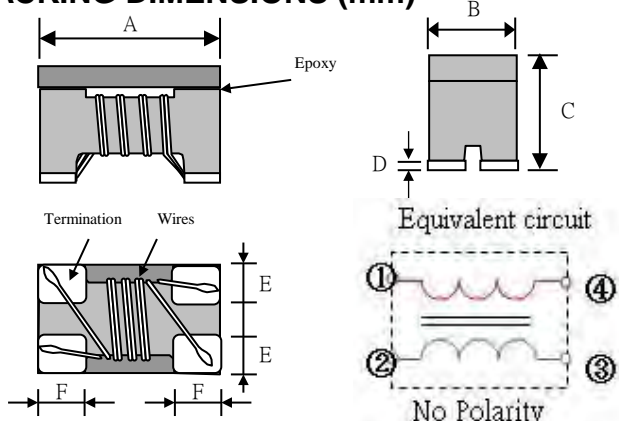


# SPECIFICATION

**RoHS  
COMPLIANT**

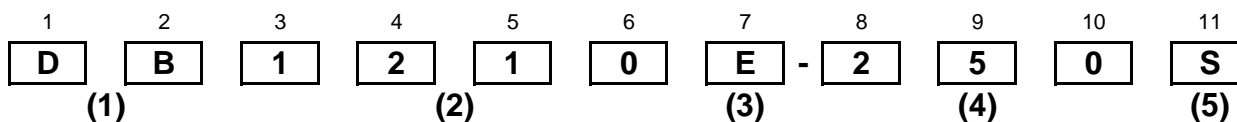
ITEM P/N	DB1210E-SERIES	TEST INSTRUMENT	4287A / 4339B
PRODUCT	COMMON MODE CHOKE	TEST FREQUENCY	100 MHz / 0.5V

## PACKING DIMENSIONS (mm)



DB1210	Dimensions
A	1.2 ± 0.2
B	1.0 ± 0.2
C	0.9 max.
D	0.15 max.
E	0.36Typ.
F	0.33Typ.

## EXPLANATION OF PART NUMBERS



- (1) Product name
- (2) Shapes and dimensions
- (3)Shielding Type

E	USB3.1 / 10.0G
---	----------------

- (4) Impedance 【 at 100MHz 】  
900:90Ω
- (5) Tolerance  
S= ±25% ; M= ±20%

## ELECTRICAL CHARACTERISTICS

P/N	Z(Ω)	DCR (Ω)	Idc(mA)	Rated Voltage	Insulation Resistance	Cut-off Frequency	Characteristic Resistance
	Common Mode						
	Impedance at 100MHz						
	[ Max ]	[ Max ]	Vdc (V)Typical	IR (MΩ)Min.	(GHz)	(Ω)	
DB1210E-250□	25	0.30	300	20	10	10.0 typ.	90 typ.
DB1210E-600□	60	0.40	300	20	10	10.0 typ.	90 typ.
DB1210E-900□	90	0.50	280	20	10	10.0 typ.	90 typ.

Operating temperature : -25 to +85°C

Storage temp. and humidity : -40 to +85°C ,70%RH max

If Use Wave soldering is there will be some risk. Re-flow soldering temperatures below 240 degrees, there will be unwitting risk there will be unwitting risk



