

深圳市晶力源科技有限公司

Shenzhen Jingliyuan Technology Co., Ltd.

● ELECTRICAL PARAMETERS

No.	Characteristic	Limits	Remark
1	Nominal Frequency	7.3728MHZ	
2	Mode of Vibration	Fundamental	
3	Frequency Tolerance	±20ppm	Measure at 25℃±3℃
4	Operating Temperature Range	-40℃~+85℃	
5	Frequency Stability	±10ppm	Over Operating Temperature Range
6	Storage Temperature Range	-55℃~+105℃	
7	Load capacitance	20PF	
8	Recommended matching capacitance range		
9	Equivalent Series Resistance	80Ω max	
10	Drive Level	10μW max	
11	Insulation Resistance	500MΩ	At 100V _{DC}
12	Shunt Capacitance	3pF	
13	Motional Capacitance		
14	Aging Per Year	±3ppm	First Year
15	Resistance Variation vs. Drive Level		
16	Frequenc Variation vs. Drive Level		
17	Package Type	7.3728M	See Page 4
18	Remark		Remark

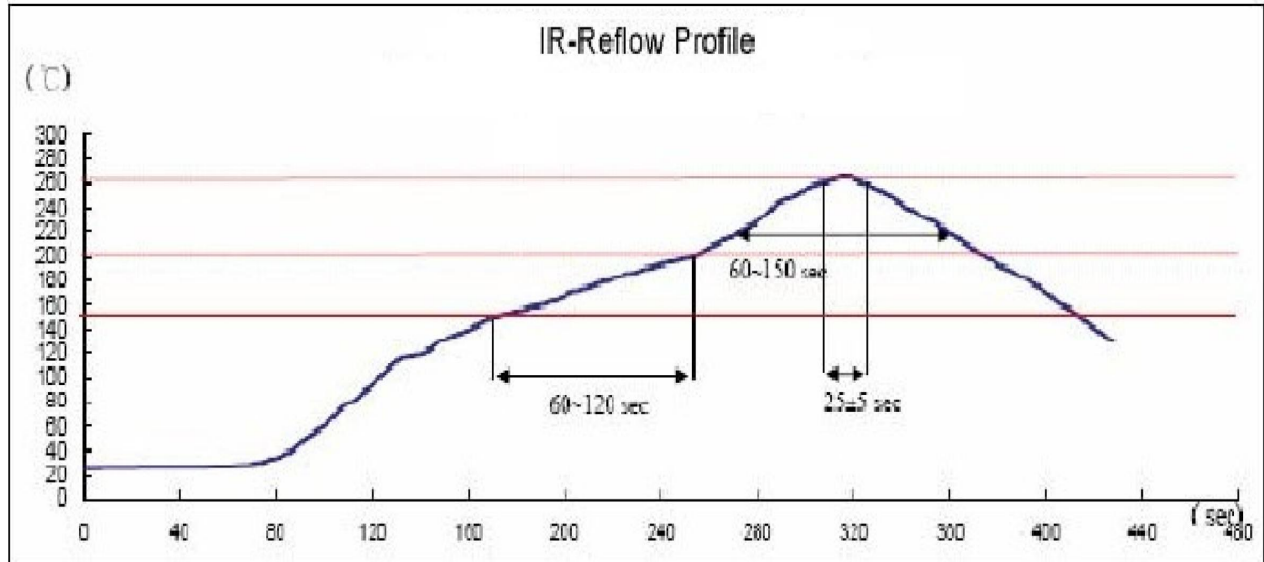
No.	Test Item	Test Conditions	Reference
1	High Temperature Storage	Temperature: 125°C±10°C Time: 1000±24 Hours	MIL-STD-883E-1016
2	Temperature Cycle	Temperature 1: -55°C±10°C Temperature 2: 125°C±10°C Temperature change between T1 and T2 at soonest Run 15 cycles, maintain T1 and T2 30minutes each in one cycle	MIL-STD-883E-1010.7B
3	Solder Heat Resistance	Pre-heat: 125°C 60~120 Seconds Solder Temperature: 260°C±10°C Time: 5 Seconds	MIL-STD-202F 210 E
4	Drop Test	3 Times Free Fall from 75cm height table to 3cm thickness hard wood board	MIL-STD-202F-203B
5	High Temperature, High Humidity Storage	Temperature: 40°C±5°C Relative Humidity: 90%--95% Time: 1344 Hours±24 Hours	MIL-STD-202 F-103B
6	Steam Aging	Temperature: 97°C Time: 8 Hours 230°C solder pot to check solderability	MIL-STD-883 C-1008.2B
7	Solderability	Dip in flux 5~10 seconds Temperature: 230°C±10°C Time: 5 Seconds	MIL-STD-883E 2003
8	Aging	Temperature: 85°C±5°C Time: 250±12Hours	MIL-STD-202 F-108A B
9	Thermal Shock	Temperature 1: -55°C±10°C Temperature 2: 125°C±10°C Temperature change between T1 and T2: 5 seconds 10 cycles, maintain T1 and T2 for 30 minutes each in one cycle	MIL-STD-883E-1011.9B

