



# THINKING ELECTRONIC INDUSTRIAL CO., LTD.

HEAD OFFICE: 12F, No.93, Dashun 1st Rd., Zuoying Dist., Kaohsiung, Taiwan  
TEL: 886-7-5577660 FAX: 886-7-5570560

## MANUFACTURING SITE

- KAOHSIUNG FACTORY 1: No. 51, Kaifa Rd., N.E.P.Z, Kaohsiung City 81170, Taiwan  
TEL: 886-7-9616668 FAX: 886-7-9616698
- KAOHSIUNG FACTORY 2: No. 2-2, Xinjian S. Rd., N.E.P.Z., Kaohsiung City 81170, Taiwan  
TEL: 886-7-9630001 FAX: 886-7-3635113
- CHANGZHOU FACTORY: No.6 Longmen Rd., Wujin High & New-Tech Industrial  
Development Zone, Changzhou, Jiangsu, China 213161  
TEL:86-519-86578999 FAX:86-519-86558643
- DONG GUAN FACTORY: No.45, East Rd., Sha-Tao Dist., Chang-An Town,  
Dongguan City, Guangdong, China 523863  
TEL:86-769-85542016 FAX:86-769-85546890
- YICHANG FACTORY: No. 283 Xiaoting Avenue, Xiaoting Dist., Yichang  
City 443007, Hubei, China  
TEL:86-717-6510010 FAX:86-717-6511430



## SPECIFICATION FOR APPROVAL

CUSTOMER	立創電子
CERTIFIED MODEL/TYPE	KLM2S110
PART NO.	KLM2S110RY(RoHS+HF)
APPLICATION	
CUSTOMER P/N	
ISSUE DATE	Dec.01.2020
REV. NO.	
REV. DATE	

FOR CUSTOMER APPROVAL	CHECKED BY
	<i>Haili Gong</i>
	APPROVED BY
	<i>Huaifang Zhang</i>





**REVISED RECORD SHEET**

REV. NO	REV. DATE	REVISED CONTENT

## INDEX

Page

■ Part Number Code	1
■ Structure and Dimensions	2
■ Electrical Characteristics	2
■ Reliability	3
■ Soldering Recommendation	4
■ Thermal Derating Curve	5
■ RoHS Compliant Declaration	6
■ Warehouse Storage Conditions of Products	6
■ Safety Approvals	7
■ Certificates	7
■ Packaging	8



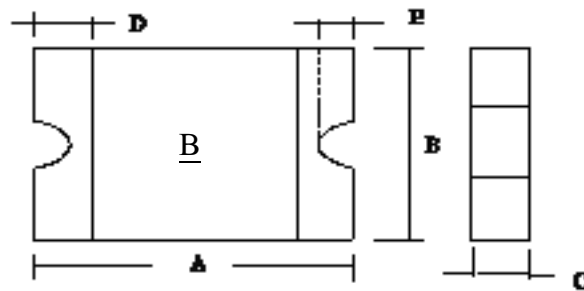
Part Number Code

Example :

**K**    **LM**    **2**    **S**    **110**    **R**    **Y**  
(1)    (2)    (3)    (4)    (5)    (6)    (7)

No.	Item	Digit	Specification
(1)	Product Type	K	Thinking Polymer PTC Resettable Fuse
(2)	Type Series	LM	LoRho SMD series
(3)	Size (EIA)	2	0805
(4)	Structure	S	S type
(5)	I hold	110	1.1A @ 23°C
(6)	Packaging	R	Taping & Reel
(7)	Optional Suffix	Y	RoHS+HF compliance

## Structure and Dimensions



( unit : mm )

Item	A	B	C	D	E
MIN.	2.00	1.20	0.40	0.15	0.05
MAX.	2.20	1.50	0.70	0.55	0.45

## Electrical Characteristics (23 °C)

Part No.	V max.	I max.	I hold @ 23°C	I trip @ 23°C	Pd (Max.)
	(V)	(A)	(A)	(A)	(W)
KLM2S110RY	6	50	1.10	1.80	0.60

Part No.	Max.time to trip		Resistance (Ω)		Operating / storage temperature
			Initial (Ri)	Post trip (R1)	
	(A)	(Sec.)	min.	max.	(°C)
KLM2S110RY	8.0	0.30	0.03	0.13	-40 ~ +85

I<sub>hold</sub>=Hold current :maximum current device will pass without interruption at 23°C still air unless otherwise specified.

