

# 承认书

## SPECIFICATION FOR PRODUCT

客户名称

Customer Name

客户料号

Customer P/N

产品名称

Product Name

分流贴片电阻

制造商料号

Manufacturer P/N

ASH-M-1206-0.5F

申请承认日期

Apply Date

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.

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

拟定 Draft	审核 Checked	批准 Approved	拟定 Draft	审核 Checked	批准 Approved
邹文鉴					
供货商印鉴 Vendor Stamp			客户承认印鉴 Customer Accepted and Stamp		

### 版本记录

#### Version record

版本 Edition	日期 Date	版本更新记录 Version update record	核准 Approval
A1.0	2022/10/10	First issue	

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### >> 特征 Features

精度±5%、±2%、±1%和±0.5%	Tolerance ±5%, ±2%, ±1% and ±0.5%
使用温度-65°C~170°C	Operating Temperature range -65°C~170°C
电子束焊接结构	Electron beam welding
耐冲击	Ideal for pulse application
电感小于 3 纳亨	Low Inductance < 3nH
符合ROHS 要求	RoHS Compliant
特殊规格可以订做	Customizable
符合AEC-Q200	AEC-Q200 qualified.

### >> 应用范围 Applications

变频驱动、伺服驱动系统	Frequency conversion drive, servo drive system
大电流电池管理系统	High current battery management system
汽车电子控制单元、汽车油泵驱动	Automobile electronic control unit, automobile oil pump drive
DC/DC, DC/AC电源模块	DC/DC, DC/AC power modules
自动化控制系统	Automatic control system
工业仪器设备	Industrial instrument and equipment

### >> 订购信息 Ordering information

ASH	-M	-1206	-0.5	F	
Yezhan Type	Element Material	Dimension	Resistance Value	Tolerance	Other
ASH	M: Manganin	1206	0.5mΩ	F: ±1%	

### 说明 Notice

#### ■ 适用范围 Scope

■ 本承认书适用于深圳市业展电子有限公司 制造之[分流贴片电阻器]。

This specification is available for Alloy Shunt Resistors manufactured by Shenzhen Yezhan Electronics Co., Ltd.

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

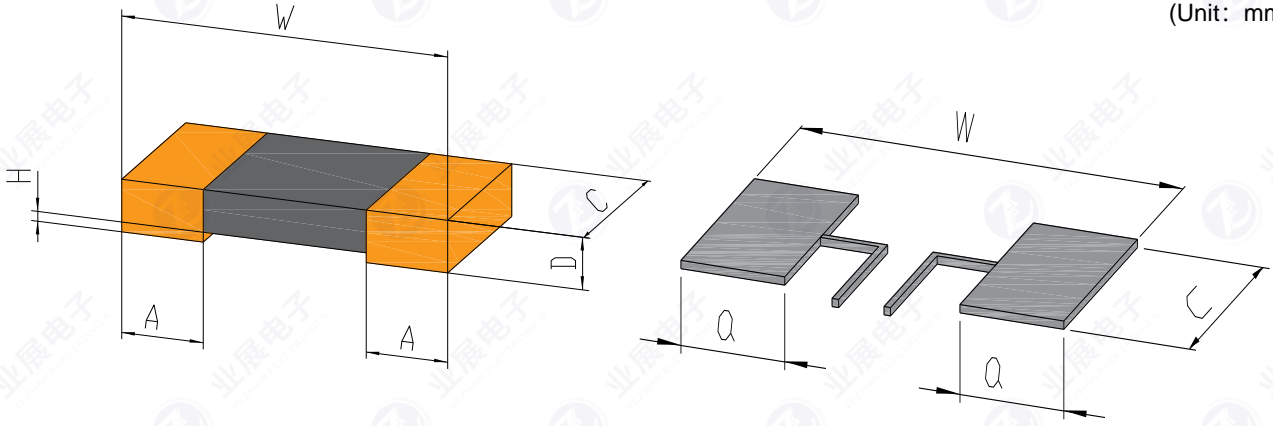
■ 温度20±2°C、湿度65±5%。但在温度 5~35°C、湿度45~85%之情况下，仍可给予判定。

Temperature 20±2°C, Humidity 65±5%. Being no doubt about the judgment, measurements can be made within the following Temperature 5~35°C, Humidity 45~85%.