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- **RECOMMENDED IR REFLOW PROFILE**

IR REFLOW PROFILE OF CERAMIC SMD PRODUCTS FOR Pb FREE PROCESS



IR-Reflow Test

Reference Standard :JEDEC-STD 020

Test Conditions:Pre-heating:150° C to 200° C, 60 -120 sec

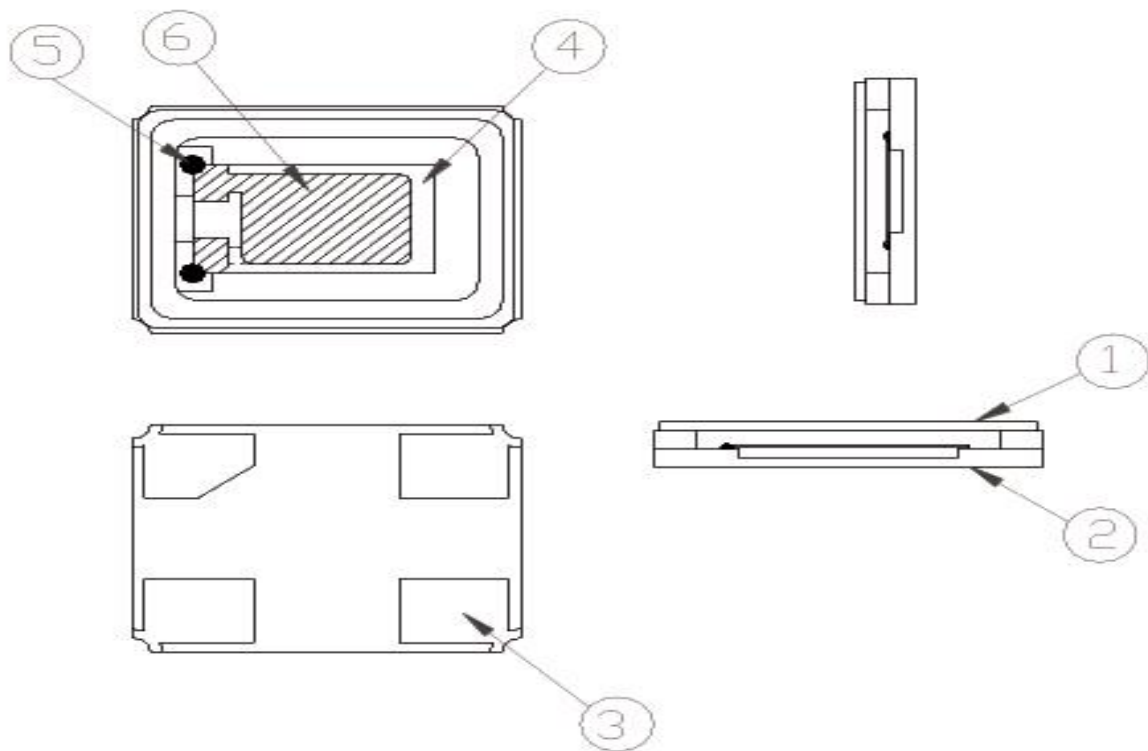
Heating :217° C, 60-150 sec

Peak Temperature : $260 \pm 5^{\circ}$ C , 25 ± 5 sec

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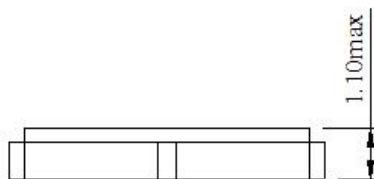
