

深圳市业展电子有限公司

# 承认书

## SPECIFICATION FOR APPROVAL

客户名称

Customer Name \_\_\_\_\_

客户料号

Customer P/N \_\_\_\_\_

产品名称

Product Name

Weld Precision Resistors – SBN Series

产品规格

Product Type

SBN-F-5F-t

申请承认日期

Apply Date

2019-08-13

版本

REV. \_\_\_\_\_

供货商属性 代理商

制造商 深圳市业展电子有限公司

Vendor Type Agency

Manufacturer

Note: 禁止使用 1 级环境管理物质.遵守 ACBEL"环境管理物质规范"中所要求之含量标准.

Restrict use of hazardous substances of level 1; Comply with "Specification for Hazardous Substances and Materials Management" of ACBEL

供货商印鉴 Vendor Stamp	APPROVED	CHECKED	PREPARED	承认印鉴 Stamp
			邓小辉	

Mainland China: 深圳市业展电子有限公司

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标准书名 Classification 承认书 Specification	Spec No.	YZ-QR-EN-007
品名 : 精密焊接电阻 SBN Series	Version	1.6
Product Name: Weld Precision Resistors	Page	5-2

## 1. 一般事项 General

### 1.1 适用范围 Scope

本承认书适用于 制造之[精密焊接电阻]。

This specification is available for Weld Precision Resistors manufactured by

Shenzhen Yezhan Electronics Co., Ltd.

### 1.2 品质 Quality

本电阻器的制造系经高质量管理程序，并具有高信赖性的质量保证，且符合 RoHS 和无卤要求。

The resistor is manufactured by highly quality-controlled process and guaranteed high reliability,

it meets RoHS & Halogen-Free requirement.

### 1.3 标准试验状态 Standard measuring conditions

温度  $20 \pm 2^\circ\text{C}$ 、湿度  $65 \pm 5\%$ 。

但在温度  $5 \sim 35^\circ\text{C}$ 、湿度  $45 \sim 85\%$ 之情况下，仍可给予判定。

Temperature  $20 \pm 2^\circ\text{C}$ , Humidity  $65 \pm 5\%$ .

Being no doubt about the judgment, measurements can be made within the following

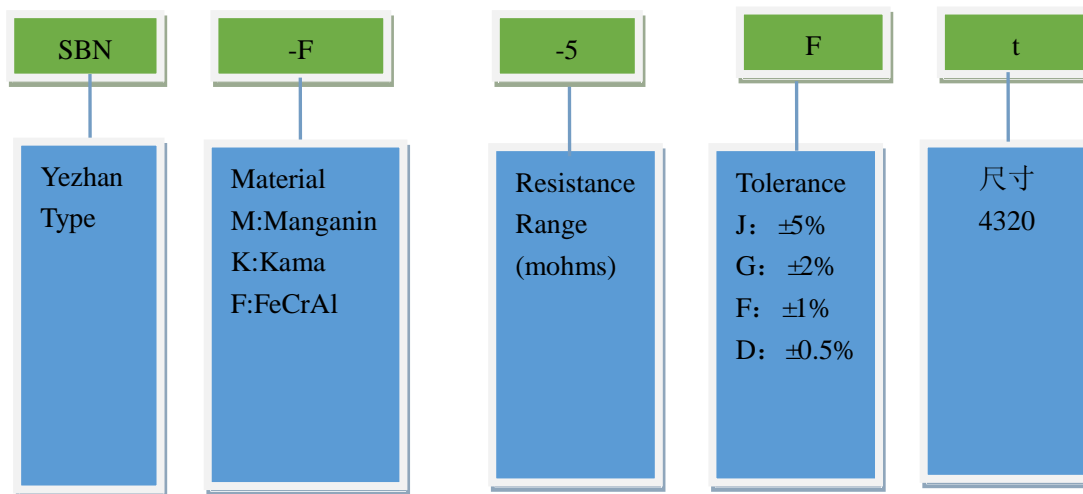
Temperature

$5 \sim 35^\circ\text{C}$ , Humidity  $45 \sim 85\%$ .

