



**Lead-Free Current Sensing Resistors  
RLM Series  
( Halogen-Free )**

Document No	TRLM-256Z001A
Issued date	2019/01/22
page	1/6

**1. Scope :**

This specification applied to the products of Lead-Free current sensing resistor of metal foil for Lead-Free RLM series manufactured by TA-I TECHNOLOGY CO.,LTD.

**2. Type Designation :**

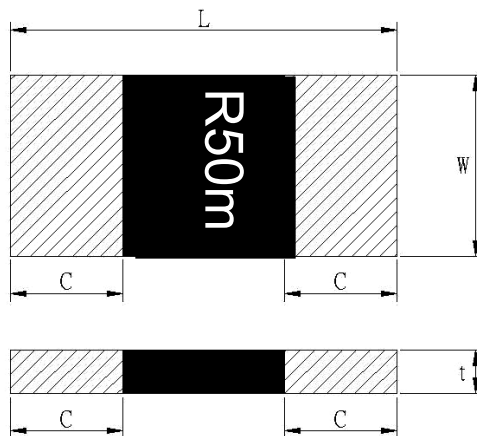
<u>RLM</u> Item	<u>25</u> Series No.	<u>F</u> Resistance tolerance	<u>E</u> Packaging	<u>E</u> Power Rating	<u>M</u> Metal	<u>R50M</u> Resistance
25:2512(6432)		F:±1% G:±2% J:±5%	E: Embossed Tape	C=1W E=2W G=3W	M=MnCu	e.g : R50m=0.5mΩ

**3. Construction and Dimension :**

**3.1 Construction:**



**3.2 Dimension:**



UNIT : mm

Style	L	W	C	t	Material
RLM25	6.4±0.2	3.2±0.2	2.6±0.2	0.6 ±0.20	Metal: Copper-Manganese Alloy Over Coating : molding Compound UL-94V-0 grade



Lead-Free Current Sensing Resistors  
RLM Series  
( Halogen-Free )

Document No	TRLM-256Z001A
Issued date	2019/01/22
page	2/6

#### 4. Features:

Type	RLM25
Power Rating	1W 、 2 W 、 3W
Resistance Value	0.5mΩ~0.75mΩ
Operation Temperature Range	-55℃~+170℃
Temperature Coefficient of Resistance	±75ppm/℃
Tolerance	±1% 、 ±2% 、 ±5%
Insulation Resistance	Over 100MΩ
Maximum Working Voltage(V)	$(P \cdot R)^{1/2}$

#### 5. Reliability Tests :

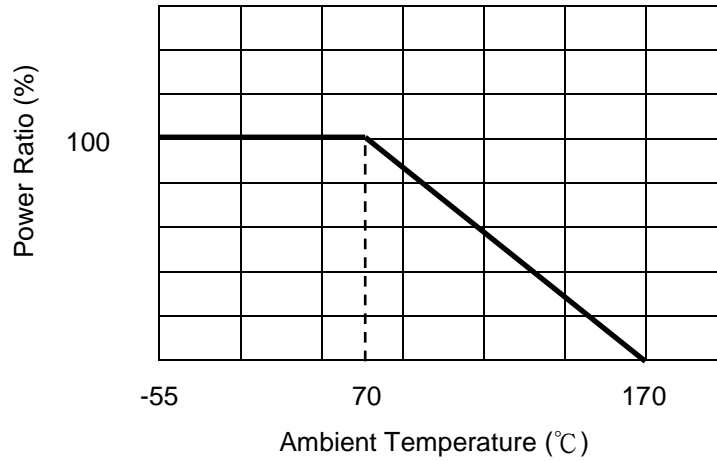
Test Items	Reference standard	Condition of Test	Test Limits
Temperature Coefficient of Resistance	IEC60115-1 4.8 JIS C 5201-1 4.8	+25℃ ~ +125℃	Refer 4.0
Load Life	IEC60115-1 4.25.1 JIS C 5201-1 4.25.1	1000hours at rated power, 70℃, 1.5hours "ON", 0.5hour "OFF"	< ±1%
Short Time Overload	IEC60115-1-4.13 JIS-C5201-4.13	5 X rated power for 5s	< ±0.5%
Moisture no Load	IEC60115-1 4.13 JIS C 5201-1 4.13	85℃, 85%RH, 1000hrs	< ±0.5%
Temperature cycle	IEC60115-1 4.24.2.1a) JIS C 5201-1 4.24.2.1a)	-55℃ & +155℃, 300cycle, 15min per extreme condition	< ±0.5%
Resistance to Soldering Heat	IEC60115-1 4.19 JIS C 5201-1 4.19	260±5℃ for20±1 sec	< ±0.5%
Solderability	IEC60115-1 4.18 JIS C 5201-1 4.18	245±5℃, 2±0.5sec	At least 95% of surface area of electrode shall be covered with new solder
High Temperature Exposure	IEC60115-1 4.17 JIS C 5201-1 4.17	170℃, 1000hrs	< ±1%
Low Temperature Storage	IEC60115-1 4.23.2 JIS C 5201-1 4.23.2	-55℃, 1000hrs	<±0.5%
Substrate Bending	EC60115-1 4.23.4 JIS C 5201-1 4.23.4	Bending width 2mm	< ±0.5%
Insulation Resistance	IEC60115-1 4.33 JIS C 5201-1 4.33	100V DC for 1 minute	>100 MΩ



