



Lead-Free Current Sensing Resistors
RLM Series
 (Halogen-Free)
 AEC-Q 200-Ver D qualified

Document No	TRLM-250S149D
Issued date	2016/06/15
Page	1/6

1. Scope :

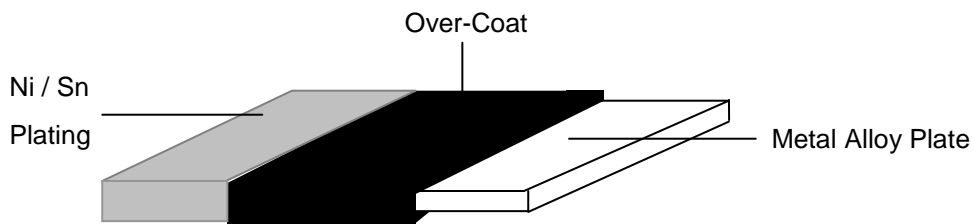
This specification applied to the products of Lead-Free current sensing resistor of metal foil for Lead-Free RLM series manufactured by TA-I TECHNOLOGY CO.,LTD.

2. Type Designation :

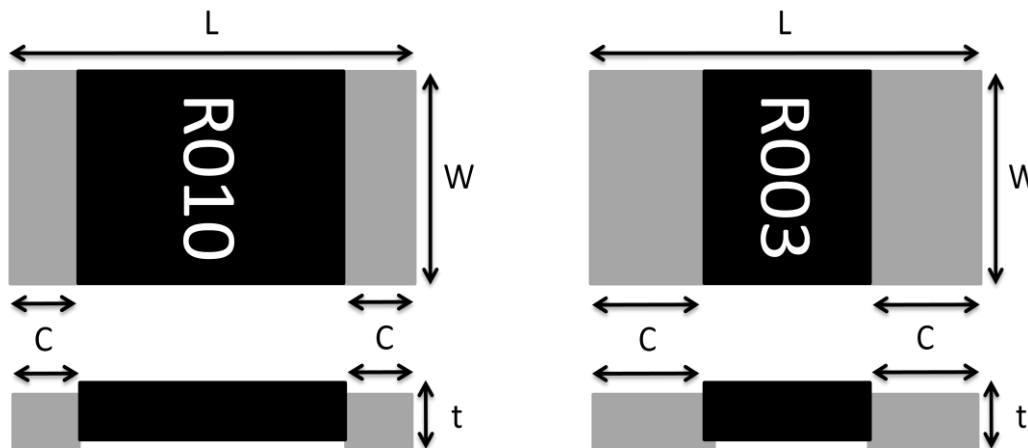
<u>RLM</u> Item	<u>25</u> Series No.	<u>F</u> Resistance tolerance	<u>E</u> Packaging	<u>C</u> Power rating	<u>R010</u> Resistance
	25:2512 (6432)	F:±1% G:±2% J:±5%	E: Embossed Tape	C=1W D=1.5W E=2W	e.g : R003=3mΩ R050=50mΩ

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	2.0±0.2(R ≤ 3mΩ)	0.6 ±0.20	Metal : Alloy Over Coating : molding Compound UL-94 grade
			0.9±0.2(R > 3mΩ)		



Lead-Free Current Sensing Resistors
RLM Series
(Halogen-Free)
AEC-Q 200-Ver D qualified

Document No	TRLM-250S149D
Issued date	2016/06/15
Page	2/6

4. Features:

Type	RLM	
Power Rating	(1W:R=1mΩ~50mΩ) (1.5W:R≤15mΩ) (2W:R≤10mΩ)	
Resistance Value	1mΩ~50mΩ	
Operation Temperature Range	-55℃~+170℃	
Temperature Coefficient of Resistance	±275ppm/℃	R≤1mΩ
	±50ppm/℃	1mΩ<R≤50mΩ
Tolerance	±1%,±2%,±5%	
Insulation Resistance	Over 100MΩ	
Maximum Working Voltage(V)	(P*R) ^{1/2}	

