DataSheet No:E05015

Version:V0

Date:2026/06/24

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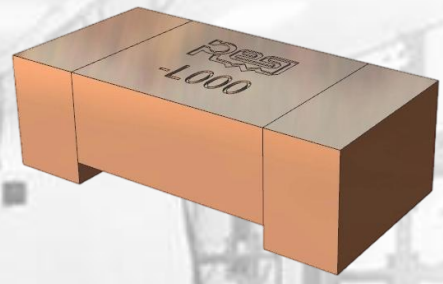
High-Precision T2 Pure Copper Material
Zero-Ohm Chip Resistor

PEWM2512

Resistance	0mΩ
Rated power	3W
Rated current	122A



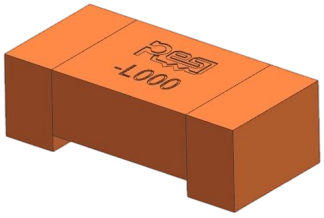
Applicable to

Electric Vehicles | Precision Power Supplies | AI Servers

Lithium-Ion Battery and Semiconductor Test Equipment

Energy Storage | Medical Equipment

Zero-Ohm Chip Resistor
High-Precision, High-Reliability T2 Pure Copper Material



RoHS AEC-Q200 3D

Introduction

This product series achieves full independent control over raw materials, core production equipment and key manufacturing processes, delivering stable quality and on-time delivery.We will focus on developing low-resistance and low-temperature-drift resistors within this series, with new variants to be released successively in the near future.If standard specifications cannot satisfy your demands, please get in touch with our sales staff for consultation.C&B Electronics is dedicated to providing customers with optimal precision resistor solutions, catering to applications including instruments & meters, medical devices, automotive electronics, precision power supplies, battery formation & capacity grading equipment, as well as test and measurement apparatus.

Electrical Parameters

Series	Resistance	Rated Power (+70°C)	Max. Operating Current	Operating Temperature	TCR ppm/°C(+20°CRef)	Internal* Resistance °C/W	Tolerance %
PEWM2512	＜0.2mΩ	3W	122A	-55°C~+170°C	NA	0.85	NA

* Thermal Resistance: Refer to the internal thermal resistance between the center of the resistive alloy and the copper electrode.
As the heat dissipation efficiency is influenced by operating environment, copper bus bars, PCB design, etc., this parameter is only for reference.

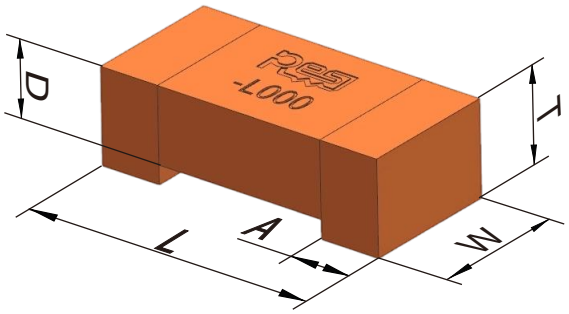
Applications

Suitable for complex wiring layouts of various circuit boards. It serves as a surface-mount jumper to realize cross-circuit conduction, supporting circuit option selection, single-point grounding and simple current sampling.

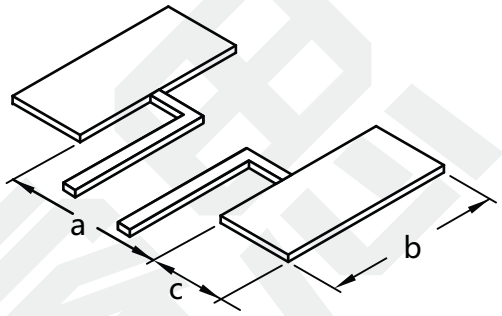
Dimensions

Unit:mm

Resistor



Land Pattern



Resistance	L	W	A	T	D	a	b	c	Packaging	Quantity Per Reel	Net Weight
＜0.2mΩ	6.3±0.3	3.0±0.3	1.4±0.2	0.8±0.2	0.45±0.2	3.9±0.2	3.4±0.25	1.8±0.25	Tape & Reel	4000pcs	0.10±0.05g