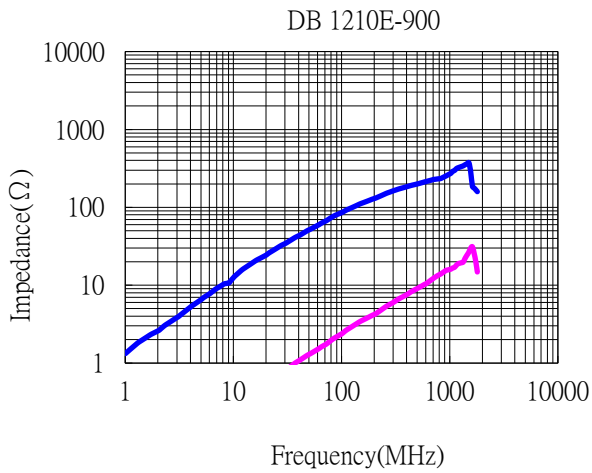
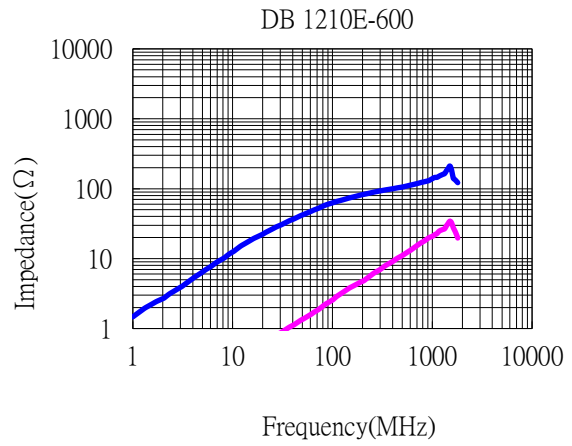
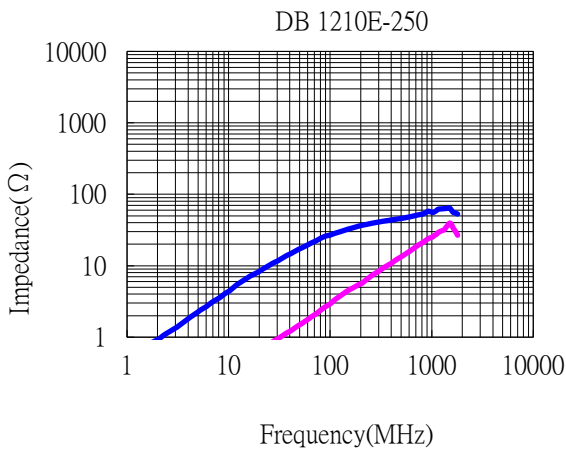
**昕磊科技股份有限公司**  
**SUNLEI TECHNOLOGY CORP.**  
**TEL:(02)8228-7672 傳真:(02)8228-7673**

# CHARACTERISTICS

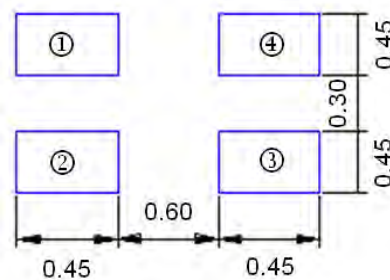
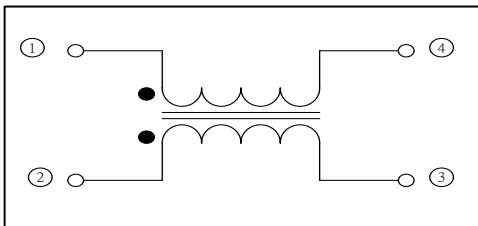
RoHS  
COMPLIANT

