



贝特卫士®

更好的电路安全卫士! 
You build electronics, We safeguard them!

承 认 书

APPROVAL SHEET

编 号 No.	9321315278-C/5-B
日期 Date	2019.04.24

客 户 Customer	
-----------------	--

品 名 Product	Time-Lag subminiature fuse
系 列 Series	932 series

料号 Part No.	规格描述 Specification	备注 Remark
贝特电子 Betterfuse		
客 户 Customer		

环保特别提示 Special instructions for environmental protection
本产品:

供应商-贝特电子 Supplier-Betterfuse	零件承认章 Approval Signet	客 户 Customer	零件承认章 Approval Signet
制 作 Make			
审 核 Check			
确 认 Approval			



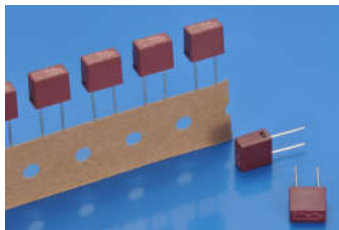
Document Record						
No.	Date	Modified Content	Page	Edition	Prepared/modified by	Checked by
1	2014.02.14	Draft	6	D	Runsong Zhong	Lianghua Guo
2	2014.04.08	Added TUV certification	6	B/0	Kings Luo	Wenhua Yan
3	2015.02.04	Add 125mA and 250mA CQC certification; Add 200mA I-T Curve	4,15,16	B/1	Kings Luo	Wenhua Yan
4	2015.02.09	Add 8A and 10A CQC certification;	19,20	B/2	Kings Luo	Wenhua Yan
5	2015.06.18	The fuse high to change the 7.6mm	5	B/3	Jeffery	Gem Guo
6	2015.08.04	Update UR certification		B/4	Jeffery	Gem Guo
7	2015.09.09	Update CQC , TUV certification		B/5	Jeffery	Gem Guo
8	2015.11.18	Update the tapping	9	B/6	Jeffery	Lin Gao
9	2015.12.12	Update PSE certification		B/7	Jeffery	Lin Gao
10	2016.01.14	Update I2T value		B/8	Jeffery	Wenhua Yan
11	2016.04.15	Add the 0.16A~0.4A CQC certification	3,7	B/9	Jeffery	Helge
12	2016.8.24	Change the construction		B/10	Jeffery	Wenqiang Luo
13	2017.12.08	Update BSI, SEMKO certification		C/0	J.Q.	Fei Gao
14	2018.03.05	Update TUV certification		C/1	J.Q.	Fei Gao
15	2018.10.08	Change of the innor core and material	4	C/2	Xiang Xiong	Fei Gao
16	2019.02.25	Update UL certification	7	C/3	Xiang Xiong	Fei Gao
17	2019.03.11	Add 6.3A PSE certification	7	C/4	Xiang Xiong	Fei Gao
18	2019.04.24	Add 12A,12.5A,15A and16A IT curve	6	C/5	Xiang Xiong	Fei Gao

TABLE OF CONTENTS

1. SCOPE AND DESCRIPTION.....	3
2. GENERAL INFORMATION.....	3
3. AGENCY APPROVALS.....	3
4. PART NUMBERING SYSTEM.....	4
5. CONSTRUCTION AND MECHANICAL CHARACTERISTICS.....	5
6. ELECTRICAL SPECIFICATIONS.....	6
7. SOLDERING PARAMETERS.....	8
8. ORDERING INFORMATION.....	8
9. PACKING INFORMATION.....	9
10.APPENDIX.....	10



1. SCOPE AND DESCRIPTION



Following electronic product specifications apply to fuses of the 932 series. The 932 series is a time lag type subminiature fuse for over-current protection.

Its main applications are for consumer electronics, LED drivers, power supplies, battery chargers and controllers for industrial use.

2. GENERAL INFORMATION

General Description

The 932 series provides protection for printed circuit boards used in a large variety of applications that need fuses with time-delay, low breaking capacity. The sub-miniature device is constructed of a plastic cap and base with a tin plated copper lead wire. It offers excellent mounting characteristics and is 100% tested for cold resistance.