**Lead-Free Current Sensing Resistors  
RLM Series  
( Halogen-Free )**

Document No	TRLM-256Z001A
Issued date	2019/01/22
page	3/6

### 5.1 Derating Curve



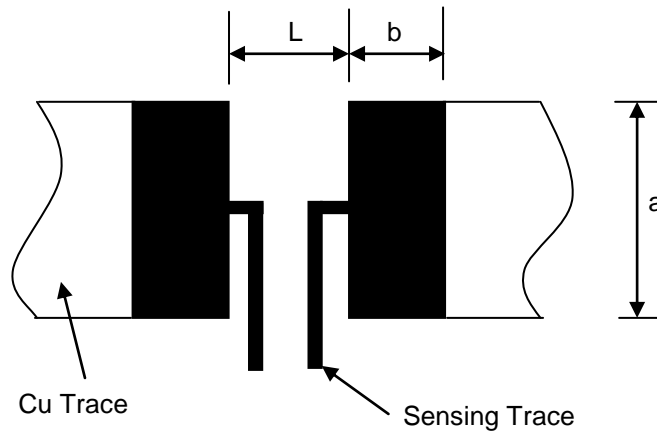
### 5.2 Rated Current

The rated current is calculated by the following formula:

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

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

### 6. Recommended Solder Pad Dimension



Resistance Range (Ω)	a	b	L
0.0005~0.00075	4.0	3.1	1.3

Unit: mm



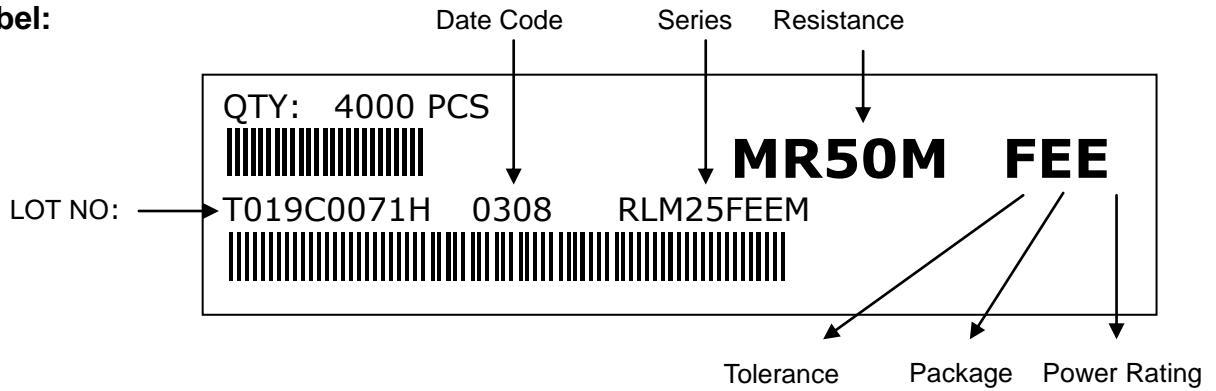
**Lead-Free Current Sensing Resistors  
RLM Series  
( Halogen-Free )**