### 产品尺寸和PCB板布局

#### Product dimensions and PCB-layout (Reflow-soldering)

(Unit: mm)



Type	Size	W	A	C	H
ASH-M-1206-0.5F	1206	3.2±0.2	0.7±0.2	1.6±0.3	0.5±0.2

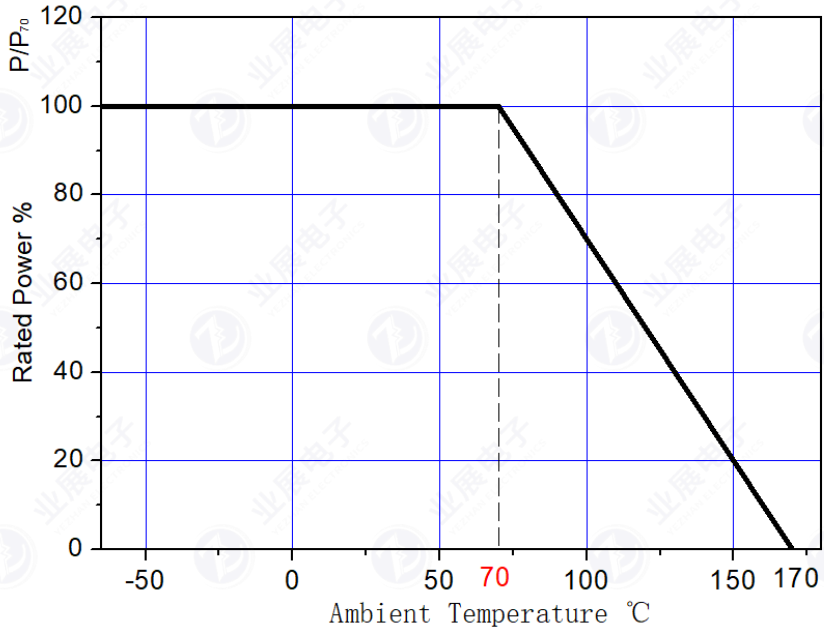
Solder pad type	w	c	a
ASH-M-1206-0.5F	3.5	2.0	1.1

Size	Element Material	Resistance (mΩ)	D (mm)	TCR (ppm/°C)	P70 °C (W)
1206	M	0.5±0.005	1.3±0.2	±200	1.5

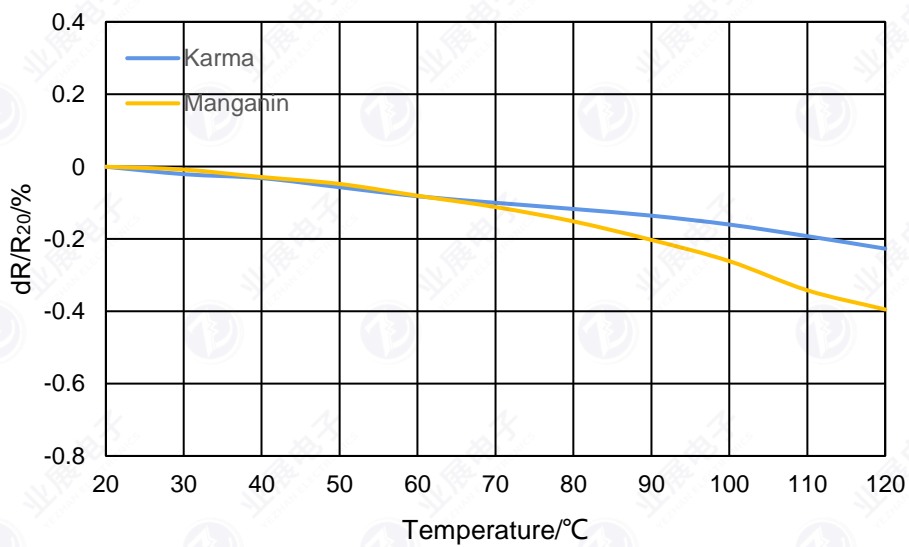
TCR (ppm/°C) : Test conditions at 20°C~120°C.