Part Number Information

Example:PEWM2512-L000-9 (PEWM 2512 0Ω（＜0.2mΩ） Standard)

P	E	W	M	2	5	1	2	-	L	0	0	0	-	9

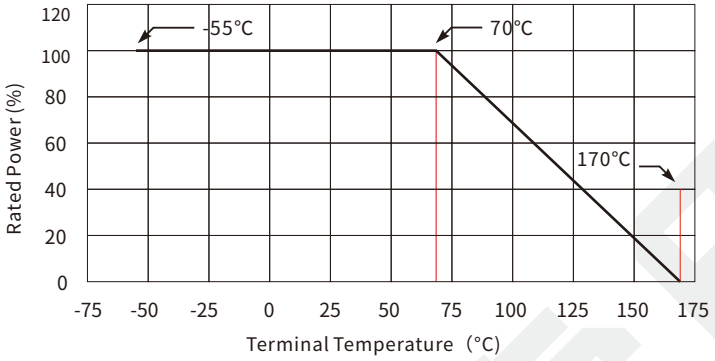
Series	Size	Tolerance	Resistance	TCR	Code
PEWM	2512	-=No Tolerance	L000=0Ω（＜0.2mΩ）	-=No TCR	9=Standard

For higher/lower resistance, tighter tolerance, higher power, lower TCR and larger size, please contact us.

Performance

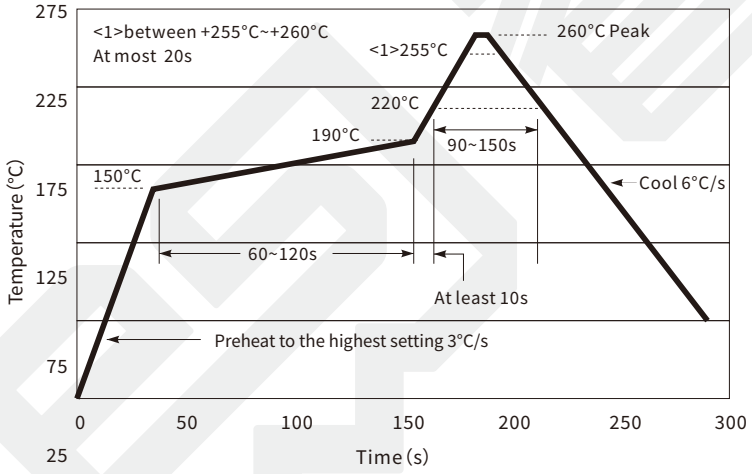
Test	Test Method	Standards	Max.
High Temperature Storage	1000h@+170°C, unpowered	AEC-Q200 TEST 3 MIL-STD-202 Method 108	R＜0.2mΩ
Thermal Shock	-55°C, 15min~ambient<20s~+155°C, 15min, 1000cycles	AEC-Q200 TEST 16 MIL-STD-202 Method 107	R＜0.2mΩ
Bias Humidity	+85°C, 85%RH, powered 10% rated power for 1000h	AEC-Q200 TEST 7 MIL-STD-202 Method 103	R＜0.2mΩ
Load Life	2000 h @ +70°C*, rated power, 90min on, 30min off *70°C is the terminal temperature	AEC-Q200 TEST 8 MIL-STD-202 Method 108	R＜0.2mΩ
Resistance to Solvent	Immerse in solvent for 3 min and wipe 10 times. Three cycles of three solvents. Dry at ambient temperature after cleaning	AEC-Q200 TEST 12 MIL-STD-202 Method 215	Clear marking. No visible damage
Mechanical Shock	Half sine wave, peak acceleration 100g's, pulse duration 6ms, 3 times in each of six directions, on three different axes	AEC-Q200 TEST 13 MIL-STD-202 Method 213	R＜0.2mΩ
Vibration	10-2KHz, 5g's, 20 min per cycle, 12 in each of the three directions of X.Y.Z loops	AEC-Q200 TEST 14 MIL-STD-202 Method 204	R＜0.2mΩ
Resistance to Solder Heat	+260°C constant temperature station for 10s	AEC-Q200 TEST 15 MIL-STD-202 Method 210	R＜0.2mΩ
Solderability	+245°C tin bath for 3s	AEC-Q200 TEST 18 IEC 60115-1 4.17	No visible damage. 95% minimum coverage
Board Flex	2mm. Duration: 60s.	AEC-Q200 TEST 21 AEC-Q200-005	R＜0.2mΩ
Short Time Overload	5x rated power, 5s	IEC 60115-1 4.13	R＜0.2mΩ
Low Temperature Storage	-55°C for 96h, unpowered	IEC 60068-2-1	R＜0.2mΩ
Moisture Resistance	Apply T=24 h/cycle, zero power, method 7a and 7b are not required	MIL-STD-202 Method 106	R＜0.2mΩ