Detailed Features

- Subminiature fuse with time delay, low breaking capacity
- Small, rectangular and leaded design minimizes board space and eliminates the need for additional mounting components
- Plastic cap / brown thermoplastic fuse body.
- 0.6mm lead wires made of tin plated copper.
- Protection against harmful over-currents in primary and secondary applications.
- Lead-free, Halogen-free, RoHS compliant
- Designed according to IEC 60127-3
- TUV compliance to EN 60127-7: 2016

3. AGENCY APPROVALS

Agency	Agency File Number	Voltage/ Current Rating
	E300003	400/300/277/250/125V AC: 0.1A~16A;
	CQC11012062690 CQC13012097386 CQC15012121655 CQC16012141544	250VAC: 125mA, 160mA, 200mA, 250mA, 315mA, 400mA, 500mA, 630mA, 800mA, 1A, 1.25A, 1.6A, 2A, 2.5A, 3.15A, 4A, 5A, 6.3A, 8A, 10A
	PSE15020937 PSE19021462	250V AC: 1A, 1.25A, 1.6A, 2A, 2.5A, 3.15A, 4A, 5A, 250V AC: 6.3A
	40033369	250V AC: 630mA, 800mA, 1A, 1.25A, 1.6A, 2A, 2.5A, 3.15A, 4A, 5A, 6.3A
	SU05042-13003, SU05042-13002, SU05042-13001	250V AC: 500mA, 630mA, 800mA, 1A, 1.25A, 1.6A, 2A, 2.5A, 3.15A, 4A, 5A, 6.3A

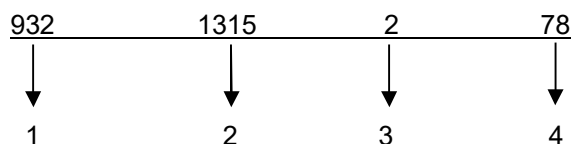


	R 50279350	300V AC: 125mA, 160mA, 200mA, 250mA, 315mA, 400mA, 500mA, 630mA, 800mA, 1A, 1.25A, 1.6A, 2A, 2.5A, 3.15A, 4A, 5A, 6.3A, 8A, 10A 250V AC: 125mA, 160mA, 200mA, 250mA, 315mA, 400mA, 500mA,
	KM 677189	250V AC: 3.15A; 5A; 8A; 10A
 Intertek	1719061	250V AC: 3.15A; 5A; 8A; 10A

4. PART NUMBERING SYSTEM

4.1 Part Number

Example: 9321315278



- | | |
|-----------------------------|--|
| 1 .Product Series | 932 |
| 2 .Ampere Rating | 3.15A (see table 4.2 below) |
| 3 .Rated Voltage | 1– 125V
2– 250V
3– 300V
K– 400V |
| 4 .Supplementary Code | Complement Code |

4.2. Ampere / Voltage Rating Table

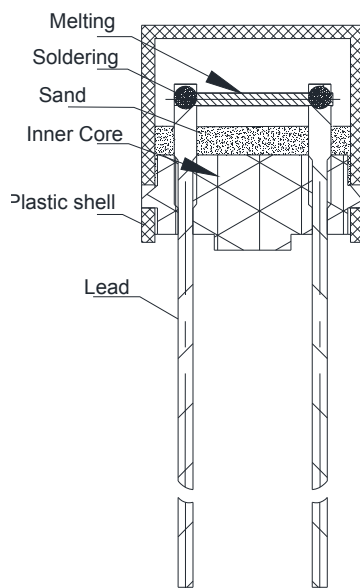
AMP CODE	CURRENT RATING	VOLTAGE RATING
0100	100mA	125 / 250 / 277/ 300/ 400V AC
0125	125mA	125 / 250 / 277/ 300/ 400V AC
0160	160mA	125 / 250 / 277/ 300/ 400V AC
0200	200mA	125 / 250 / 277/ 300/ 400V AC
0250	250mA	125 / 250 / 277/ 300/ 400V AC
0315	315mA	125 / 250 / 277/ 300/ 400V AC
0400	400mA	125 / 250 / 277/ 300/ 400V AC
0500	500mA	125 / 250 / 277/ 300/ 400V AC
0630	630mA	125 / 250 / 277/ 300/ 400V AC
0800	800mA	125 / 250 / 277/ 300/ 400V AC
1100	1.00A	125 / 250 / 277/ 300/ 400V AC
1125	1.25A	125 / 250 / 277/ 300/ 400V AC
1160	1.60A	125 / 250 / 277/ 300/ 400V AC
1200	2.00A	125 / 250 / 277/ 300/ 400V AC
1250	2.50A	125 / 250 / 277/ 300/ 400V AC
1315	3.15A	125 / 250 / 277/ 300/ 400V AC
1400	4.00A	125 / 250 / 277/ 300/ 400V AC
1500	5.00A	125 / 250 / 277/ 300/ 400V AC
1630	6.30A	125 / 250 / 277/ 300/ 400V AC
1700	7.00A	125 / 250 / 277/ 300/ 400V AC
1800	8.00A	125 / 250 / 277/ 300/ 400V AC