## 工作特性 Performance data

降功率曲线 Power Derating



TCR曲线 TCR Derating



### » 耐久性测试 Endurance test

Items	Additional Requirements	Reference	Limits
Temperature Cycling	1000 Cycles(-55°C to +125°C)	JESD22 Method JA-104	±0.5%
High Temperature Exposure	100hrs.@T=170°C.Unpowered.	MIL-STD-202 Method 108	±0.5%
Biased Humidity	1000hrs 85°C/85%RH. Note:Specified conditions:10% of operating power.	MIL-STD-202 Method 103	±0.5%
Operational Life	Condition D Steady State TA=125°C at rated power.	MIL-STD-202 Method 108	±0.5%
Solderability	245°C±5°C,5s±0.5s	J-STD-002C	95% Coverage Minimum
Vibration	5 g's for 20 min, 12 cycles each of 3 orientations. Note: Use 8"X5" PCB .031" thick 7 secure points on one long side and 2 secure points at corners of opposite sides. Parts mounted within 2" from any secure point. Test from 10-2000 Hz.	MIL-STD-202 Method 204	±0.5%
Resistance to Soldering Heat	260°C±5°C, 10s±1s	MIL-STD-202 Method 210	±0.5%
Short Time Overload	5×Rated power for 5 s	MIL-STD-202 Method 301	±0.5%
Mechanical Shock	1) Pulse waveform: Half-Sine pulse. 2) Accelerate peak: 100g. 3) Pulse duration: 6ms. 4) Orientation & Shock time: ±X, ±Y, ±Z; 3 times each orientation, total 18 times	MIL-STD-202H Method 213	±0.5%
ESD	1) Direct Contact (DC): ±6kV; 2) Air Discharge (AD): ±12kV, ±16kV, ±25kV;	AEC-Q200-002 REV-B,	±0.5%
Board Flex	1) PCB board size(H×W×T): 100mm ×40mm ×1.6mm. 2) Press tool: r = 340mm, Width = 20mm. 3) Deformation displacement: 2mm. 4) Duration: 60 (+5) s.	AEC-Q200-005 REV A,	±0.5%
Terminal Strength	1) Press tool: A pointed thruster with a radius of 0.5 mm. 2) Shear force: 17.7N. 3) Duration: 60 (+1) seconds.	AEC-Q200-006 REV A	±0.5%

# 分流贴片电阻

## Alloy Shunt Resistors



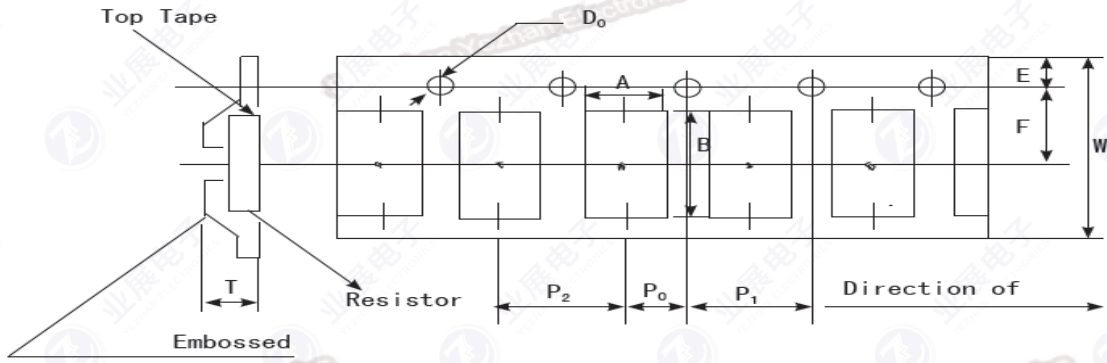
业展电子  
YEZHAN ELECTRONICS

Items	Additional Requirements	Reference	Limits
Flame Retardance	1) Test current: 100%, 115%, 130%, 150% (rated current). 2) Test duration: 1h. The following constitutes a failure: 1) A flame over 3.0 seconds duration; 2) An explosion; 3) A temperature above 350°C sustained for over 10 seconds.	AEC-Q200-001 REV B	>10s for 350°C
Resistance to Solvents	1) Solvent a: 1 part (by volume) of isopropyl alcohol reagent grade and 3 parts (by volume) of a mixture of 80% (by volume) of kerosene and 20% (by volume) ethylbenzene. 2) Solvent c: 9 parts (by volume) of D-limonene and 1 part of surfactant. 3) Solvent d: 42 parts (by volume) of water 1 part (by volume) of propylene glycol monomethyl ether 1 part (by volume) of monoethanolamine.	MIL-STD-202H Method 215	There was no missing, faded, smeared, blurred, or shifted (dislodged) with the marks. There was no crack, separation, crazing, swelling, softening, degradation on the samples.

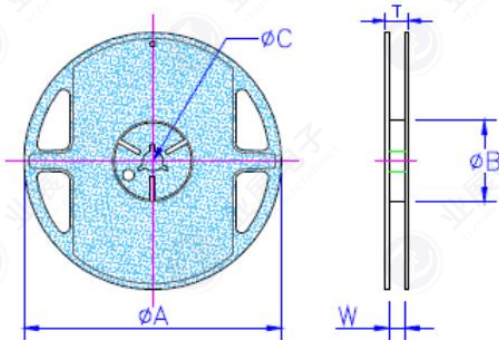
### 包装 Packaging

Embossed plastic Tape Specifications

(Unit: mm)



Size	A ±0.1	B ±0.1	W ±0.3	E ±0.1	F ±0.1	P <sub>0</sub> ±0.1	P <sub>1</sub> ±0.1	P <sub>2</sub> ±0.1	D <sub>0</sub> ±0.1	T	Quantity (pcs)
1206	1.8	3.35	8	1.75	3.5	2	4	4	1.50	1.45	2000



Size	1206
φA	178
φB	60
φC	13
W	12.5
T	21