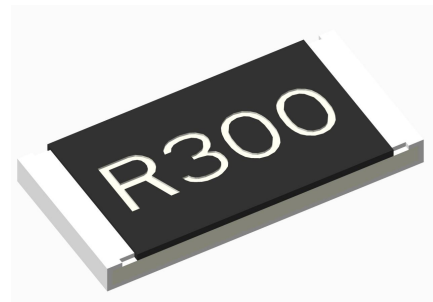


HoJLRH1206-Ceramic Thin Film High Power Resistors Series Specifications

■ Features

- ① Large Electrode (All series)
- ② Pb-free to Meet RoHS Requirements
- ③ Good Performance for Heat Dissipation
- ④ High Purity Alumina Substrate for High Power Dissipation
- ⑤ Low Resistance and High Accuracy Resistor for Current Detection



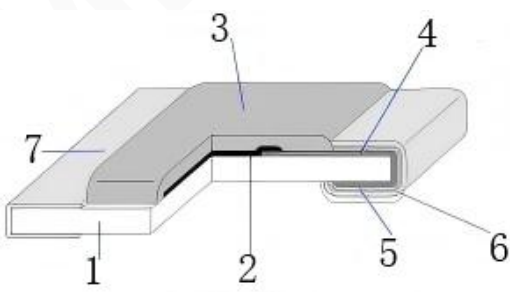
■ Application Areas

- ① Switching Power Supply
- ② Power Management Applications
- ③ Voltage Regulation Module (VRM)
- ④ DC-DC Converter, Battery Pack, Charger, Adaptor
- ⑤ Portable Instruments (PDA and Cell Phone)/ Computer

■ Electrical parameters

Product Model	power	Resistance Range	temperature coefficient TCR	Operating Temperature Range	Resistance Accuracy	Insulation impedance	operating voltage
JLRH1206	1/2W 1W	101mΩ ~ 910mΩ	±100 ppm/°C	-55°C~+155°C	±1% ±2% ±5%	Over 100MΩ	(P*R) ^{1/2}

■ product mix

	Item No.	Part name
	1	Ceramic Substrate
	2	Nichrome
	3	Over coat
	4	Conductor: (Lead-free)
	5	Cu Plating
	6	Ni Plating
	7	Sn Plating



■ Product Selection

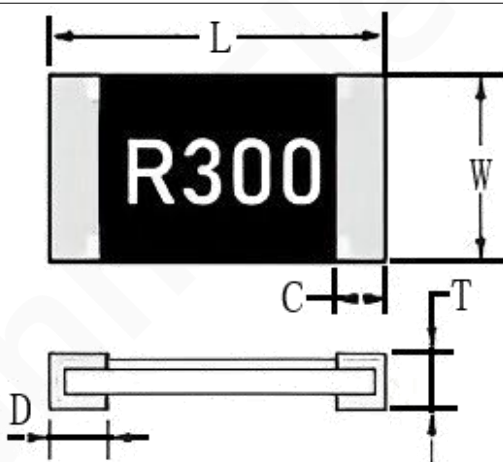
Selection Example: HoJLRH1206-1W-300mR-1%

H o J L R H 1 2 0 6 1 W 3 0 0 m R 1 %
 ↓ ↓ ↓ ↓ ↓ ↓

makers	product category	seal inside	rating	Resistance Range	accuracy
Millio Electronics	J L R H	1206	1/2W、1W	101mΩ~910mΩ	±1% ±2% ±5%

For specific parameters, please check the details on the following page

■ Product Size(unit : mm)



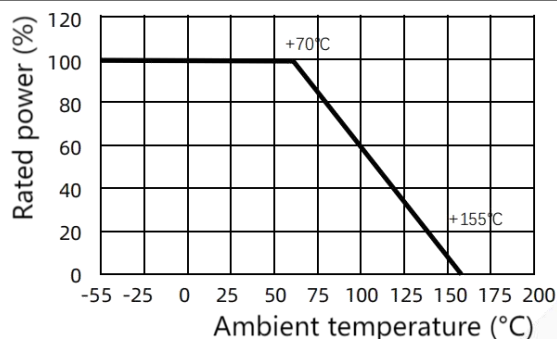
seal inside	L	W	C	D	T
1206	3.1±0.1	1.55±0.2	0.5±0.3	0.4±0.2	0.55±0.1

■ Recommended Pad Size

seal inside	A	B	C
1206	1.6-2.0	4.4-5.0	1.2-1.8

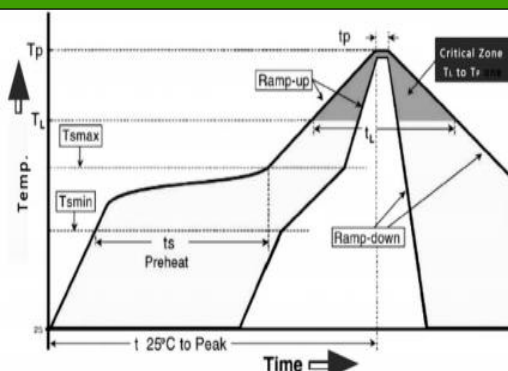
■ power curve

Operating Temperature Range -55 to +155°C Resistance Temperature up to 70°C Power Reduction Diagram