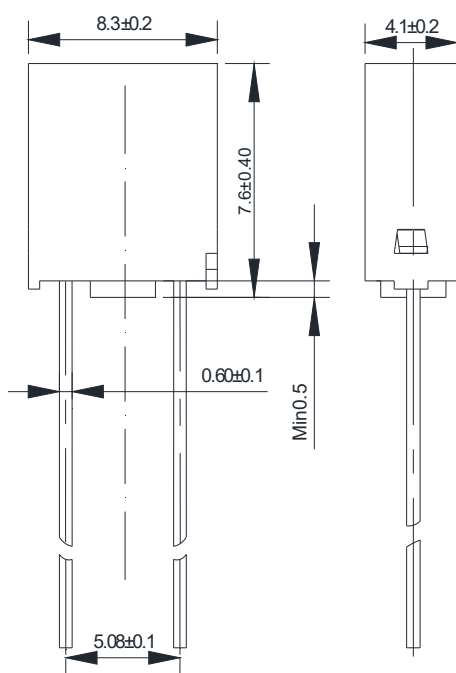
2100	10.00A	125 / 250 / 277/ 300/ 400V AC
2120	12.00A	125 / 250 / 277/ 300/ 400V AC
2125	12.50A	125 / 250 / 277/ 300/ 400V AC
2150	15.00A	125 / 250 / 277/ 300/ 400V AC
2160	16.00A	125 / 250 / 277/ 300/ 400V AC

5. CONSTRUCTION AND MECHANICAL CHARACTERISTICS

Construction (cross section)



Dimensions (units: mm)



Operating Temperature:

-55°C to +125°C

Storage Conditions:

+10°C to +60°C

Relative humidity: ≤ 75% yearly average
without dew, maximum 30 days at 95%

Vibration Resistance:

24 cycles at 15 min. each (60068-6)
10-60Hz at 0.75mm amplitude
60-2000Hz at 10g acceleration