Derating Curve

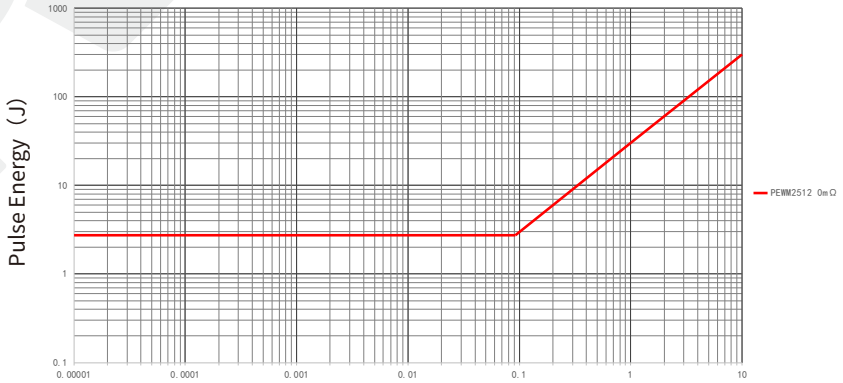


Reflow Soldering Profile

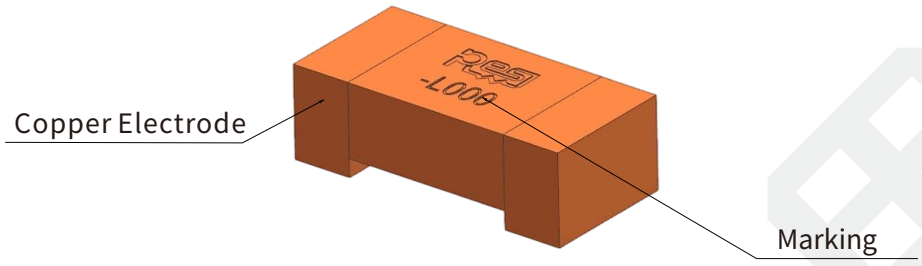
Resistor Surface Temperature:
Pre-Heat: +150°C~+190°C, 60~120sec.
Reflow: +220°C and above, 90~150sec.
Applicable Solder Composition:
Sn-Ag-Cu .



Max. Pulse Energy Curve

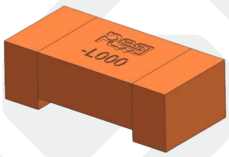


Construction



Marking

Marking: LOGO+Tolerance+Resistance

Size	Illustration	Demonstration
2512		RESI：Brand -：Tolerance L000：Resistance

Storage Instructions

(1) Resistors should be stored at a temperature of 5 to 35 °C, with a humidity of<60% RH. The humidity should be kept as low as possible.

(2) Resistors should be protected from direct sunlight.

(3) Resistors should be stored in a clean and dry environment free of harmful gases (HCl, Sulfuric acid, H_2S, etc.)

(4) Do not move the resistor from the packaging unless use it.

(5) Under the above storage conditions, the resistor can be stored for at least 1 year.

Usage Suggestions

(1) Please protect the surface of the resistor during use. Prevent defects such as scratches, bumps, and oil stains on the surface.

(2) Do not use sharp tweezers to move the resistor. Scratches on the surface can cause resistance drift and resistor failure.

(3) When installing and using resistors, avoid the impact of mechanical stress on the resistor.

(4) The long-term operating power of resistors should be less than the rated power to avoid resistance drift caused by long-term overload.

