage Time	1年 1 year
	5~35℃	30%~75%		

外包装 (*Outer Packaging*)





第一次包装：1~10卷

First package：1~10 reels (inner box)

第二次包装：最多80卷

Second package：80 reels Max (export carton)

■当包装数量不能达到最大时，剩余空隙部位采用辅助材料填满。

When quantity shall not reach the max, the remaining empty space shall be filled up with buffer material.

■当包装数量为最小时，使用其它方法包装，确保运输过程中无问题是至关重要的。

When the quantity is a few, altemative packing methods may be used. It is important to ensure the safety of the products during transportation.

注意事项 (*Instructions)*

一、产品设计与评估（Product Design and Evaluation）

1.为了防止由于本公司产品的故障而导致人身伤害及其他重大损害的发生，请在客户方的系统设计中通过保护电路和冗余电等确保安全性。

To prevent any injuries and other possible damages caused by malfunction of our products on the P.C.boards,please ensure safety measures in the client's system design through protective circuits and redundant circuits, etc.

2. 烙铁焊接温度及焊接时间要求：370+/-10 ℃(2s以内)。

Soldering temperature and time requirements:: 370℃ ± 10 ℃ (within 2 seconds).

二、产品用途（Product Applications）

1. 除非本产品规格书中另有规定，本产品旨在一般电子设备(AV设备、家电产品、商用设备、办公设备、信息、通信设备等)中用于标准的用途。在将本产品用于要求特殊的品质和可靠性，其故障或误动作可能会直接威胁到生命安全，或危害人的安全(例:航空/航天设备、运输/交通设备、燃烧设备、医疗设备、防灾/防盗设备、安全装置等)中的情况下，请另行与本公司联系适合用途的系列产品。

Unless otherwise specified in the product specifications, this product is intended for use in general consumer electronic products (such as AV equipment, home appliances, commercial devices, office equipment,information and communication devices). Any other applications in the fields of aerospace equipment, transportation systems,combustion equipment, medical devices, disaster prevention/security systems, safety equipment, etc,please contact our respective sales personne for product reference.

三、使用环境（Operating Environment）

1. 本产品在设计时没有考虑在特殊环境下的使用。在下述特殊环境下使用及在下述条件下,可能会影响到其性能/可靠性,所以不要在以下情况下使用：

This product is designed not to be used under the following conditions :

(1)在水、油、药液,有机溶剂等液体中使用

In various types of liquid, including water, oils, chemicals, and organic solvents.

(2)在直射阳光、户外曝露、尘埃环境下使用

Where the products are exposed to direct sunlight, or in dusty places.

(3)在海风、Cl_2 、H_2S、NH_3 、SO_2 、NO_2 等腐蚀性气体多的场所使用

In places where the products are exposed to sea winds or corrosive gases, including CI_2 、H_2S、NH_3 、SO_2 and NO_2 etc.

(4)在静电、电磁波或放射线强的环境下使用

In environments with strong static electricity，electromagnetic waves or radiation.

(5)靠近发热零部件安装以及靠近本产品配置乙烯配线等易燃物而使用

In proximity to heat-producing components, plastic cords, or other flammable items.

(6)用树脂等材料封装、涂敷本产品而使用

To overcoat this product with resin or other coating materials as sealings.

(7)在无清洗下锡焊或在锡焊后的助焊剂清洗中使用溶剂、水、水溶性洗涤剂(特别要注意水溶性助焊剂的残渣影响大)

After soldering, the flux is not to be cleaned directly in any solvents, water,water-soluble detergents (pay special attention to the significant impact of water-soluble flux residues).

(8)在可能产生结露的场所使用本产品

Use this product in places where condensation may occur.

(9)在污染的状态下使用本产品(例:直接接触到印刷电路板贴装后的产品而致使皮脂附着等的处理)

Under a polluted environment (e-g: this product is away from any printed circuit board after assembly.

2. 树脂封装, 如树脂灌封或防潮涂层等, 可能会对零部件施加过大的应力, 并造成内部电极的连接不良等, 因而不在保修范围内。使用时, 请贵公司负责充分进行性能可靠性等的确认。

Any resin packaging, potting and/or moisture-proof coating may exert excessive pressure on this product which may cause poor connection of internal electrodes. Therefore, it is not covered by the warranty.

3. 请勿长时间将其浸渍于溶剂中。

Do not immerse this product in solvents for a long time.

4. 焊锡后印刷电路板洗涤液的选定和清洗条件, 干燥条件不恰当时, 可能会给本产品的性能/可靠性造成不良影响, 所以请贵公司进行充分确认。请在充分研究洗涤剂的污渍、清洗残渣, 清洗后的污染影响等情况后, 进行设定和管理。

Under normal washing condition, use a proper PCB cleaning solvent after soldering. If drying condition is inappropriate which may adversely affect the performance and reliability of this product.