5. Reliability Tests:

Test Items	Condition of Test	Test Limits
High Temperature Exposure(Storage)	T=125℃,1000hrs,Measurement at 24hrs after test conclusion.	< ±1%
Low temperature operation	-55 °C for 45 min	< ±0.5%
Temperature Cycling	1000Cycle (-55℃ to 125℃),Measurement at 24hrs after test conclusion.	< ±0.5%
Short time overload	5 X rated power for 5s	< ±0.5%
Biased Humidity	10% Rated voltage at 85 °C,RH:85% ,1000Hrs, Measurement at 24hrs after test conclusion.	< ±0.5%
Operation life	1000 h at +70 °C, 1.5 h "ON", 0.5 h "OFF"	< ±1%
Resistance to Soldering Heat	T=260+/-5℃ solder,10+/-1 sec dwell	< ±0.5%
Mechanical Shock	100g's , Normal duration is 6ms , half sine shock pluse	< ±0.5%
Resistance to vibration	5g's for 20min.12cycles, 10-2000Hz	<±0.5%
Board Flex	Min 2mm deflection ,60sec.	< ±0.5%
Flammability	V-0 or V-1are acceptable, Electrical test not required	



Lead-Free Current Sensing Resistors
RLM Series
 (Halogen-Free)
 AEC-Q 200-Ver D qualified

Document No	TRLM-250S149D
Issued date	2016/06/15
Page	3/6

5.1 Derating Curve



5.2 Rated Current

The rated voltage is calculated by the following formula:

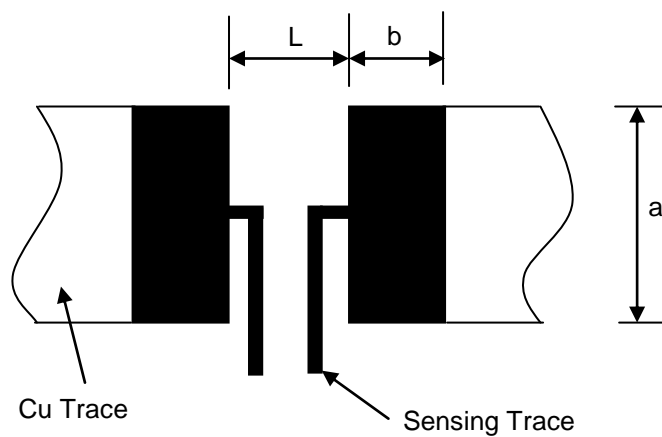
$$I = \sqrt{P \div R}$$

I: Rated Current(A)

P: Rated Power(W)

R: Resistance Value(Ω)

6. Recommended Solder Pad Dimension



Resistance Range (Ω)	a	b	L
0.001-0.003	4.0	3.1	1.3
0.004-0.050	4.0	2.1	4.1

Unit: mm



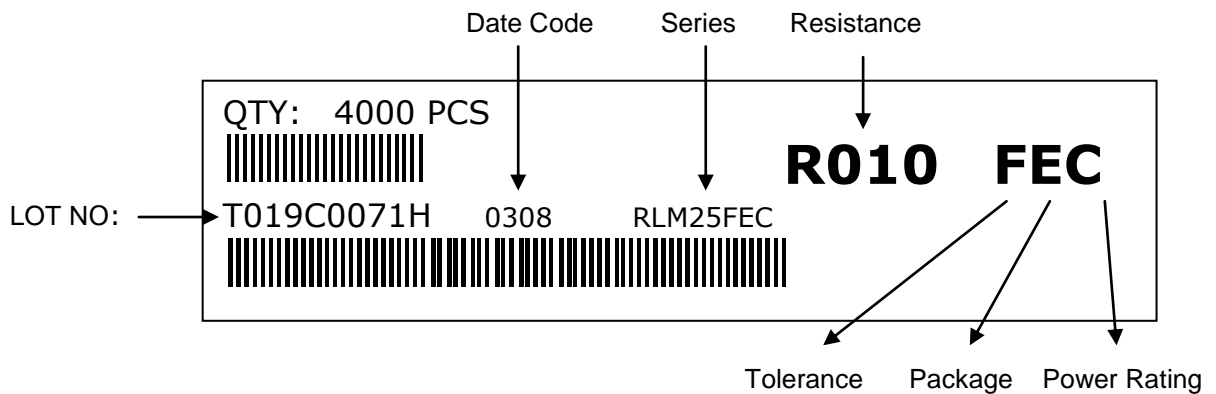
Lead-Free Current Sensing Resistors
RLM Series
 (Halogen-Free)
 AEC-Q 200-Ver D qualified