ITEM P/N	DB1210E-SERIES	TEST INSTRUMENT	4287A / 4339B
PRODUCT	COMMON MODE CHOKE	TEST FREQUENCY	100 MHz / 0.5V

## PERFORMANCE CURVES



## Equivalent Circuit & Recommended Footprint



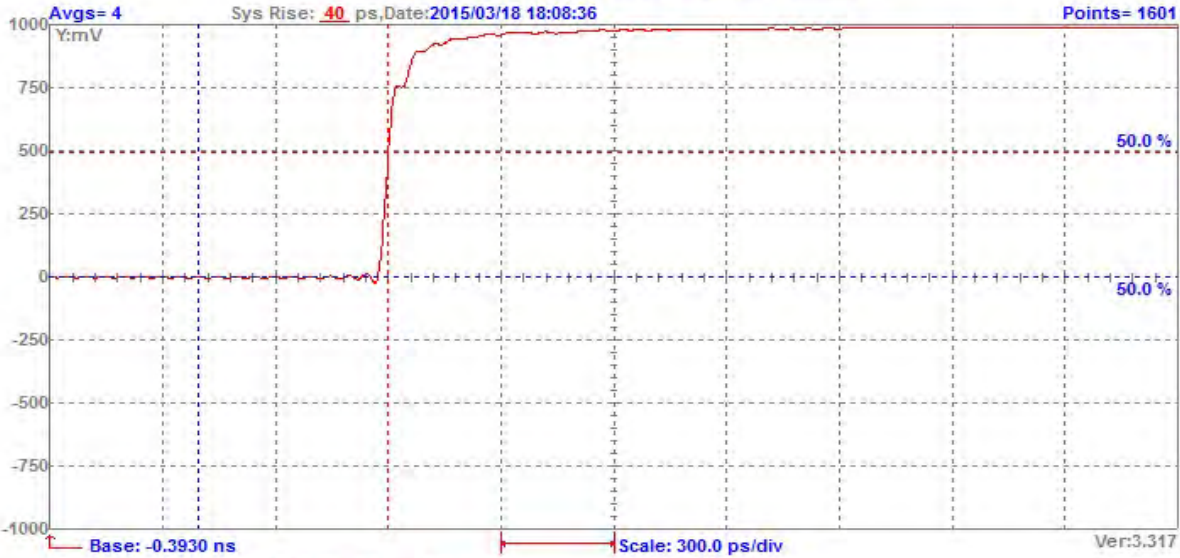
# CHARACTERISTICS

**RoHS  
COMPLIANT**

ITEM P/N	DB1210E-SERIES	TEST INSTRUMENT	4287A / 4339B
PRODUCT	COMMON MODE CHOKE	TEST FREQUENCY	100 MHz / 0.5V

## Intra Pair Skew

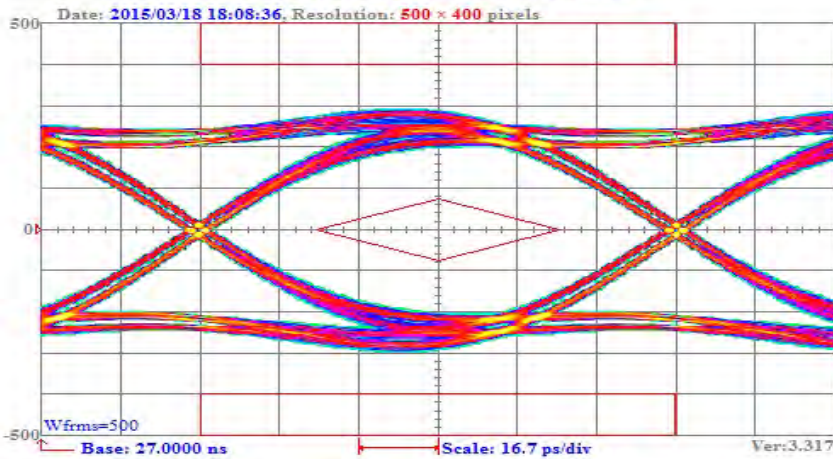
*USB3.1 Choke Intra Skew Graphic result*



Parameter Name: <b>Intra Pair Default Input Skew</b>	
Input Skew: <b>100.0 ps</b>	
Mode: TDT Method, Relative: 50%	

## Eye Diagram Graphic Test

*Choke Eye Diagram Graphic result*



Parameter Name: <b>Choke Eye Diagram C1</b>	
Display Mode: <b>Not a standard mode</b>	
dRate: <b>10 Gbits/s; 100.0 ps</b>	V: <b>250 mV; Gain: 0 dB; Off: 0 mV</b>
CAL: <b>DONE, JGen: OFF</b>	Result: <b>Pass</b>