四、异常应对、处理条件（Abnormal applications and immediate reactions）

1. 本产品异常发热或产生异臭时, 要立即通过切断设备主电源等方式停止使用。此外, 本产品可能会成为高温并导致烫伤, 请勿将脸或手靠近本产品。

If this product shows overheating or emits an unpleasant odor, please immediately stop using it by cutting off the main power supply of the equipment.

2. 由于本产品厚度较薄, 有可能因冲击而易于破损。在采用本产品前, 请确认不会因贴装于印刷电路板的冲击等而导致破损。此外, 还要注意的是, 在本产品受到冲击或被硬物(钳子、镊子等)挤压时, 保护层或产品本体恐会碎裂, 导致其性能受到影响。

This product is thin in nature and will easily get damaged or shocked on the PCB during assembly;and the protective layer may easily get cracked by any hard objects such as hard pliers, forceps, etc.

3. 请勿从印刷电路板将贴装后的本产品拆下后再使用。此外, 请勿裸手接触本产品。

Do not reuse this product after being mounted on the printed circuit board. Also, do not touch directly with your hands.

4. 请勿让本产品掉落到地面等上。掉落下来的本产品在机械或电性方面会受到损害, 所以请勿使用。

Please do not allow this product to fall onto the ground, this may cause mechanical and electrical defects.

5. 本产品的电阻值可能会因ESD(静电放电)而变化。在处理本产品时, 要确保不易产生静电的环境(推荐湿度:30~75%), 并通过佩戴接地带和导电手套, 对贴装的装置进行接地, 在工作台上放置导电垫等方法采取ESD对策。

The resistance value of this product may change due to ESD (electrostatic discharge). When using this product,the environment has to be away from generating any static electricity (recommended humidity: 30% - 75%).

6. 本产品的电阻值在无应力的状态下得到保证。在向本产品施加应力或压力的情况下电阻值或发生变化, 所以请贵公司在使用时进行充分的评估、研究。

The resistance value of this product is guaranteed under normal conditions. However, the value might change when abnormal external conditions exist.

五、电路设计、基板设计（Circuit deisgn and PCB design）

1. 为了避免向产品施加超出规格的过载, 如脉冲等过度负荷(短时间的负荷), 请务必在贴装于贵公司产品的状态下实施评估确认。在施加额定功率/额定电压(电流)以上负荷的情况下, 可能会损坏本产品的性能/可靠性, 请务必在额定功率/额定电压(电流)以下使用。另外, 施加脉冲等过载的使用方法(而引起的损坏)不在质保范围内。

To avoid applying improper overloads on this product (e.g. pulse power supply - short time overload), a careful and proper evaluation has to be in place. This might cause damage the characteristics and reliability of this product.

2. 请注意, 即使在额定功率以下使用的情况下, 本产品也可能成为高温。还需要考虑对安装基板和周围零部件等的影响, 和周围零部件等对本产品的影响。请务必在贴装于贵公司产品的状态下确认其在规定温度以下后再使用。

Please note that even when using this product at its rated working power, there might encounter high temperature during application. Please take into account of the other components on the PC board which might have an impact on this product.

3. 在将本产品串联连接或并联连接的情况下, 负荷可能不会完全均匀地施加至本产品, 所以请务必在实机上进行确认。
When connecting this product in series or in parallel on the PC board, the load may not be evenly distributed across this product. Therefore, please make sure to have trial runs on the actual device.
4. 在高频电路中使用的情况下, 可能无法获得必要的特性, 所以请务必在实机上进行确认。
When being used in high-frequency circuits, the respective characteristics may not be observed instantly, please make sure to have trial runs on the actual device.
5. 请勿对本产品施加印刷电路板过度翘曲引发的异常应力。此外, 在基板分割用等并列穿孔附近、或基板上有多个大孔排成一条线时, 要设计成使本产品不处于该条线上。
Do not apply excessive bending strength of this product on the PC board. Moreover, some parallel holes designed and arranged in a line on the board for later board separation might cause falling off of this product.
6. 在本产品锡焊后安装其他零部件时, 要避免基板产生过度翘曲。如有必要, 请予以处置, 如设置支撑销(支承销)等。
When inserting other component parts after this product being soldered on the board, take precautions to avoid bending on the PC board. Any supportive measure has to be in place where necessary to maintain flatness of the board.
7. 避免用手拿基板进行基板截断, 要使用夹具等工具, 防止在基板截断时产生过度翘曲。
Avoid using hands to separate the PC board. Use any hand tools to prevent excess bending strength upon breakage.