Long Leads: L=18.8±1.5mm

Short Leads: L=4.3±0.3mm



6. ELECTRICAL SPECIFICATIONS

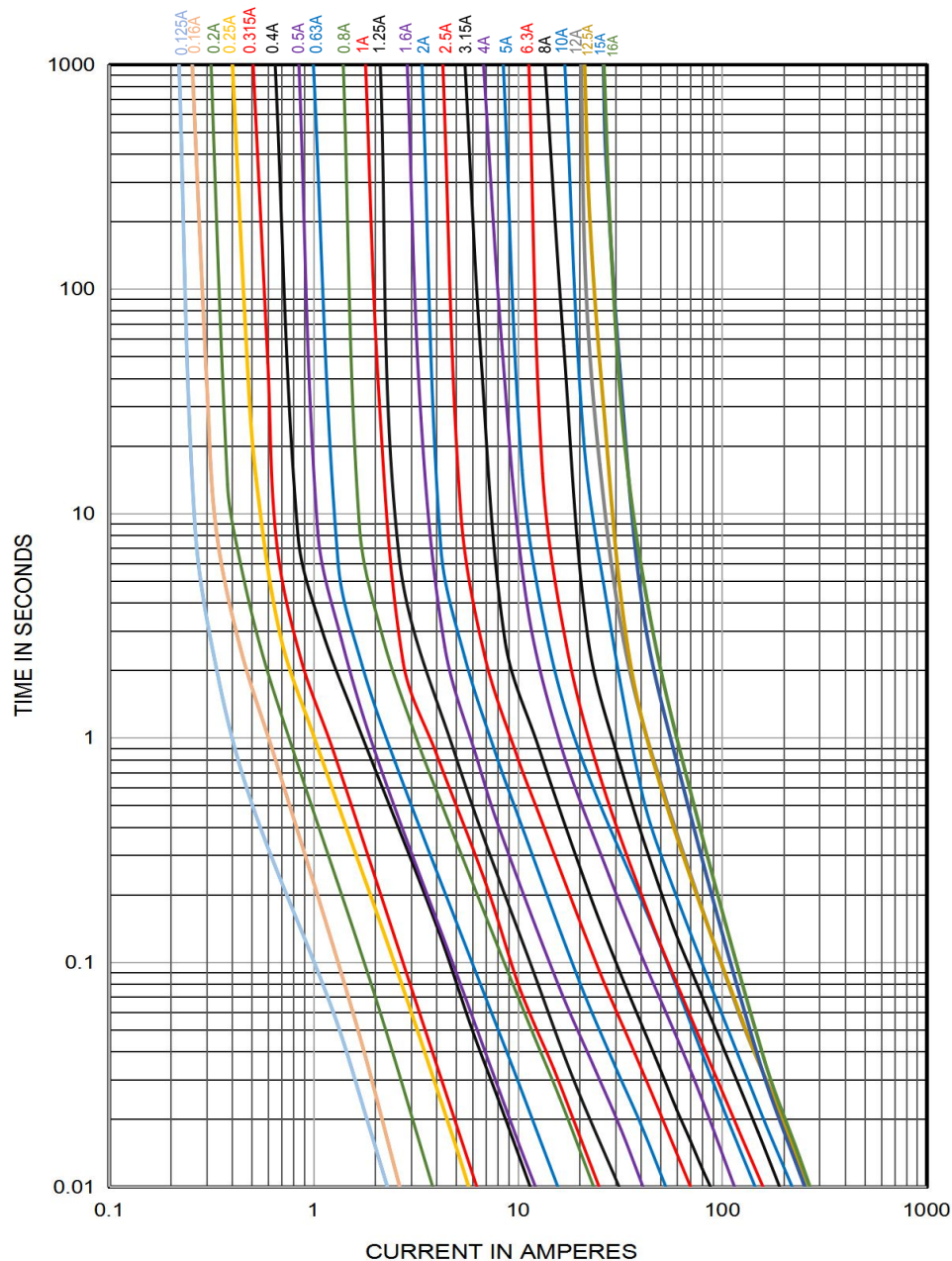
Time vs Current Characteristics Table

(measured with constant current power supply)

Time vs Current Characteristics: IEC 60127-3/IV					
Rated Current	150%	210%	275%	400%	1000%
100mA~10.0A	>1h	<2min	400ms-10s	150ms-3s	20ms-150ms
12A~16A	>1h	<300s	1s~50s	150ms~5s	20ms~150ms

Average Time Current (I-T Curves)

Average Current Curve(I-T Curve)



