No.：HoS20260612-63
Version：A0

Product Acknowledgement Letter

CustomerName：

ProductName: Encapsulated Alloy Resistor

ProductSpecification: LR2512DS-3W-10mR-1%

ProductCode:

Dateofdocument: 2026-06-12

Approved Company Signature			
Edited by	Reviewed by	Approved by	CompanySeal
ZhenhuanLiao	YongkangHuang	WenyiLeng	

Shenzhen Milliohm Electronic Ltd Engineering stamp

Customer confirmation seal			
Acknowledged by	Reviewed by	Approved by	Company Seal

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Purpose

Through the description of sample characteristics and inspection standards in this acknowledg ement, we can better communicate with customers, reach an agreement, and avoid product qu ality disputes caused by insufficient communication.

Scopeofapplication

This Certificate of Acceptance applies to the samples provided by ShenzhenMilliohmElectronic Co.,Ltd and covers product characteristics and inspection standards.

Orderassociation

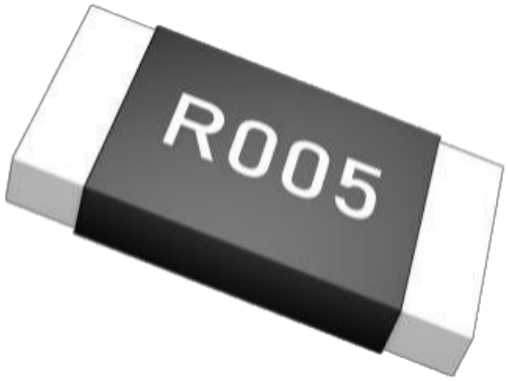
The Customer hereby acknowledges that the specifications and models of materials under all contractual orders with ShenzhenMilliohmElectronicCo.,Ltd are consistent with the delivered products. If no objection or confirmation is received, this acknowledgement shall be deemed effective two weeks after the date of receipt by the Customer.

Product Features

① The first manufacturer of alloy resistors using high thermal conductivity epoxy resin in China.
② Alloy chip, encapsulated for superior solderability, reliability, and overload ability.
③ Consistent performance, high precision, high reliability, high stability.
④ Low resistance temperature coefficient, ultra-low parasitic inductance, can be used for high-frequency AC current detection.
⑤ Compliant with ROHS and halogen-free requirements.

Product ApplicationScope

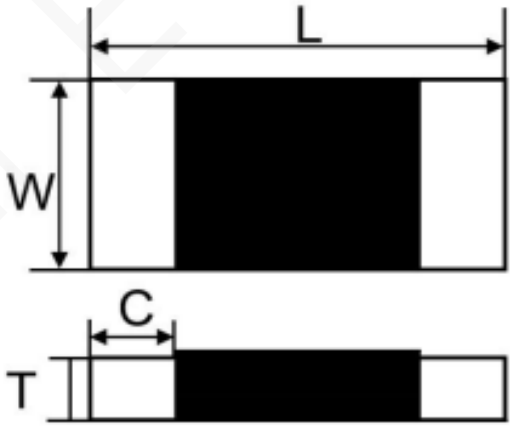
① Power Module
② Automatic Control System
③ Variable frequency drive
④ Servo drive system
⑤ Industrial equipment



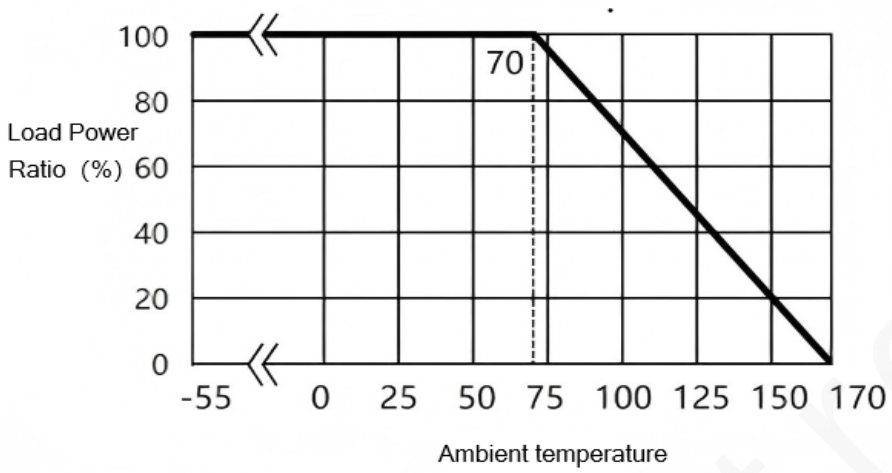
Selection Example：LR2512DS-3W-10mR-1%	Encapsulated Alloy Resistor