I<sub>trip</sub>=Trip current :minimum current that will switch the device from low resistance to high resistance at 23°C still air unless otherwise specified.

V<sub>max</sub>=Maximum voltage device can withstand without damage at rated current.

I<sub>max</sub>=Maximum current device can withstand without damage at rated voltage .

P<sub>d</sub>=Power dissipated from device while the tripped state at 23°C still air unless otherwise specified.

R<sub>imin</sub>=Minimum resistance of device prior to tripping at 23°C .

R<sub>1max</sub>=Maximum resistance of the device one hour after tripping at 23°C .

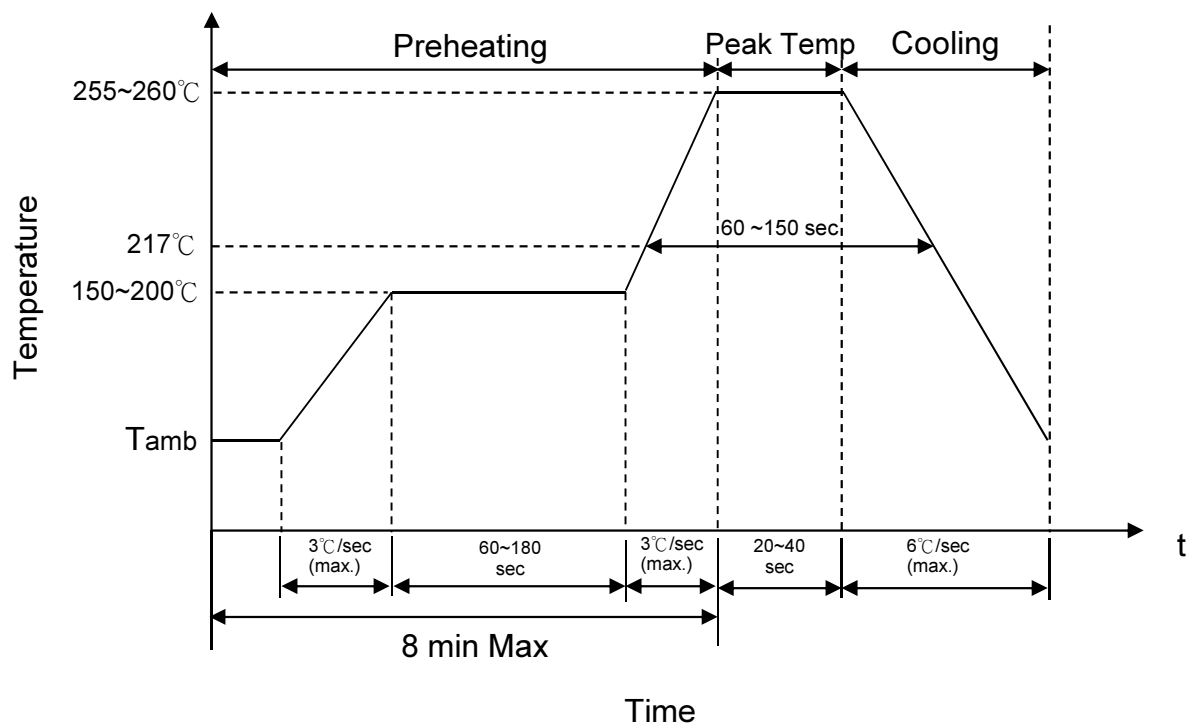
**Caution:Operation beyond the specified rating or improper use may result in damage and possible arcing and flame.**