### 1.4 形名 (例) Type designation (example)

依使用种类、材料、公称电阻值、电阻值容许差而区别，其构造如下：

The type designation shall be in the following form and as specified.

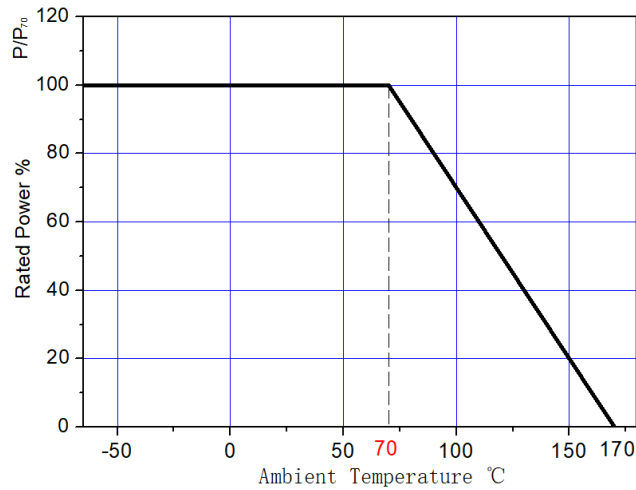


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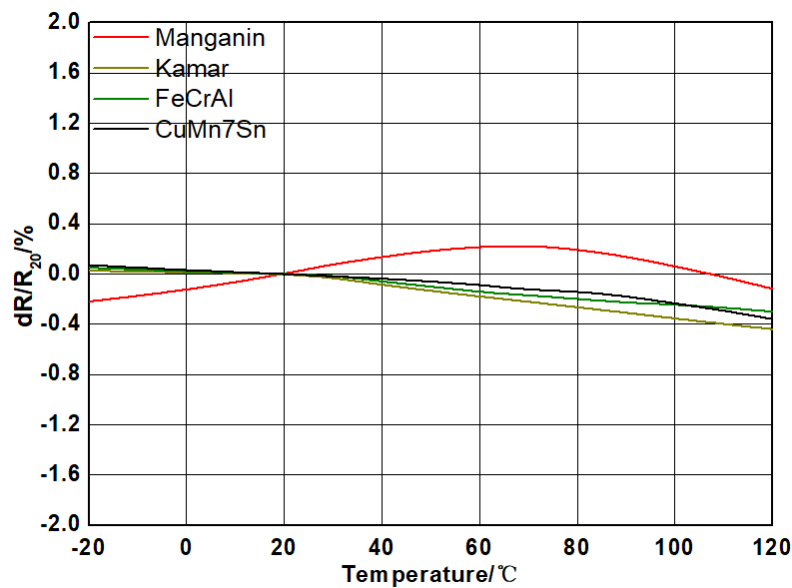
### 1.5 材质 Material

代号 Symbol	材料 Material	成分 Components	电阻率 Resistance rate
K	卡玛 Kama	Cr 19-21%, Al 2.5-42%, Fe 2.0-3.0%, Ni bal.	133 $\mu\Omega \cdot \text{cm}$
M	锰铜 Manganin wire	Cu 85%, Mn 12%, Ni 3%	44 $\mu\Omega \cdot \text{cm}$
F	铁铬铝 FeCrAl	Cr 21-23%, Al 5.0-7.0% Fe 余量, Re 适量, Nb 0.5%	145 $\mu\Omega \cdot \text{cm}$

### 1.6 功率曲线 Power Derating



### 1.7 温度系数曲线 TCR Derating



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1.8外形 External

项 目	参 数
图 解	<p>The diagram illustrates the physical dimensions of the resistor. The top view shows a U-shaped resistor with a total length <math>W</math>, a height <math>H</math>, and a thickness <math>D</math>. The distance between the two leads is <math>B</math>, and the length of each lead is <math>T</math>. The side view shows a height <math>A</math> and a maximum thickness of <math>1.0\text{max}</math>.</p>
H(高度)	$3.5\text{mm}\pm 0.5\text{mm}$
A(线宽)	$6.1\text{mm}\pm 0.4\text{mm}$
D(线厚)	$0.67\text{mm}\pm 0.1\text{mm}$
T(脚长)	$2.8\text{mm}\pm 0.5\text{mm}$
W(全长)	$11\text{mm}\pm 0.5\text{mm}$
B(缺距)	$4.2\pm 0.5\text{mm}$
阻 值	$5\text{m}\Omega\pm 1\%$
额定功率	5W
使用温度	$-65^{\circ}\text{C}\sim 170^{\circ}\text{C}$