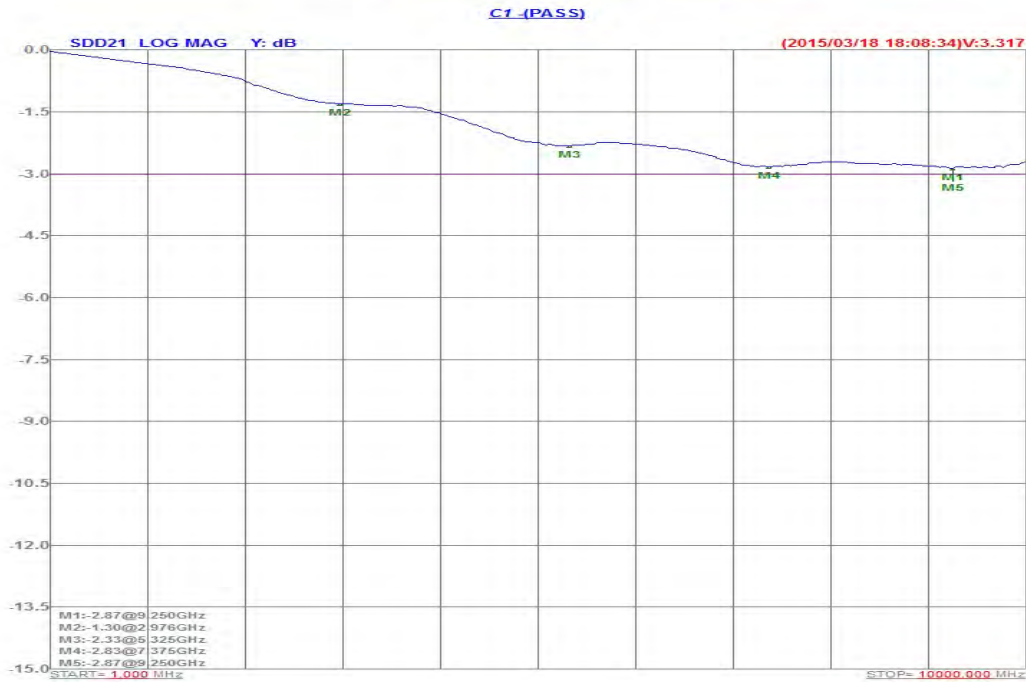
# CHARACTERISTICS

RoHS  
COMPLIANT

ITEM P/N	DB1210E-SERIES	TEST INSTRUMENT	4287A / 4339B
PRODUCT	COMMON MODE CHOKE	TEST FREQUENCY	100 MHz / 0.5V

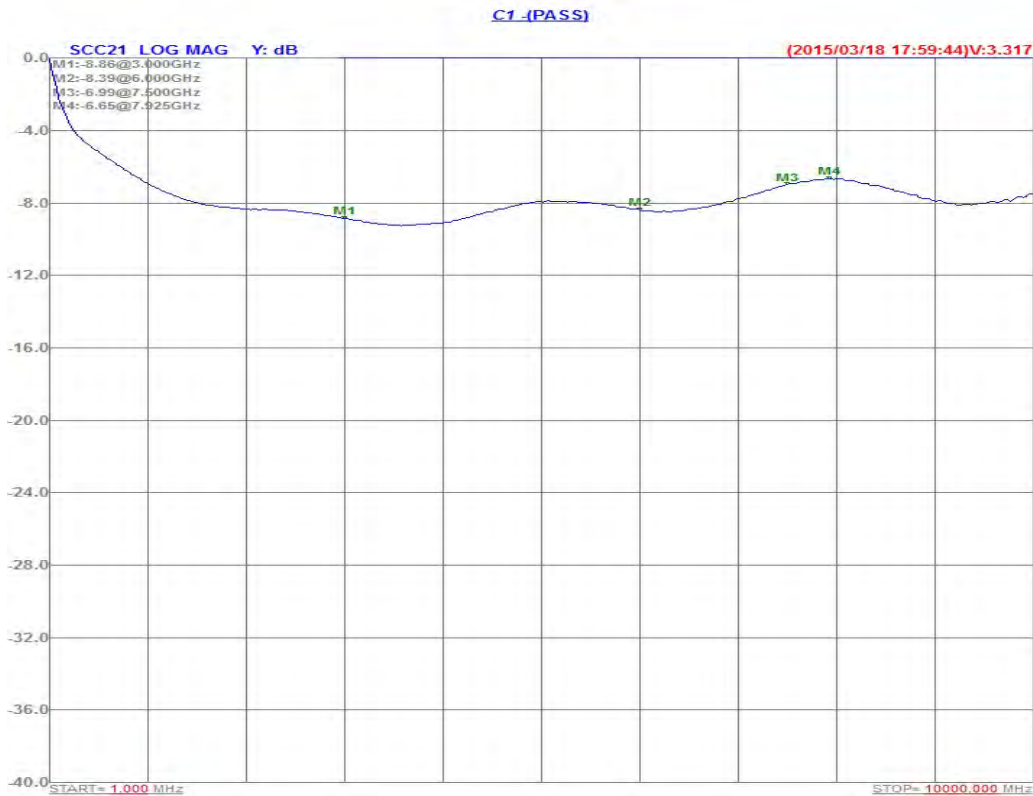
## Insertion Loss Test

Choke Insertion Loss Graphic result



## Choke Common Mode Insertion Loss

Choke SCC21 Graphic result



# CHARACTERISTICS

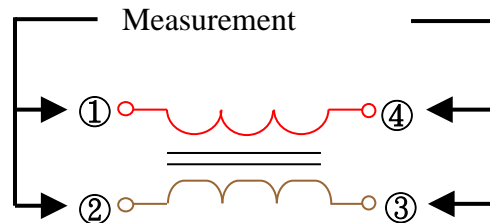
RoHS  
COMPLIANT

ITEM P/N	DB1210E-SERIES	TEST INSTRUMENT	4287A / 4339B
PRODUCT	COMMON MODE CHOKE	TEST FREQUENCY	100 MHz / 0.5V

## Test Equipment

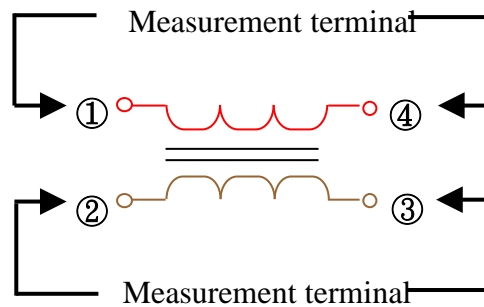
### Impedance

Measured by using Agilent 4291A RF Impedance Analyzer.