Reliability

Item	Standard	Test conditions/Methods	Specifications
Passive Aging	IEC60738-1	85±5°C, 1000±24hrs	±10% typical resistance change
Humidity Aging	Specification Standard	85±5°C, 80~85%RH, 100±5hrs	±15% typical resistance change
Rapid Change of Temperature	IEC60738-1	85±5/-40±5°C, 20 cycles Duration:30min	-30% typical resistance change
Overload Endurance	UL1434	Vmax, 120% Imax ,50 cycles + Vmax, 300% Itrip ,6000 cycles	No arcing or burring
Aging	UL1434	Vmax, Itrip ≤ I ≤ Imax , 1000±24hrs	No arcing or burring
Solderability	IEC60068-2-58	245 ± 5 °C , 3 ± 0.3 sec	At least 95% of terminal electrode is covered by new solder

## Soldering Recommendation

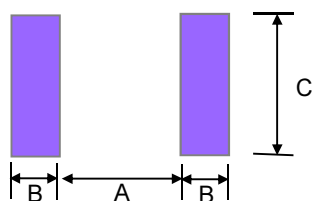
### ■ IR-Reflow Soldering Profile



### ■ Recommended Reworking Conditions with Soldering Iron

Item	Conditions
Temperature of Soldering Iron-tip	360 °C (max.)
Soldering Time	3 sec (max.)
Diameter of Soldering Iron-tip	φ 3 mm (max.)

### ■ Recommended Soldering Pad Dimensions (Nominal)

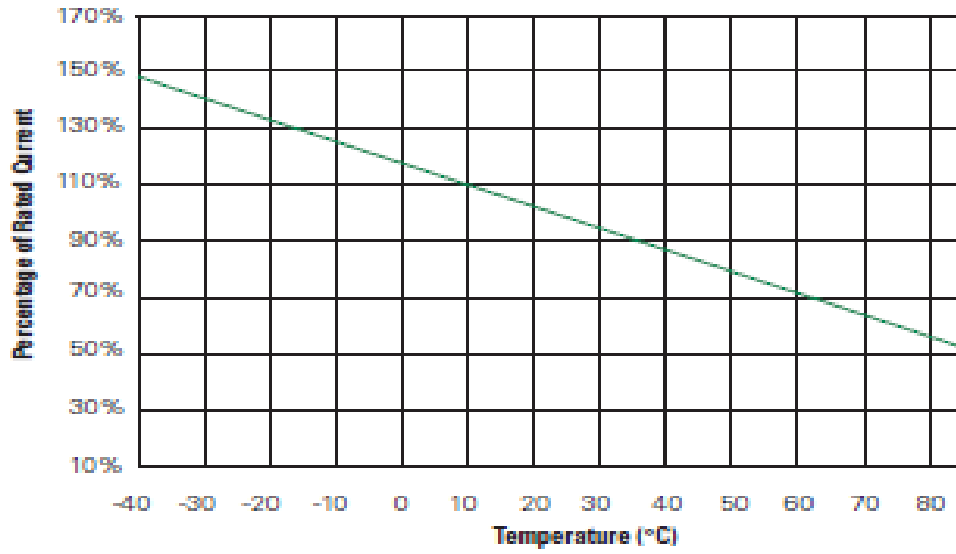


(Unit : mm)

SIZE	A	B	C
0805	1.20	1.00	1.50

Thermal Derating Curve

Thermal derating curve for LoRho SMD0805 series



Model	Ambient Operation Temperature							
	-40°C	-20°C	0°C	23°C	40°C	60°C	70°C	85°C
KLM2S110	1.93	1.65	1.38	1.10	0.83	0.55	0.41	0.23



---

### RoHS Compliant Declaration

We hereby declare that the components delivered to your company are compliant with RoHS directive 2015/863/EU.

### Warehouse Storage Conditions of Products

(I) Storage Conditions :

- 1.Storage Temperature :  $-10^{\circ}\text{C}\sim+40^{\circ}\text{C}$
- 2.Relative Humidity :  $\leq 75\%RH$
- 3.Keep away from corrosive atmosphere and sunlight.