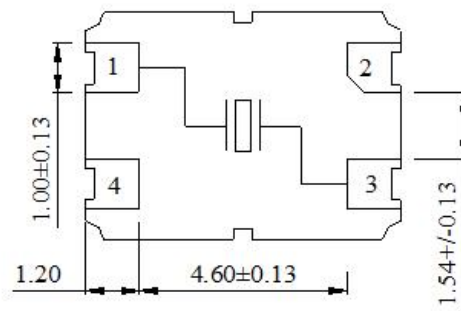
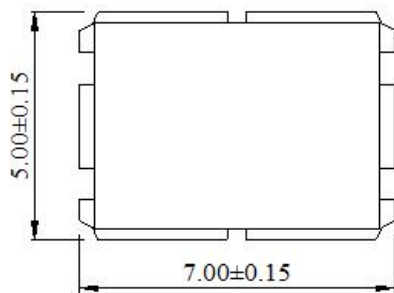


NO	COMPONENTS	MATERIALS	QTY	FINISH/SPECIFICATIONS
1	Cap(Lid)	Metal(Fe)	1	
2	Base (Package)	Ceramic(Al2O3)	1	Alumina ceramics
3	Pad (Package)	Au	4	Tungsten metalize +Ni plating + Au plating
4	Crystal blank	Sio2	1	-
5	Conductive adhesive	Ag	4	Silicone resin
6	Electrode	Ag + Cr	2	-

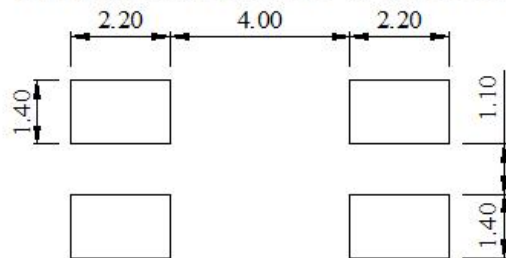
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- Outline Dimensions (unit: mm)