### DC Resistance

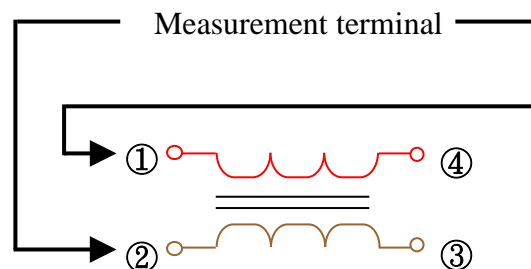
Measured by using Chroma 16502 mill ohm meter.



### Insulation Resistance

Measured by using Chroma 19073

Measurement voltage : 50v ,Measurement time : 60 sec.

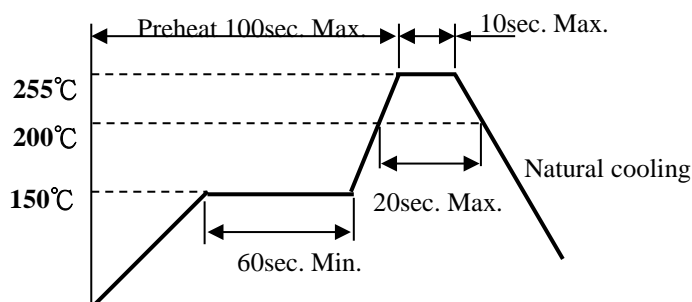


# RELIABILITY

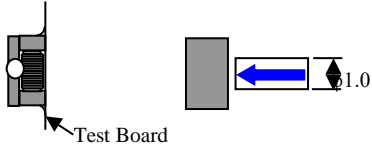
**RoHS  
COMPLIANT**

ITEM P/N	DB1210E-SERIES	TEST INSTRUMENT	4287A / 4339B
PRODUCT	COMMON MODE CHOKE	TEST FREQUENCY	100 MHz / 0.5V

## RECOMMENDED SOLDERING TEMP. GRAPH



## MECHANICAL RELIABILITY

TEST	Specification & Requirement	Method Used
Solderability	The surface of terminal/pin tested shall be covered with new solder by 90%	Solder heat proof: Preheating: 150 ±10°C 60 seconds Soldering: 245 ±5°C for 4 ±1 sec
Solder Heat Resistance	Components should have not evidence of electrical and mechanical damage Impedance: within ±15% of initial value	Preheating: 150°C 60secs Solder temperature: 260±5°C Flux: rosin Dip time: 10±0.5 secs
Terminal strength	Series No.	F (Kg)
	DB1210A/D/E	0.2
	DB1608A/C	0.5
	DB2012A/B/C	0.5
	DB3216A	1.0
		Solder a chip to test substrate and then laterally apply a force in the arrow direction 

## ENDURANCE RELIABILITY

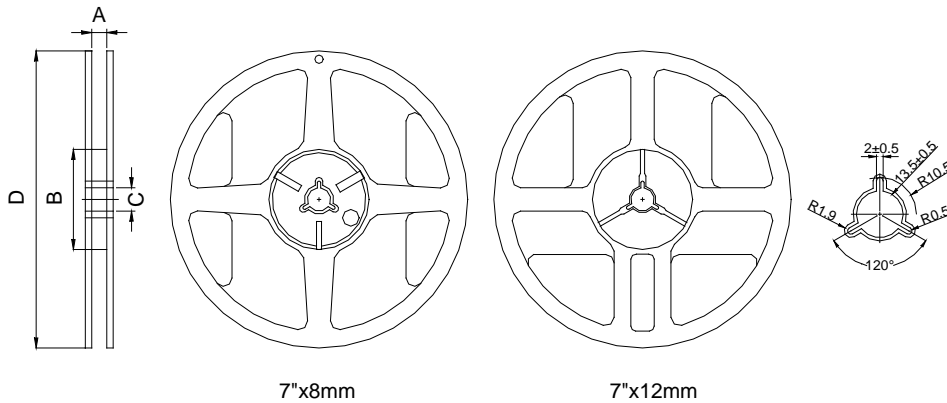
TEST	Specification & Requirement	Method Used
Thermal Shock	Impedance change within ± 15% Without mechanical damage	-65°C, (30 mins) -> room temp. (2 mins) -> 125°C, (30 mins) -> room temp. (2 mins) 50 cycles
Humidity Resistance	Impedance change within ± 15% Without mechanical damage	Apply IDC current @ 60°C ambient Humidity: 90% Duration: 168 hrs
Low Temp. Storing	Impedance change within ± 15% Without mechanical damage	Storing Temp. -40 ±2 °C for total 168 +5/-0 hours
High Temp. Storing	Impedance change within ± 15% Without mechanical damage	Storing Temp. 125 ±2 °C for total 168 +5/-0 hours