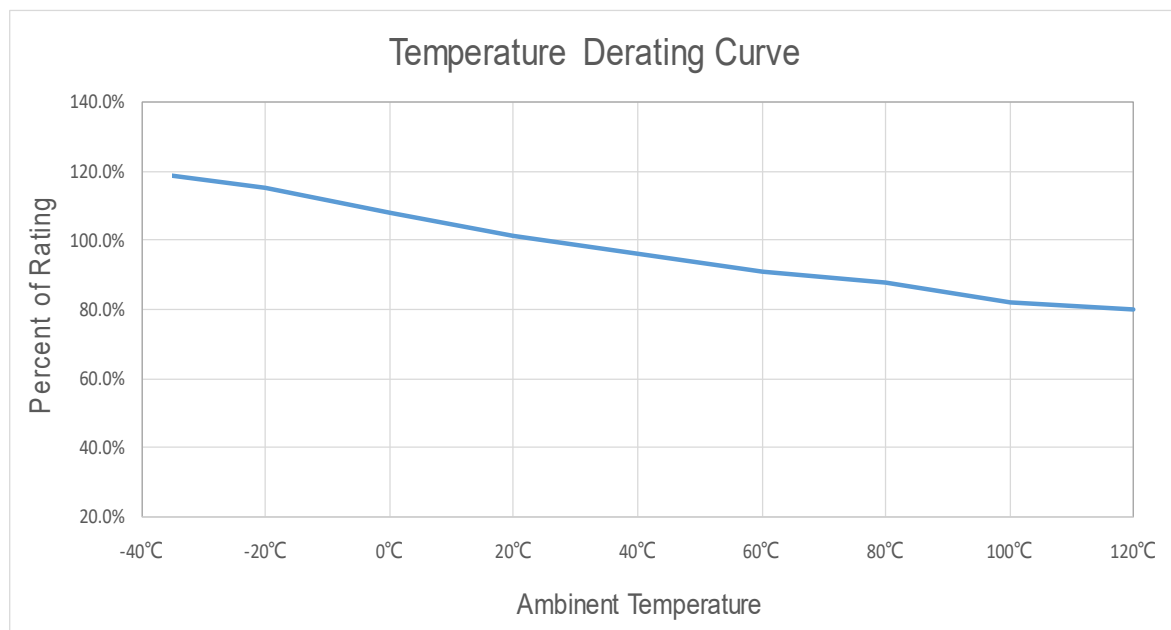


Electrical Characteristics

Amp Code	Rated Current	Max. Voltage	Max. Voltage Drop(mV)	Max. Power Dissipation (mW)	Nominal Melting I ² t(A ² sec)	Breaking Capacity	Approvals								
							cURus	VDE	CQC	PSE	KC	TUV (250V)	TUV (300V)	BSI	SEMKO
0100	100mA	400V AC	350	170	0.034	100A@125V AC 100A@250V AC 50A or 10In@300V AC 160A@125V /250V AC 100A@277V /300V/400V AC	●	○	○	○	○	○	○	○	○
0125	125mA		300	180	0.053		●	○	●	○	○	●	●	○	○
0160	160mA		280	190	0.073		●	○	●	○	○	●	●	○	○
0200	200mA		260	200	0.141		●	○	●	○	○	●	●	○	○
0250	250mA		240	220	0.331		●	○	●	○	○	●	●	○	○
0315	315mA		220	250	0.348		●	○	●	○	○	●	●	○	○
0400	400mA		200	280	1.32		●	○	●	○	○	●	●	○	○
0500	500mA		190	310	1.49		●	○	●	○	○	●	●	○	○
0630	630mA		180	360	2.46		●	●	●	○	●	○	●	○	○
0800	800mA		160	430	5.52		●	●	●	○	●	○	●	○	○
1100	1.00A		140	500	6.70		●	●	●	●	●	○	●	○	○
1125	1.25A		130	600	13.0		●	●	●	●	●	○	●	○	○
1160	1.60A		120	730	22.0		●	●	●	●	●	○	●	○	○
1200	2.00A		100	870	38.0		●	●	●	●	●	○	●	○	○
1250	2.50A		100	1000	56		●	●	●	●	●	○	●	○	○
1315	3.15A		100	1200	101		●	●	●	●	●	○	●	●	●
1400	4.00A		100	1400	156		●	●	●	●	●	○	●	○	○
1500	5.00A		100	1400	200		●	●	●	●	●	○	●	●	●
1630	6.30A		100	1400	260		●	●	●	●	●	○	●	○	○
1800	8.00A		100	1400	380		●	○	●	○	○	○	●	●	●
2100	10.00A		100	1400	480		●	○	●	○	○	○	●	●	●
2120	12.00A		180	4000	645.8		●	○	○	○	○	○	○	○	○
2125	12.50A		180	4000	705.6		●	○	○	○	○	○	○	○	○
2150	15.00A		140	4000	635.2		●	○	○	○	○	○	○	○	○
2160	16.00A		140	4000	705.6		●	○	○	○	○	○	○	○	○

- Notes:** 1. Permissible continuous operating current is ≤100% at ambient temperature of 23°C (73.4°F)
 2. For certification, the cURus by 125/250/277V/300V/400V, the TUV by 250/300V, the others by 250V.
 3. The current values used for calculating I²T should be within the standard range of 8ms ~ 10ms.

Temperature Derating Curve



$$\text{Calculation for ideal fuse selection} = \frac{\text{Operating Current (A)}}{\text{Rating (\%} \times 0.75 \text{)}}$$



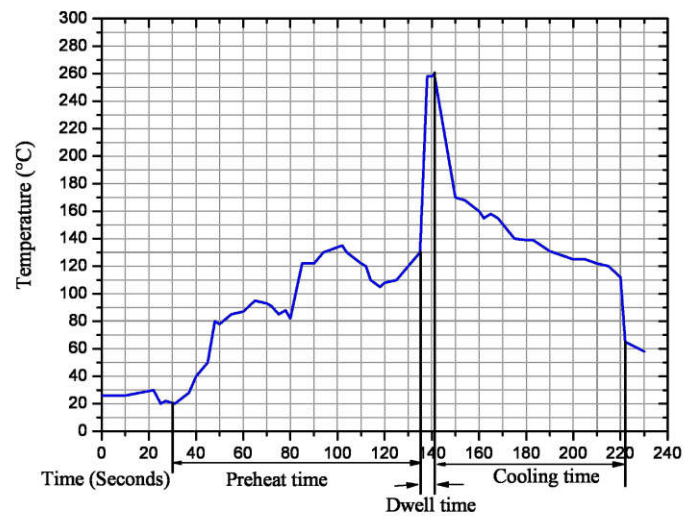
7.SOLDERING PARAMETERS

260±5°C.≤5 sec (Wave Soldering)