Document No	TRLM-250S149D
Issued date	2016/06/15
Page	4/6

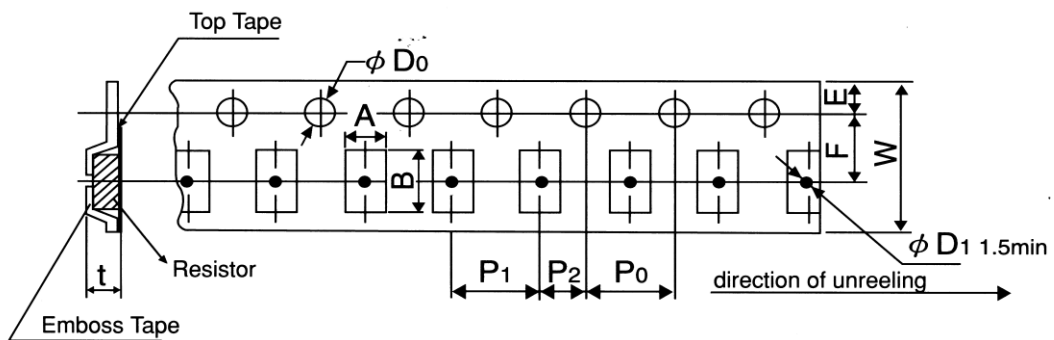
7. Number of Package:

4000 Pieces / package

8. Label:



9. Taping



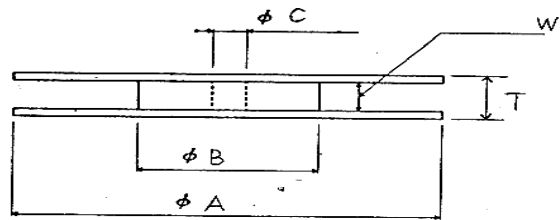
Packing	Type	A	B	W	F	E	P_1	P_2	P_0	D_0	T
Emboss	RLM25	$3.6^{+0.2}_{-0.18}$	6.9 ± 0.2	$12. \pm 0.2$	5.5 ± 0.05	1.75 ± 0.1	4.0 ± 0.1	2.0 ± 0.05	4.0 ± 0.05	$\phi 1.5$ (+0.1/-0)	0.85 ± 0.15



Lead-Free Current Sensing Resistors
RLM Series
 (Halogen-Free)
 AEC-Q 200-Ver D qualified