LR	2512DS	3W	10mR	1%
↓	↓	↓	↓	↓
Product Type	Dimensions	Rated Power	Resistance value	Resistance Tolerance
LR	2512DS	3W	10mR	±1%

Product dimensions

Project	Parameter		
Dimensions (mm)	L (6.4±0.2)	W (3.2±0.2)	C (0.8±0.2)
	T (0.8±0.2)		
产品编码： Shenzhen Milliohm Electronic Ltd Controlled documents			
Rated Power	3W		
Rated Current	17.32A		
Resistance Tolerance	±1%		
Resistance Temperature Coefficient	±25ppm/℃		
Resistance value	10mR		
Operating temperature	-55℃~+170℃		
Customer confirmation	Customer Signature:		Signature date:
Remarks			

Power Derating Curve



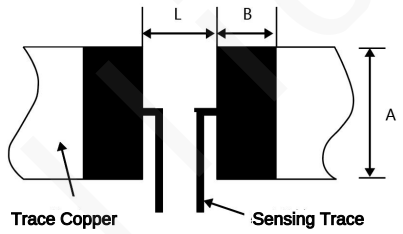
Op. Temp. Range: -55~+170°C; Power Deration Schematic (Resistor Temp@ 70°C)

Rated Current Calculation Formula

$$I=\sqrt{P/R}$$

I	P	R
Rated Current (A)	Rated Power (W)	Resistance (Ω)

Recommended Pad Dimensions（mm）



Resistancevalue	A	L	B
10mR	**4.0**	4.1	2.1

■ Reliability Test

Item	Standard	Testing Conditions	Testing Limit
Temperature coefficient	IEC60115-1-4.8 JIS-C5201-4.8	Test temperature +25～125℃ Reference temperature +25℃	Within specified value
Load Life	IEC60115-1-4.25.1 JIS-C5201-4.25.1	At rated power: 1000 hours, 70°C, " on" 1.5 hours, " off" 0.5 hours	No visible damage △R±1%
Short-term overload	IEC60115-1-4.13 JIS-C5201-4.13	5 times rated power, 5 seconds	No visible damage △R±1%
High temperature and High humidity	IEC60115-1-4.24.2.1a) JIS-C5201-4.24.2.1a)	85°C, 85% relative humidity, 1000 hours, load 10% rated power	No visible damage △R±1%
Temperature Cycle	IEC60115-1-4.19 JIS-C5201-4.19	-55@30min～+155@30min, 1000 cycles	No visible damage △R±0.5%
Withstand welding heat	IEC60115-1-4.18 JIS-C5201-4.18	260±5, 10±1sec	No visible damage △R±0.5%
Solderability	IEC60115-1-4.17 JIS-C5201-4.17	45±5, 2±0.5s	At least 95% of the electrode surface should be covered with new solder
High temperature storage	IEC60115-1-4.23.2 JIS-C5201-4.23.2	1000 hours @170, no load	No visible damage △R±1%
Low temperature storage	EC60115-1-4.23.4 JIS-C5201-4.23.4	1000 hours @-55, no load	No visible damage △R±1%
Substrate bending	IEC60115-1-4.33 JIS-C5201-4.33	2mm, holding time 60+5 seconds	Within specified value
Withstand voltage	IEC60115-1 4.7 JIS C 5201-1 4.7	Apply an AC voltage with an effective value of the maximum load voltage between the electrode and the substrate at a rate of about 100V/S for 60+5 seconds	No breakdown or arcing
Solvent resistance	IEC60115-1 4.29 JIS C 5201-1 4.29	Isopropyl alcohol (IPA), solvent temperature: 23±5, duration 5±0.5min	Clear markings No visible damage