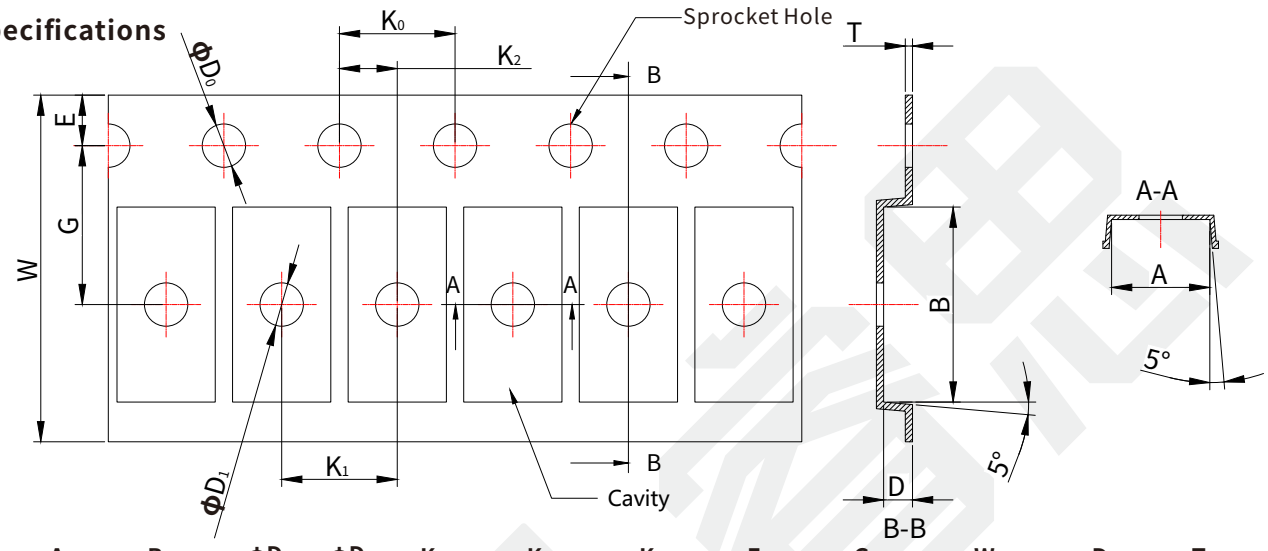
(5) Please refer to the derating curve when operating under high temperature conditions or poor heat dissipation environment.

(6) If the operating conditions exceed the pulse specified in the pulse curve, a systematic evaluation is required.

(7) If the resistor is not used after being moved from the packaging, it should be stored under vacuum to avoid risks such as poor solderability caused by oxidation of the resistor.