Document No	TRLM-256Z001A
Issued date	2019/01/22
page	4/6

**7. Number of Package:**

4000 Pieces / package

**8. Label:**



**9. Taping**



Packing	Type	A	B	W	F	E	P <sub>1</sub>	P <sub>2</sub>	P <sub>0</sub>	D <sub>0</sub>	T
Emboss	RLM25	3.6 <sup>+0.2</sup> <sub>-0.18</sub>	6.9±0.2	12.±0.2	5.5±0.05	1.75±0.1	4.0±0.1	2.0±0.05	4.0±0.05	φ 1.5 (+0.1/-0)	0.85±0.15

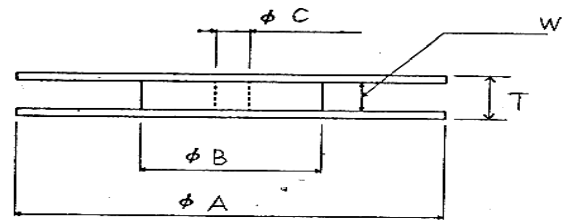
Unit: mm



**Lead-Free Current Sensing Resistors  
RLM Series  
( Halogen-Free )**

Document No	TRLM-256Z001A
Issued date	2019/01/22
page	5/6

**10. Reel Specification**

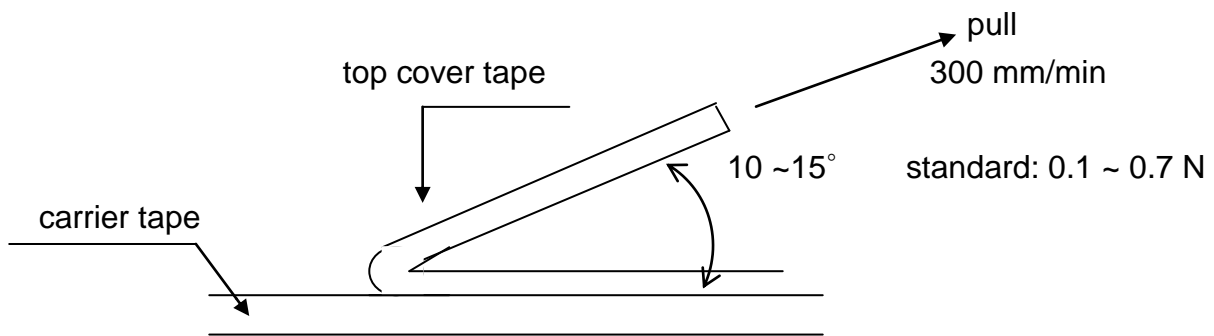


Series	$\phi A$ <sub>+0</sub> <sub>-3</sub>	$\phi B$	$\phi C$	W	T
RLM 25	180	60 ±1.0	13.0±1.0	13.0±1.0	15.4±2.0

Unit: mm

**11. Peeling Strength of Top Cover Tape**

Test Condition: 0.1 to 0.7 N at a peel-off speed of 300 mm / min.



**12. Storage Conditions:**

Temperature: 5°C ~35°C, Humidity: 40%~75%

**13. Shelf Life:**

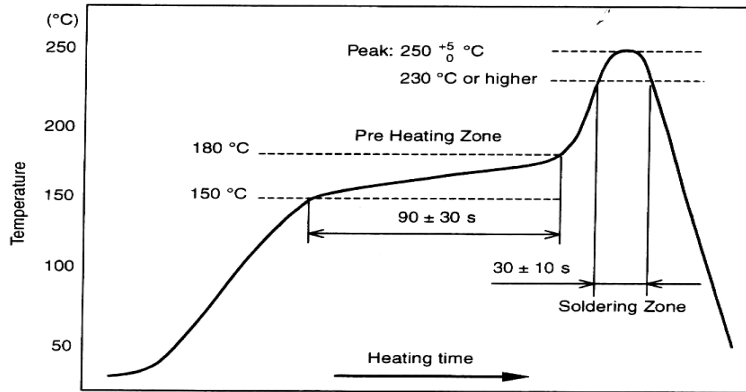
2 years from manufacturing date.