Document No	TRLM-250S149D
Issued date	2016/06/15
Page	5/6

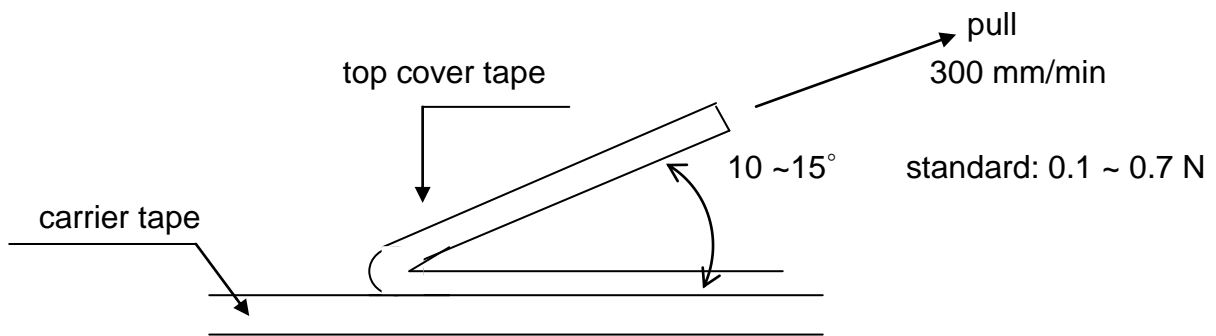
10. Reel Specification



Series	ϕA	ϕB	ϕC	W	T
RLM 25	180 ⁺⁰ ₋₃	60 ±1.0	13.0±1.0	13.0±1.0	15.4±2.0

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:

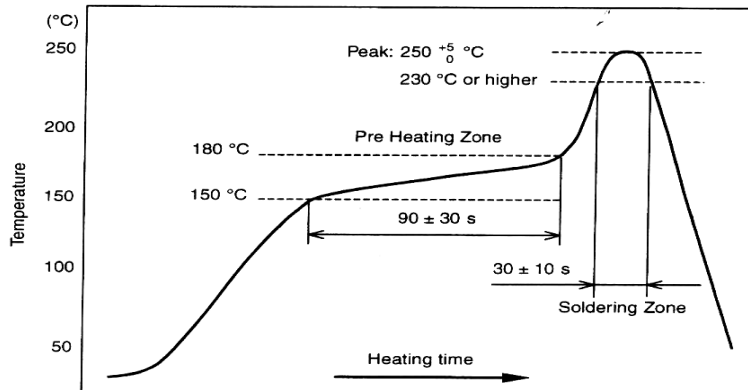
2 years from manufacturing date.



**Lead-Free Current Sensing Resistors
RLM Series
(Halogen-Free)
AEC-Q 200-Ver D qualified**

Document No	TRLM-250S149D
Issued date	2016/06/15
Page	6/6

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



Peak : 260^{+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

TA-I TECHNOLOGY CO., LTD

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 :

[5112](#) [65709-330JE](#) [PF2512FKF7W0R007L](#) [PR2512FKF7W0R003L](#) [PR2512FKF7W0R005L](#) [RCWL0603R500JNEA](#) [ERJ-3BQF1R1V](#) [ERJ-L14UJ42MU](#) [2-2176088-5](#) [PF2512FKF7W0R006L](#) [PF2512FKF7W0R033L](#) [2-2176089-4](#) [CD2015FC-0.10-1%](#) [PR2512FKF7W0R004L](#) [CGSSL1R01J](#) [CGSSL1R047J](#) [RC1005F124CS](#) [RCWE2512R110FKEA](#) [RCWL0805R330JNEA](#) [RL73H3AR47FTE](#) [RL73K3AR56JTDF](#) [RL7520WT-R001-F](#) [RL7520WT-R009-G](#) [RL7520WT-R020-F](#) [RLP73N1ER43JTD](#) [TL3AR01FTDG](#) [TLR3A20DR0005FTDG](#) [LRC-LR2512LF-01-R820J](#) [ERJ-3BQF4R3V](#) [ERJ-L14UF68MU](#) [TLR3A20DR001FTDG](#) [TLR3A30ER0005FTDG](#) [WR06X104JGLJ](#) [RLP73K1ER82JTD](#) [TL2BR01F](#) [TLR3A20DR01FTDG](#) [WSR3R0600FEA32](#) [ERJ-14BQF1R6U](#) [ERJ-14BQJR30U](#) [SP1220RJT](#) [SP1R12J](#) [ERJ-14BQF6R2U](#) [RL7520WT-R039-G](#) [PF1206FRF7W0R02L](#) [RL7520WT-R002-F](#) [RL7520WT-R047-F](#) [RLP73N2BR068FTDF](#) [RL7520WT-R005-F](#) [RCWE2512R220FKEA](#) [RCWE120625L0FMEA](#)