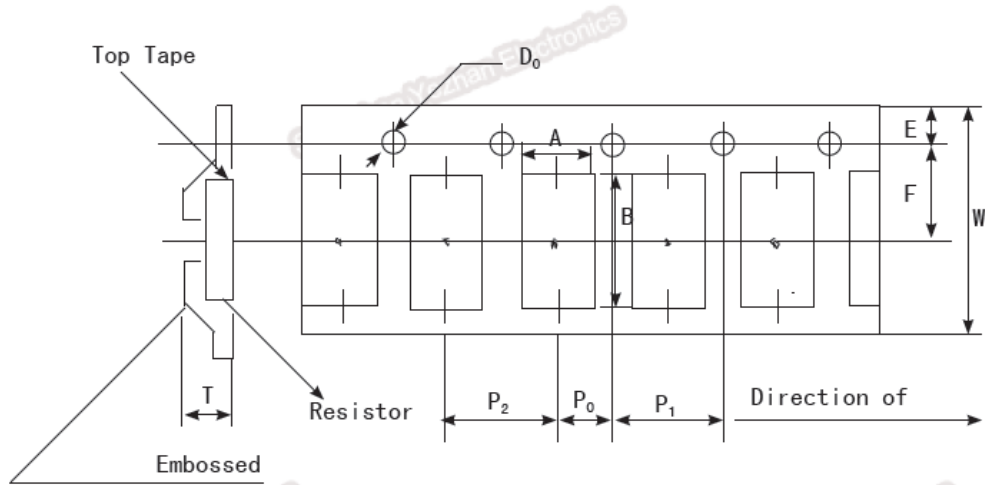
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**2 应用范围 Applications**

- 混合应用的电源电流传感器 Current sensor for power hybrid applications
- 变频器 Frequency converters
- 电源模块 Power modules
- 汽车市场的高电流应用 High current applications for the automotive market
- 体系认证 IATF16949

**3 包装 Packaging**

**Embossed plastic Tape Specifications**



Unit: mm

Size	A	B	W	E	F	P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	D <sub>0</sub>	T	Quantity (EA)
4312	4.3	12.5	24	1.55	7.5	6	12	12	1.50	3.8	1000
4320	7.0	12.5	24	1.55	11.2	6	12	12	1.50	3.8	1000

**4 工作特性 Performance Date**

TEST	CONDITIONS OF TESE	TEST LIMITS
Shot time overload	5x rated power for 5 s	±(1.0%+0.0005 Ω) ΔR
Low temperature storage	-65°C for 45 min	±(1.0%+0.0005 Ω) ΔR
High temperature exposure	1000 h at +170°C	±(1.0%+0.0005 Ω) ΔR
Bias humidity	+85°C, 85%RH, 10%bias, 1000h	±(1.0%+0.0005 Ω) ΔR
Mechanical shock	100 g's for 6 ms, 5 pulses	±(1.0%+0.0005 Ω) ΔR
Vibration	Frequency varied 10 Hz to 200 Hz in 1 min, 3 directions, 12h	±(1.0%+0.0005 Ω) ΔR
Load life	1000h at +70°C, 1.5h "ON", 0.5h "OFF"	±(1.0%+0.0005 Ω) ΔR
Resistance to solder heat	+260°C solder, 10s to 12s dwell, 25mm/s emergence	±(1.0%+0.0005 Ω) ΔR
Moisture resistance	MIL-STD-202, method 106, 0% power, 7a and 7b not required	±(1.0%+0.0005 Ω) ΔR