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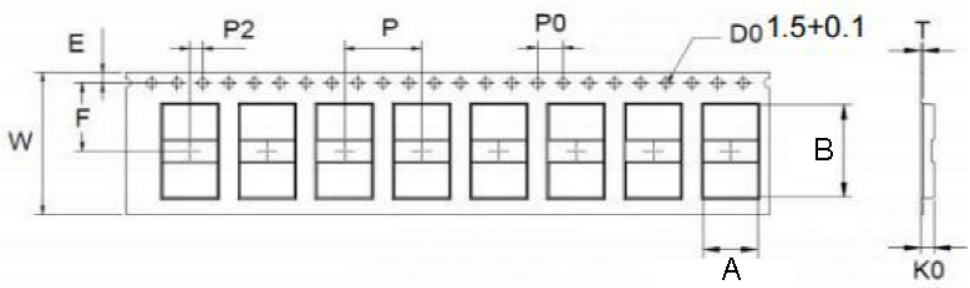
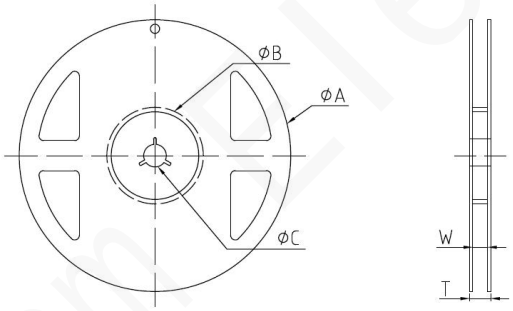
TapeSpecifications(mm)



A	B	W	F	E	P	P2	P0	D0	T
3.6±0.2	6.9±0.2	12±0.2	5.5±0.05	1.75±0.1	4±0.1	2±0.1	4±0.1	Φ1.5+0.1	0.85±0.15

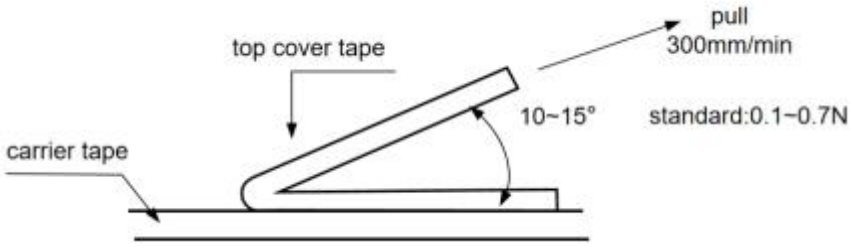
ReelSpecifications（mm）



A	B	C	W	T	Quantity
180±3	60±1	13±1	13±1	15.4±2	4000PCS/盘

PeelStrength of Top Cover Tape

PeelSpeed: 300 mm/min; Peel Force: 0.1N to 0.7N



Product PackagingandInstructionsforUse

1. Product Packaging

Tape and reel packaging: 4000 PCS/reel

2. Product Usage Instructions

① During product use, pay attention to surface protection to prevent defects such as bumps and scratches on the product surface.

② When installing and using the product, avoid subjecting the product to mechanical stress.

③ When installing and using the product, avoid subjecting the product to mechanical stress.

④ The long-term operating power of the product shall be less than or equal to the rated power to avoid resistance drift caused by long-term overload.

⑤ When using the product under high temperature or poor heat dissipation conditions, derate the application with reference to the power derating curve.

3. Product Storage Instructions

① The product storage environment temperature is 5~35°C, humidity < 65%RH, and the humidity should be kept as low as possible.

② The product must be stored in a clean, dry environment free of harmful gases.

③ Before use, avoid removing the product from its packaging.

④ Under the above storage conditions, the product can be stored for 1 year.

⑤ For products stored for more than 1 year, check the surface for oxidation and perform a soldering test.

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