Recommended Solder Pattern

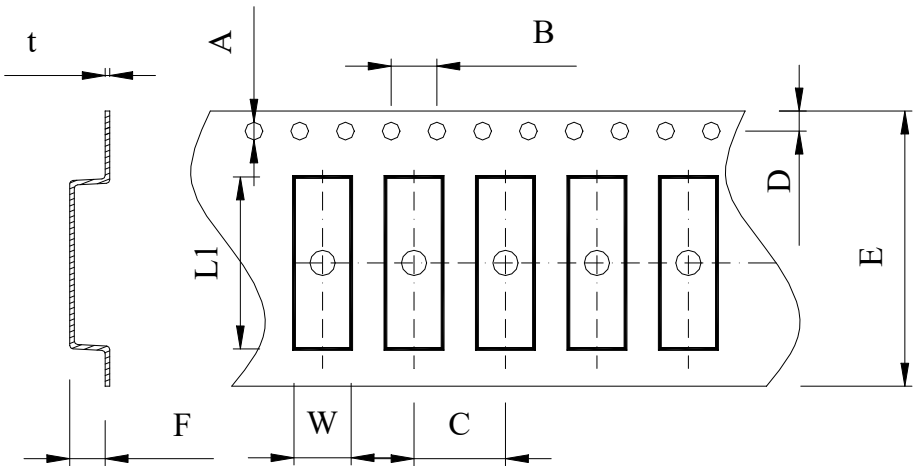


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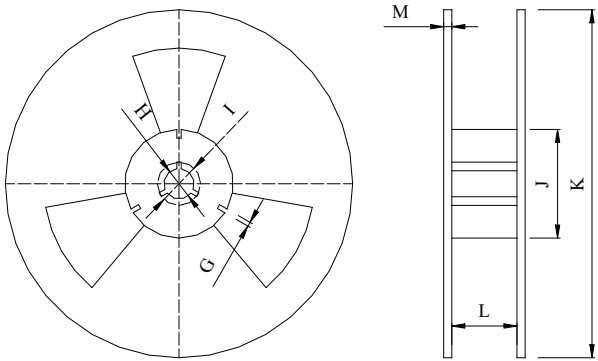
● PACKAGE

Tape Dimensions(unit : mm)



A	B	C	D	E	F	L1	W	t
1.50	4.0	4.0	1.75	8.0	1.0	3.6	2.9	0.3

Reel Dimensions(unit: mm)



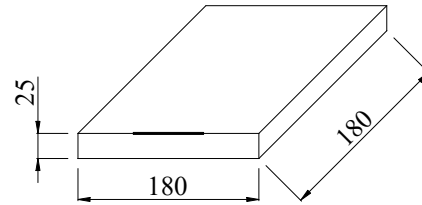
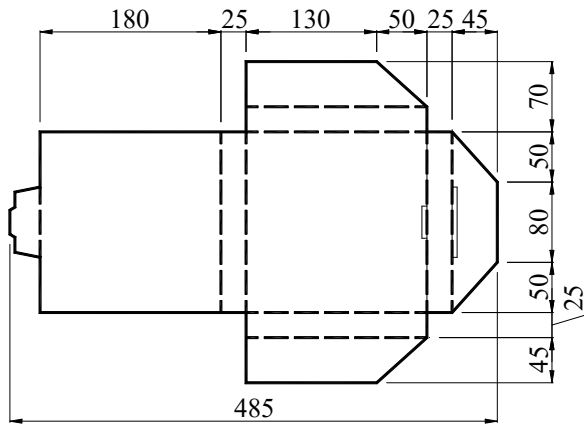
G	H	I	J	K	L	M
2.5	13.5	21.6	60.0	180	9.5	1.6

*1000pcs/Reel

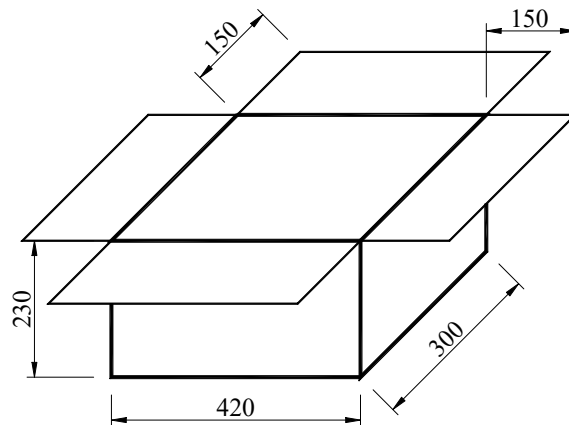
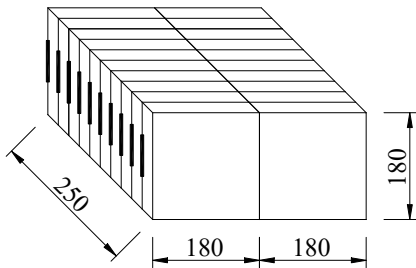
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Carton Dimension (unit : mm)



1 reel = 1 Inner box



20 Inner boxes = 1 Carton

60kpcs = 1 Carton