■ Recommended welding parameters

Reflow IR Reflow Soldering Introduction



Briefing Functions	lead free assembly
Average ramp-up rate (Ts max to Tp)	3°C / second max.
Preheat <ul style="list-style-type: none"> - Temperature Min (Ts min) - Temperature Max (Ts max) - Time (Ts min to Ts max) (ts) 	150°C 200°C 60 -120 seconds
Time maintained above : <ul style="list-style-type: none"> - Temperature (TL) - Time (TL) 	217°C 60-150 seconds
Peak Temperature (Tp)	260°C
Time within +0/-5 °C of actual Peak Temperature (tp)2	10 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8minutes max.

■ Reliability testing

sports event	reference standard	test condition	norm
Short Time Overload	IEC60115-1-4.13 JIS-C5201-1-4.13	5 X rated power for 5 sec	±(1% + 0.5mΩ)
Temperature Coefficient of Resistance	JIS C 5201-1 4.8	TCR (ppm/°C) = (R2-R1/R1*(T2-T1))X 106 R1:Room Temp. R value (Ω) R2: 125 °C Temp. R value (Ω) T1:Room Temp.(°C) T2: 125 °C	Refer to 2.
Biased Humidity	MIL-STD-202 Method 103 "	10% Rated power at 85 °C ,RH:85% ,1000Hrs, Measurement at 24hrs after test conclusion	± (5.0% + 0.5mΩ)
Endurance (Load Life)	IEC60115-1-4.25.1 JIS-C5201-1-4.25.1	1000 hours at rated power, 70 °C , 1.5hours " ON " , 0.5hour " OFF "	± (5.0% + 0.5mΩ)
Rapid Change of Temperature	IEC60115-1-4.19 JIS-C5201-1-4.19	-55°C (15 min.) / +150 °C(15 min.) 1000 cycles	± (1.0% + 0.5mΩ)
Solderability	IEC60115-1-4.17 JIS-C5201-1-4.17	245±5°C solder, 2±0.5 sec dwell. Solder : Sn96.5 / Ag3.0 / Cu0.5	At least 95% of surface area of electrode shall be covered with new solder.
Resistance to Solder Heat	IEC60115-1-4.18 JIS-C5201-1-4.18	270 ±5°C solder , 10 ±1 sec dwell .	± (1.0% + 0.5mΩ)
Robustness of Termination (Bending)	IEC60115-1-4.33 JIS-C5201-1-4.33	2mm deflection	± (1.0% + 0.5mΩ)
HighTemperature Exposure (Storage)	MIL-STD-202 Method 108	T=155°C,1000hrs,Measurement at 24hrs after test conclusion.	± (1.0% + 0.5mΩ)

■ character code

character code

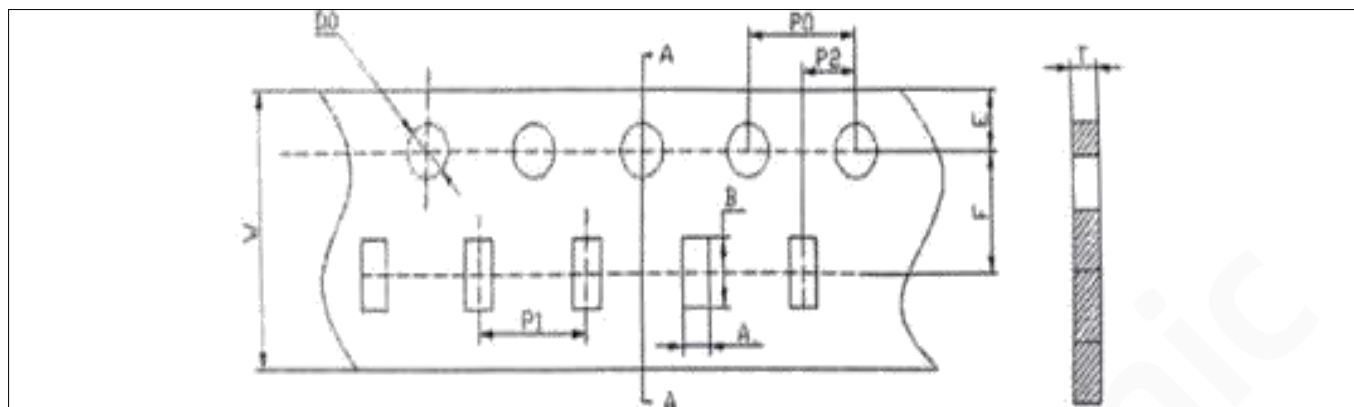
The resistance value is expressed by four digits, the first 'R' indicates the decimal point, and the other digits indicate the nominal resistance value. EX.: R300 = 300mΩ