**Lead-Free Current Sensing Resistors  
RLM Series  
( Halogen-Free )**

Document No	TRLM-256Z001A
Issued date	2019/01/22
page	6/6

**14. Recommend IR – Reflow profile : (solder : Sn96.5 / Ag3 / Cu0.5)**



**Peak :  $250^{+5}_{-0}$  °C , 5 sec**

**Pre – heat Zone : 150 to 180 °C , 90±30 sec**

**Soldering Zone : 230°C or higher , 30±10 sec**

**Iron Solder: 350±10°C , 3+1/-0 sec**

**15. ECN**

Engineering Change Notice: The customer will be informed with ECN if there is significant modification on the characteristics and materials described in Approval Sheet.

**16. Manufacturing Country & City :**

TA-I TECHNOLOGY CO., LTD. ( Taiwan– Tao Yuan )

Tel: (+886) 3-3246169 Fax : (+886) 3-3246167

**Associated companies :**

(1)TA-I TECHNOLOGY ( SU ZHOU ) CO., LTD. ( China – Su Zhou)

Tel :(+86) 512-63457879 Fax : (+86) 512-63457869

(2) TA-I TECHNOLOGY ELECTRONIC (DONGGUAN) CO., LTD. ( China –Dongguan )

Tel : (+86) 769-8339-4790~3 Fax : (+86) 769-8339-4794

(3) FORTUNE TASK RESISTOR FACTORY ( China – Dongguan )

Tel : (+86) 769-8339-4790~3 Fax : (+86) 769-8339-4794

(4) TAI OHM ELECTRONICS ( M ) SDN. BHD. ( Malaysia – Penang )

Tel :(+60) 4- 3900480 Fax : (+60) 4-3901481

(5) P.T.TAI ELECTRONIC Indonesia ( Indonesia – Jakarta )

Tel :(+62) 21-44820254 Fax : (+62) 21-44820256

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Current Sense Resistors - SMD category](#):*

*Click to view products by [TA-I Tech manufacturer](#):*

Other Similar products are found below :

[CRL0603-FW-R700ELF](#) [PFS35-200RF1](#) [CD2015FC-0.10-1%](#) [PR2512FKF7W0R004L](#) [RC1005F124CS](#) [CSNL2512FT5L00](#)

[RL73K3AR56JTDF](#) [RL7520WT-R001-F](#) [RL7520WT-R020-F](#) [LRC-LR2512LF-01-R820J](#) [65709-330](#) [SP1R12J](#) [RL7520WT-R039-G](#)

[RL7520WT-R002-F](#) [RL7520WT-R005-F](#) [KRL1632E-C-R200-F-T5](#) [KRL1632E-C-R200-F-T1](#) [Y14880R02000B9R](#) [RLP73M2AR075FTDF](#)

[SR731ERTTP5R10F](#) [SR731ERTTP100J](#) [SR731ERTTP6R80F](#) [SR731ERTTP3R9J](#) [SR731ERTTP8R2J](#) [SR731ERTTP2R0J](#)

[SR731ERTTP4R7J](#) [SR731ERTTP9R1J](#) [SR731ERTTP1R0J](#) [SR731ERTTP2R2J](#) [SR731ERTTP5R1J](#) [SR731ERTTP6R8J](#) [SR731ERTTP9R10F](#)

[FCSL64R007JER](#) [73L4R10G](#) [73L4R75G](#) [73L4R33G](#) [73M1R051F](#) [73WL4R020J](#) [73L2R68J](#) [73L2R22J](#) [73L2R33J](#) [CC1512FC-0.015-5%](#)

[ULRG2-2512-R0075-F-LF-SLT](#) [KDV08DR220ET](#) [KDV12DR240ET](#) [SLN3TTED80L6F](#) [JW104X15X4](#) [JW105X19X5](#) [HVR06FTEV2403](#)

[JW104X5X4](#)