Packaging

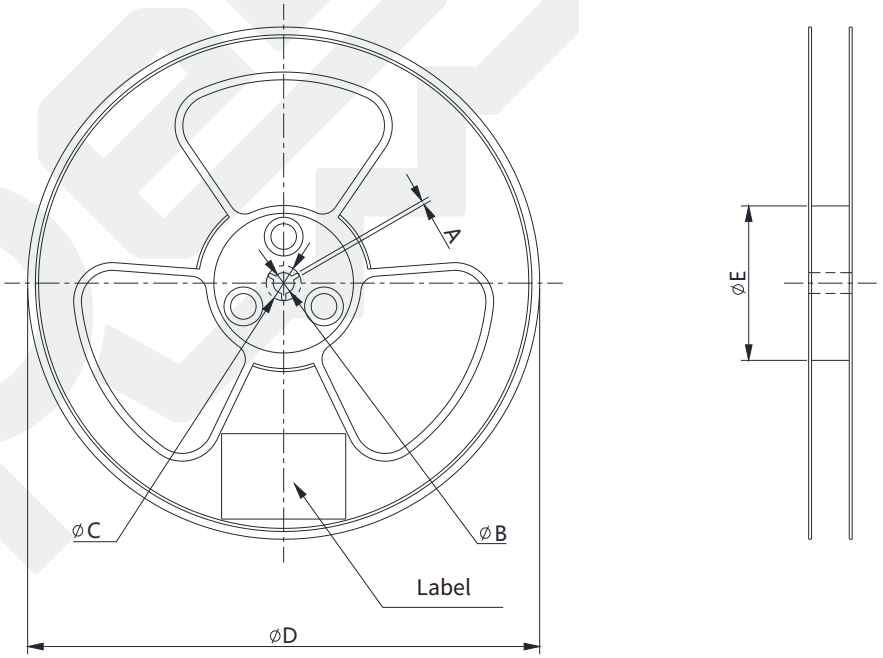
Tape Specifications



Resistance	A	B	ΦD0	ΦD1	K0	K1	K2	E	G	W	D	T
<0.2mΩ	3.30±0.2	6.60±0.2	$1.5^{+0.1}_{-0}$	$1.5^{+0.1}_{-0}$	4.00±0.1	4.00±0.1	2.00±0.1	1.75±0.1	5.50±0.05	12.00±0.2	1.0±0.1	0.25±0.05

Reel Specifications

Unit: mm



A	ΦB	ΦC	ΦD	ΦE
1.5 Min.	13.0 +0.5/-0.2	20.2 Min.	330±2	100±2

C&B Eureka Innovations CO., LTD. | www.cb-resi.com | cbresi@cbeureka.com

Packaging

(1) 4000 pcs. resistors are packed in a tape and wrapped in a reel;

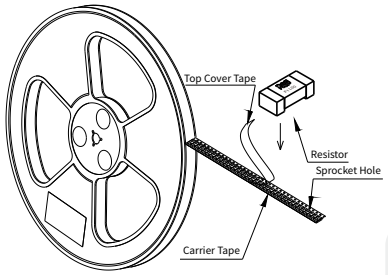
(2) Every 2 reels are packed by a cardboard sleeve case. The size of the cardboard is 335mm*340mm*37mm;

(3) Place every 3 cases into a box (24000pcs. / box).

(4) Fill with bubble wrap or pearl cotton to prevent the product from shaking inside the box.

(5) Box size: 350mm*370mm*165 mm.

Note: If ordered quantity or partial cartons do not align with the standard quantities, the final shipping configuration shall be subject to our shipment packaging.



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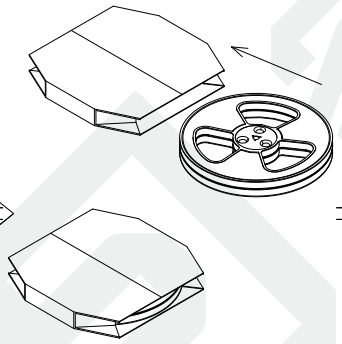
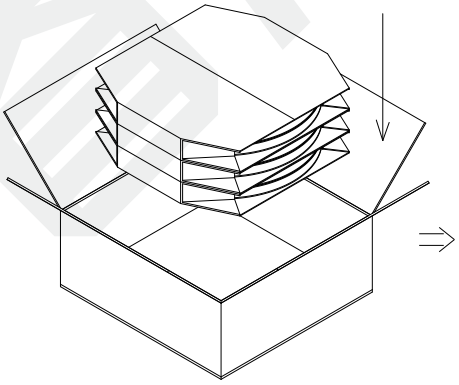
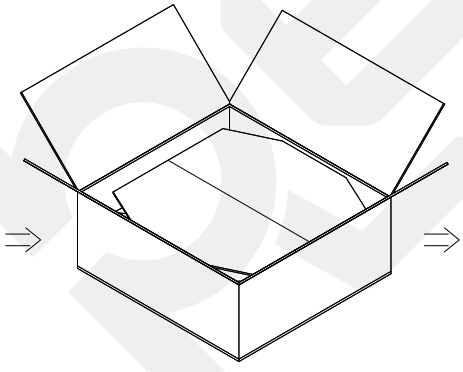


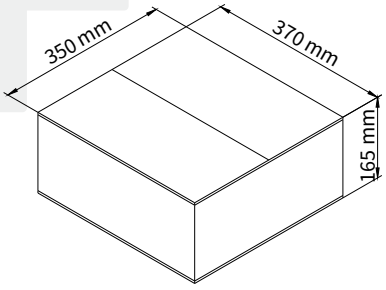
2. Every 2 reels are packed by a cardboard sleeve case. The size of the cardboard is 335mm*340mm*37mm.