■ Rated current calculation formula

Rated current calculation formula

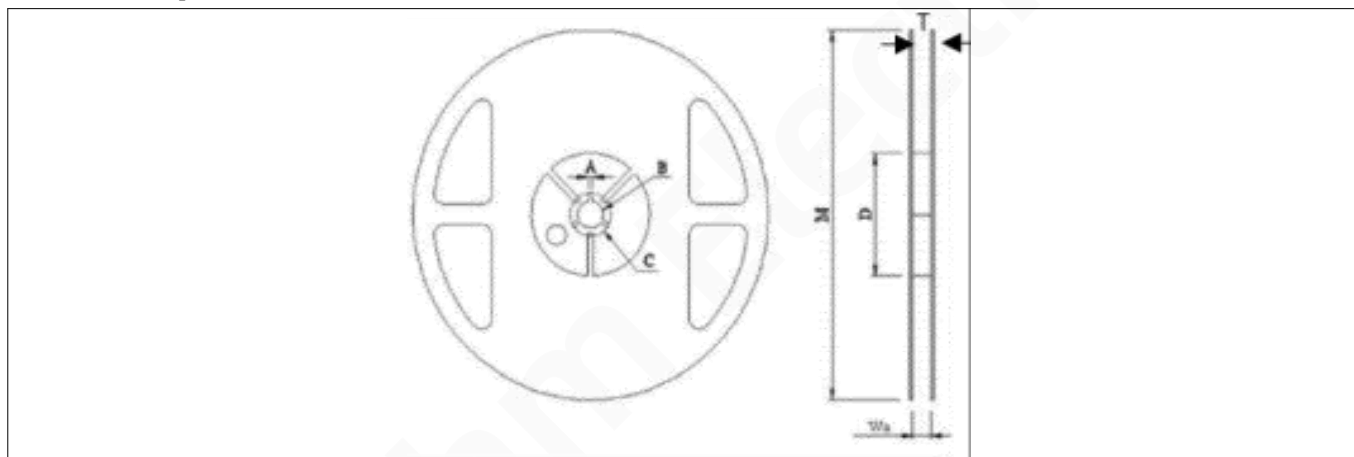
$I = \sqrt{P/R}$	I	P	R
	rated current(A)	rating(W)	resistance value(Ω)

■ Carrier tape size



A	B	W	F	E	P1	P2	P0	D0	T
2.0±0.2	3.6±0.2	8±0.2	3.5±0.05	1.75±0.1	4.0±0.1	2±0.05	4±0.05	Φ1.5±0.1	0.84±0.15

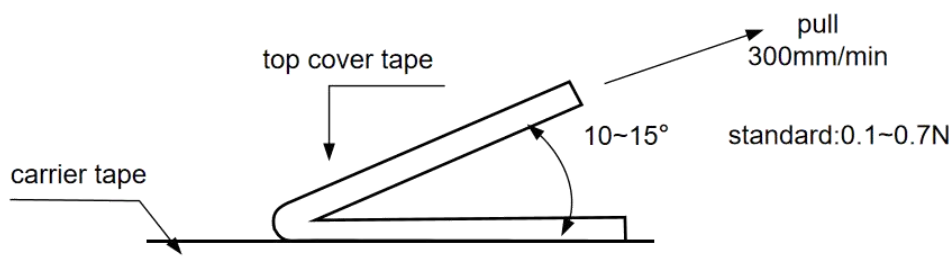
■ Reel Specifications



A	B	C	D	M	Wa	T	plaiting and rewinding
2.0±0.5	13±1	21±0.5	60±1	178±2	9.00±1.0	11.5±1.5	5000PCS

■ Peel strength of the upper band

Peeling speed: 300mm/min; peeling force between 0.1N and 0.7N



■ Usage Precautions

- ◆ During the use of the product, pay attention to the surface protection, to prevent the surface of the product bumps, scratches and other defects.
- ◆ Avoid mechanical stress when installing and using the product.
- ◆ The long-term use of the product power should be less than or equal to the rated power, to avoid long-term use of overload caused by the resistance drift.
- ◆ When using the product in high temperature or poor heat dissipation conditions, refer to the power reduction curve for derating applications.

■ Storage Instructions

- ◆ Product storage environment temperature is 5~35°C, humidity <65%RH, and humidity should be kept as low as possible.
- ◆ The products need to be stored in a clean and dry environment without harmful gases.
- ◆ Avoid removing the product from the braided package until it is used.
- ◆ Under the above storage conditions, the product can be kept for 1 year.
- ◆ For products older than 1 year, check the surface for oxidation and perform soldering tests.

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■ Revise your resume:

Version number	Date of revision	Modifications	Reason for modification	Change the person
Ho-A0	2025-02-25	first issue	YongkangHuang	Wenyi Leng