六、贴装条件（Mounting Conditions）

在超过本公司规格书规定贴装条件的条件下使用时, 会向产品施加非预期的应力并导致其故障, 所以要予以注意。
When used under conditions exceeding the mounting conditions specified in the company's specification sheet, unexpected stress will be applied to the product and may cause it to malfunction. Therefore, caution should be exercised.
1. 在贴装至印刷电路板的情况下, 贴装时要确保正反面与包装带的方向一致。用户在使用时, 请务必在贴装于贵公司产品的状态下实施评估, 确认并做出可否使用的判断。
When mounting this product onto the printed circuit board, make sure that the front and back sides are aligned with the direction of the packaging tape.
2. 焊锡时, 要在本公司规定的推荐焊锡条件范围内进行设定。在峰值温度较高, 加热时间较长等脱离规定条件的情况下, 恐会损坏其性能/可靠性。另外, 规定的焊锡条件范围为不会导致本产品特性劣化的范围, 并非表示可进行稳定焊锡的范围。关于能够稳定焊接的条件, 请在个别确认后再设定。
Please follow the recommendable soldering conditions when this product is undergoing the soldering process. When the soldering temperature is too high and the time is too long, this will damage the characteristics and reliability of this product.
3. 要进行充分预热, 使得焊锡温度与本产品表面的温差在100℃以内。此外, 在焊锡后通过浸渍于溶剂等中骤冷的情况下, 也要在此温差以内进行。
To ensure adequate preheating, the temperature between the solder and the surface of this product shall be within 100℃. Thereafter, when the soldering is completed, this product has to be cooled down rapidly by immersing it into a solvent, he temperature shall remain within 100℃.
4. 在使用电烙铁的情况下, 要通过热风等充分预热本产品, 并在进行焊锡时不要将烙铁头接触到本产品本体。此外，在烙铁头温度高的条件下进行作业的情况下, 请在短时间(370℃以下, 2秒钟以下)内进行。另外, 若是低电阻品，可能会因焊锡量等贴装偏差而无法获得电阻值精度, 所以请务必在实机上进行确认。
Before undergoing the soldering process, this product has to be well preheated and when the soldering process is in place, it has to be finished within a short period of time (below 370℃, less than 2 seconds).Do not allow the high temperature soldering iron tip to come into contact with this product. Additionally, the resistance value of any high precision items might get deviated if the soldering mounting is not properly done.

5. 若在焊锡量过多或过少的条件下进行贴装, 可能会对接合可靠性产生影响, 所以要在适当的范围内使用。
请贵公司进行充分的确认、验证。

If the tin solder is too much or too little during the mounting process, it may have an impact on the reliability of this product.

6. 高强度焊锡和特殊焊锡有可能对产品品质产生影响, 所以请勿使用此类焊锡。

Strong tin solder and any special tin solder will have an impact on the quality of this product.

7. 助焊剂请使用松香型助焊剂。在使用高活性卤素类(氯类, 溴类等)助焊剂时, 助焊剂的残渣可能会影响其性能/可靠性, 因此请在事前进行确认后使用。请勿使用强酸性助焊剂、水溶性助焊剂、含氟离子的助焊剂。此外, 焊接后若助焊剂附着于产品则可能会因助焊剂的活性力而导致产品腐蚀和故障, 所以请勿让助焊剂附着于产品。

Recommend to use rosin cleaning agent. When using high potency halogen-based (chlorine-based, bromine-based, etc.) soldering agents, the residue of the soldering agent may have an impact on the performance and reliability of this product. Do not use any strong acidic soldering agents, water-soluble soldering agents, or soldering agents containing fluorine ions. Moreover, if any soldering agent adheres to the product after soldering, it may cause corrosion and eventual performance failure of this product.

七、保管条件（Storage conditions）

1. 若在以下环境及条件下保管恐会导致性能劣化或焊锡性等性能受到影响, 所以要避免在下述环境下保管：

Do not store this product under the following conditions and circumstances which may have an impact on the performance and soldering of this product.

(1)在海风、Cl_2 、H_2S、NH_3 、SO_2 、NO_2 等腐蚀性气体多的场所保管

In places where the products are exposed to sea winds or corrosive gases, including CI_2 、H_2S、NH_3 、SO_2 and NO_2 etc.

(2)在直接照射到阳光的场所保管

Where the products are exposed to direct sunlight.

(3)在温度:5℃~35℃、相对湿度:30%~75%以外的场所保管

The recommendable temperature has to be in the range of 5℃ to 35℃ with the humidity of 30% to 75%.

(4)自运抵日起经过1年以上的保管※上述(1)-(3)的条件除外之条件得到遵守的保管方法时

Upon receipt of this product for storage for one year with the conditions (1-3) exempted as mentioned above.