3. Place every 3 cases into a box (24000pcs. / box).



4. Fill with bubble wrap or pearl cotton to prevent the product from shaking inside the box.



5. Box size: 350mm*370mm*165 mm.

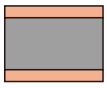
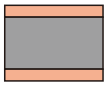
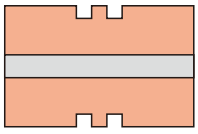
Popular Part Numbers

Part Number	Size	Tolerance	Resistance	TCR	Rated Power	Max. Operating Current
PEWM2512-L000-9	2512	NA	＜0.2mΩ	NA	3W	122A

Broad Portfolio of Current Sensing Resistors

Series	Product	Rated Power +70°C	Resistance Range	Tightest Tolerance	Best TCR
PCSR2512		1W~2W	5mΩ~100mΩ	±0.1%	±10ppm/°C
PCSR3637		2W~3W	1mΩ~200mΩ	±0.1%	±15ppm/°C
PCSK2512		1W	5mΩ~100mΩ	±0.5%	±25ppm/°C
PCSK3637		2W~5W	1mΩ~200mΩ	±0.5%	±25ppm/°C
MCSM2512		3W	0.5mΩ~2mΩ	±0.5%	±100ppm/°C
MCSF2512		2W~3W	3mΩ~100mΩ	±0.5%	±50ppm/°C
PEWM1206		6W	0mΩ~1mΩ	±1.0%	±100ppm/°C
PEWM1216		7W~10W	0.3mΩ~1.0mΩ	±1.0%	±100ppm/°C
PEWK1216		3W~5W	2.0mΩ~3.0mΩ	±1.0%	±50ppm/°C
PEWM2512		3W-6W	0mΩ~1mΩ	±0.5%	±100ppm/°C
SEWK2512		4W~5W	1mΩ~3mΩ	±0.5%	±10ppm/°C
EBWM2512		6W	0mΩ~1mΩ	±0.5%	±200ppm/°C
EBWK2512		2.5W~5W	2mΩ~5mΩ	±0.5%	±100ppm/°C
SEWF2512		2.5W~4W	3mΩ~5mΩ	±0.5%	±25ppm/°C
PEWF2512		2.5W~5W	1.5mΩ~5mΩ	±0.5%	±50ppm/°C
PEWM3920		8W~12W	0.2mΩ~1mΩ	±0.5%	±100ppm/°C
PEWK3920		3W~8W	1mΩ~5mΩ	±0.5%	±50ppm/°C
SEWF3920		3W~8W	1mΩ~5mΩ	±0.5%	±25ppm/°C
SEWK3920		5W~8W	1mΩ~3mΩ	±0.5%	±10ppm/°C
SEWM3920		8W~12W	0.2mΩ~1mΩ	±0.5%	±50ppm/°C

Broad Portfolio of Current Sensing Resistors

Series	Product	Rated Power +70°C	Resistance Range	Tightest Tolerance	Best TCR
SEWK3951		15W	0.25mΩ~0.4mΩ	±0.5%	±25ppm/°C
SEWF3951		10W~15W	0.3mΩ~0.8mΩ	±0.5%	±25ppm/°C
SEWF5930		6W~10W	1mΩ~3mΩ	±0.5%	±25ppm/°C
PEWM5930		6W~15W	0.1mΩ~1.5mΩ	±0.5%	±100ppm/°C
PEWK5930		10W	1mΩ	±0.5%	±50ppm/°C
SEWM5930		9W~15W	0.2mΩ~1mΩ	±0.5%	±50ppm/°C
PEWF4026		3W~7W	1mΩ~5mΩ	±0.5%	±50ppm/°C
PEWF2726		3W~7W	1mΩ~5mΩ	±0.5%	±50ppm/°C
PEWM4026		7W~12W	0.2mΩ~1mΩ	±0.5%	±75ppm/°C
PEWM2726		7W~12W	0.2mΩ~1mΩ	±0.5%	±75ppm/°C
SEWK6398		4W	0.1mΩ	±1.0%	±10ppm/°C

Revision

Version	Revised Content	Date	Approver
V0	Initial Issue	2026.06.24	LWW

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