350°C.≤3 sec (Hand Soldering)

Soldering Peak:

260±5°C - 10 sec (IEC 60068-20)



8.ORDERING INFORMATION

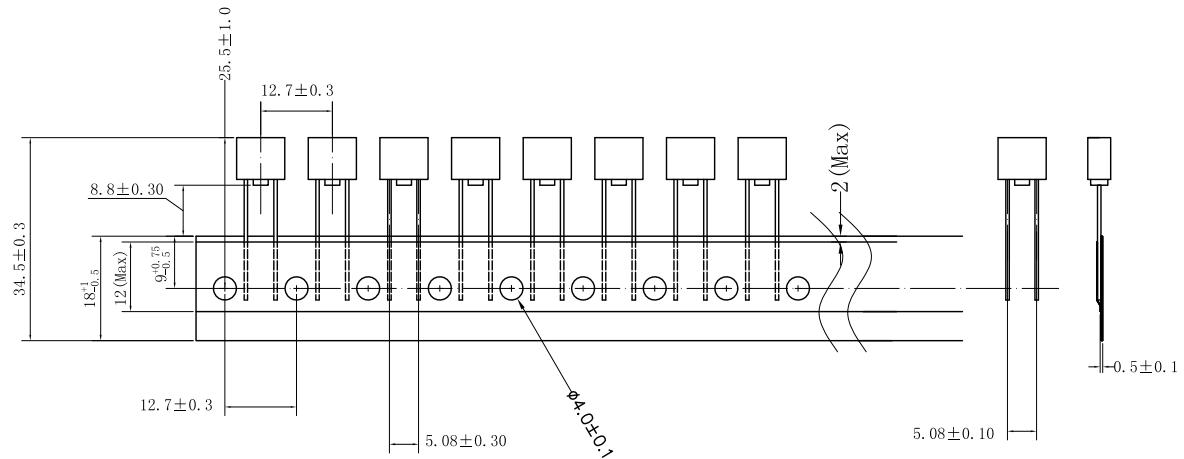
The following information are necessary in order to place your order with us correctly:

Series	Amp Code	Supplementary Code	Qty
932			

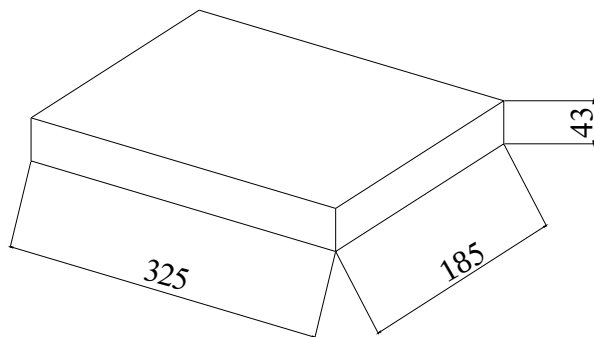


8. PACKING INFORMATION

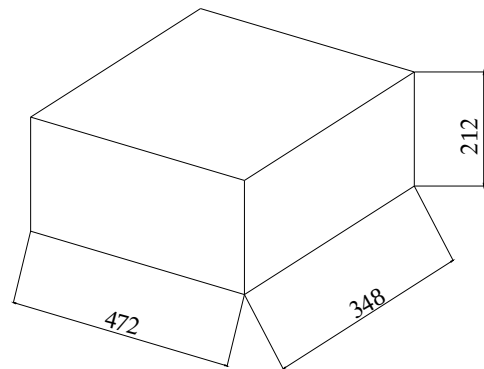
Taping detail



Inner Packaging Box



Master Carton



Net Weight (1000pcs+Taping)	0.54Kg	Master Carton Weight	6.10Kg
Qty Per Box	1000pcs	Qty Per Carton	10000pcs