(II) Period of Storage : 1 year

Safety Approvals (Certified Model/Type : KLM2S110)



\* UL 1434 / cUL recognized (File # E138827)



\* TUV recognized (File # R50311748)

Certificates

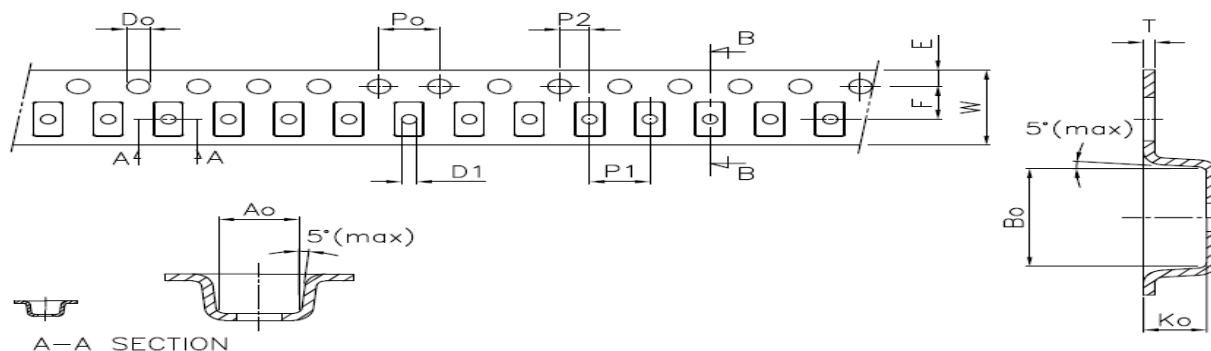
- (1) IATF 16949 certificate
- (2) ISO 9001 certificate

Test Report

- (1) RoHS test report
- (2) Halogen-free test report

### Packaging

#### ■ Taping specification (0805 type)



INDEX type	A0	B0	K0	P0	P1	P2	T	E	F	D0	D1	W	10P0
Tape-0805-1	1.80 ±0.1	2.30 ±0.1	0.90 ±0.05	4.00 ±0.08	4.00 ±0.1	2.00 ±0.05	0.25 ±0.10	1.75 ±0.1	3.50 ±0.05	1.55 ±0.05	1.00 Min	8.00 ±0.10	40.00 ±0.20

Unit : mm

#### ■ Quantity ( 4000 pcs / reel )

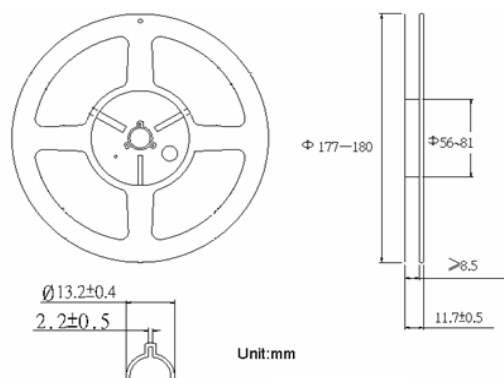


图1

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Resettable Fuses - PPTC category](#):*

*Click to view products by [TKS manufacturer](#):*

Other Similar products are found below :

[RF0077-000](#) [RF2534-000](#) [RF3256-000](#) [RF3281-000](#) [RF3301-000](#) [RF3344-000](#) [RF3382-000](#) [SMD125-2](#) [RF2171-000](#) [RF2531-000](#) [RF2873-000](#) [RF3060-000](#) [TR600-150Q-B-0.5-0.130](#) [RXE090](#) [5E4795/04-1502](#) [TRF250-080T-B-1.0-0.125](#) [SMD100-2](#) [NIS5452MT1TXG](#) [NIS5431MT1TXG](#) [SMD250-2](#) [0ZCM0001FF2G](#) [0ZCM0003FF2G](#) [0ZCM0004FF2G](#) [BK60-017-DZ-E0.6](#) [F95456-000](#) [LVR100S](#) [RS30-090](#) [RS30-600](#) [RS30-700](#) [RS30-800](#) [RS30-900](#) [RS60RB-005](#) [RS60RB-010](#) [RS60RB-020](#) [RS60RB-025](#) [RS60RB-050](#) [RS60RB-075](#) [RS60RB-160](#) [SMD1206-300C-12V](#) [SB250-145](#) [SB250-030](#) [SB250-040](#) [SB250-200](#) [SB250-600](#) [SMD0805-005-24V](#) [SMD0805-050-16V](#) [SMD1210-005-60V](#) [SMD0805-005](#) [R60-375](#) [SMD0805K110SF6V](#)