# PACKING FOR SMD

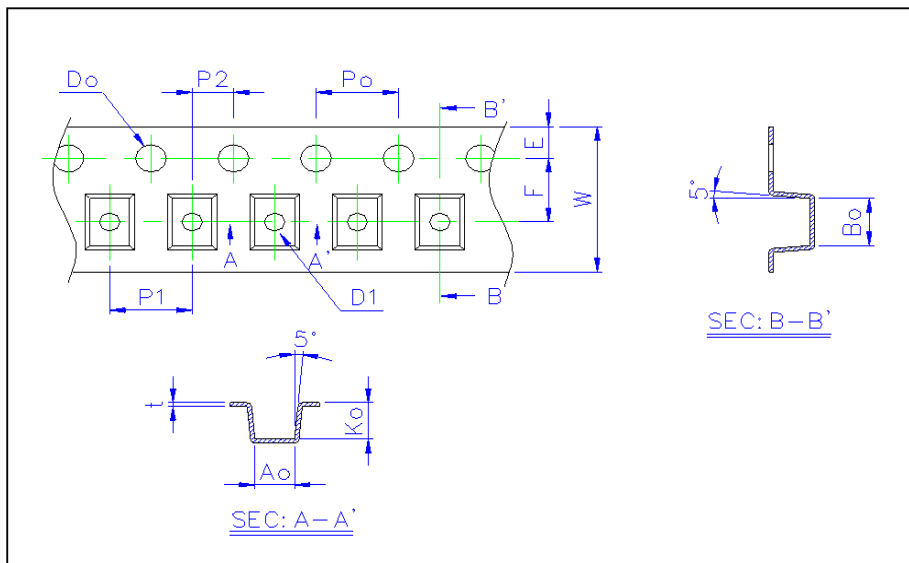
RoHS  
COMPLIANT

ITEM P/N	DB1210E-SERIES	TEST INSTRUMENT	4287A / 4339B
PRODUCT	COMMON MODE CHOKE	TEST FREQUENCY	100 MHz / 0.5V

## Reel Dimension & Tape Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
7"x8mm	9.0±0.5	60±2	13.5±0.5	178±2
7"x12mm	13.5±0.5	60±2	13.5±0.5	178±2



Size	Ao(mm)	Bo(mm)	Ko(mm)	W(mm)	E(mm)	F(mm)	Po(mm)	P1(mm)	Do(mm)
1210	1.40±0.10	1.15±0.10	0.93±0.10	8.00±0.20	1.75±0.10	3.50±0.05	4.0±0.05	4.0±0.10	1.5+0.1,-0
1608	1.00±0.10	1.65±0.10	1.18±0.10	8.00±0.20	1.75±0.10	3.50±0.05	4.0±0.05	4.0±0.10	1.5+0.1,-0
2012	1.50±0.10	2.35±0.10	1.45±0.10	8.00±0.20	1.75±0.10	3.50±0.05	4.0±0.05	4.0±0.10	1.5+0.1,-0
3216	1.88±0.10	3.50±0.10	2.10±0.10	8.00±0.20	1.75±0.10	3.50±0.05	4.0±0.05	4.0±0.10	1.5+0.1,-0

## Packaging Quantity

Chip Size	1210	1608	2012	3216
8mm/ Reel	3000	2000	2000	2000



昕磊科技股份有限公司  
SUNLEI TECHNOLOGY CORP.  
TEL: (02)8228-7672 傳真: (02)8228-7673