



TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,
Taoyuan, 324, Taiwan, R.O.C.

TEL: 886-3-4690038 FAX: 886-3-4697532

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Product Specifications Approval Sheet

Product Description: Crystal Unit 8.0x3.8 32.768KHz

TST Part No.: TZ0853A

Customer Part No.: _____

Customer signature required
Company: _____
Division: _____
Approved by : _____
Date: _____

Checked by: _____ Ginger Huang *Ginger Huang*

Approved by: _____ Kelly Huang *Kelly Huang*

Date: _____ 07/25/2012

1. Customer signed back is required before TST can proceed with sample build and receive orders.
2. Orders received without customer signed back will be regarded as agreement on the specifications.
3. Any specifications changes must be approved upon by both parties and a new revision of specifications shall be released to reflect the changes.



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8.0x3.8 32.768KHz Crystal Unit

MODEL NO.: TZ0853A

REV. NO.: 3.0

Revise:

Rev.	Rev. Page	Rev. Account	Date	Ref. No.	Reviser
1	N/A	Initial release	02/20/06'	N/A	Robert Chang
2	P3	RoHS Categoric Change	01/08/10'	1.0	Quinton Lo
3	P3	Change Electrical Specifications	07/25/12'	2.0	Ginger Huang



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32.768kHz Crystal Unit

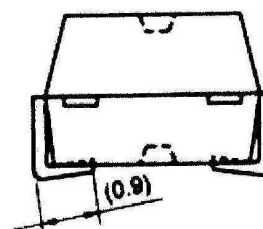
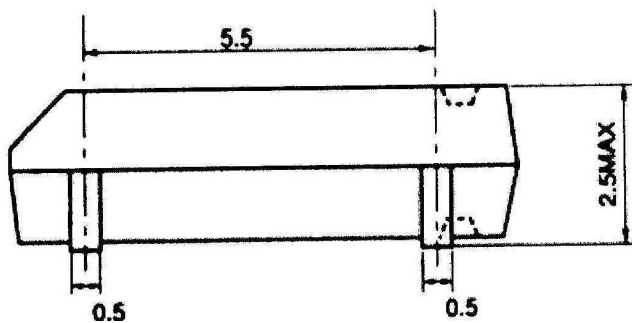
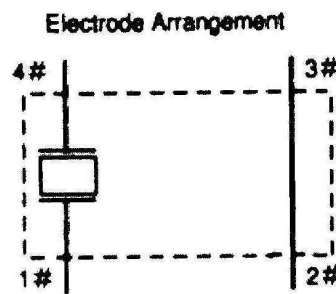
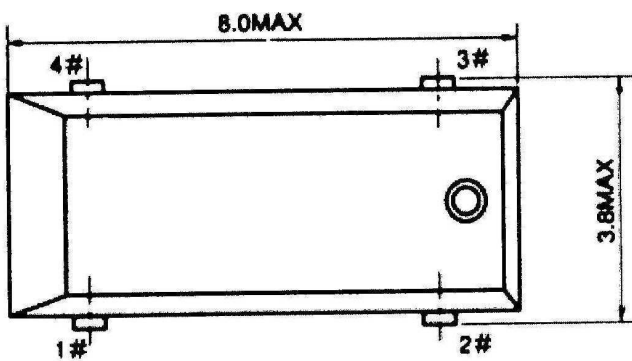
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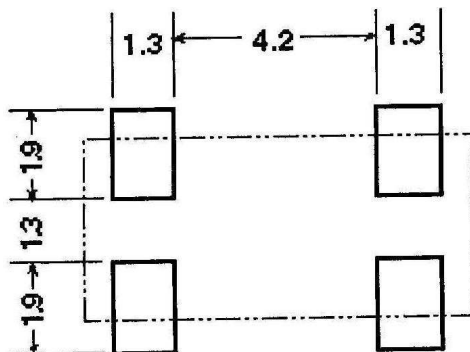
Electrical Specifications:

TZ0853A	Specification
Nominal Frequency	32.768000 KHz
Storage temperature	-55 to +125 °C
Operating Temperature Range	-40°C to +85°C
Temperature characteristics - Turnover temperature	25+/-5 °C
Temperature characteristics - Parabolic curvature constant	-0.045 +/-0.006 ppm/°C ²
Frequency Make Tolerance (FL)	+/-20 ppm @ 25°C +/- 2°C
Equivalent Series Resistance (ESR)	50K Ω max.
Drive Level	1.0 uW max.
Load Capacitance (CL)	12.5 pF
Aging	+/-3.0 ppm max.
Insulation Resistance	500MΩ Min. / DC100V+/-15V

Mechanical Dimensions (mm):



Lead connection & Land pattern (mm):

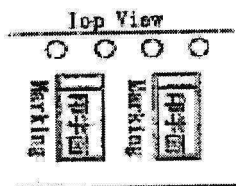
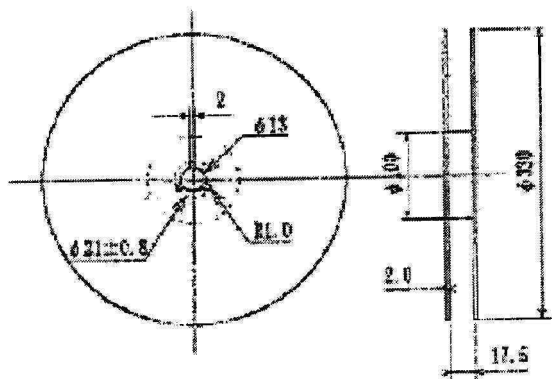
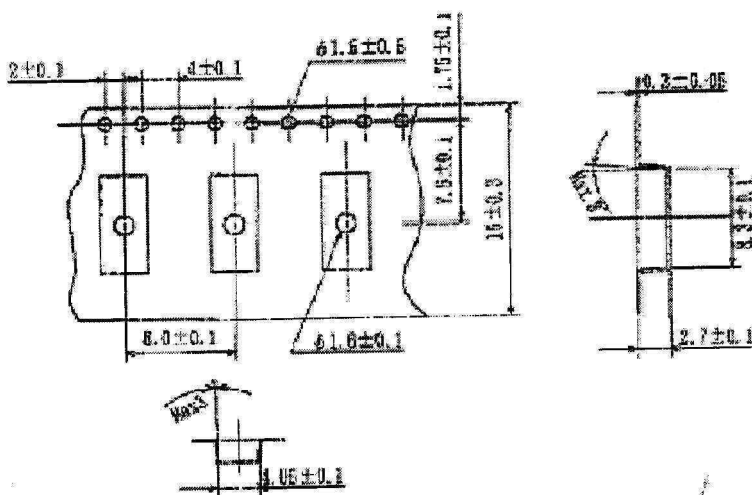


Marking:

32.768

PACKING:

TAPE & REEL DIMENSION (Unit: mm): 13" Reel / 3kpcs/Reel



テグ引き出し方向
Direction of feed

テーピング及びリール
Conforming to JIS C0806 TB1608L & R16D
(EIAJ RC1009B TE0608L & R33)適合

Reliability Specifications

Test name	Test process / method	Reference standard
Mechanical characteristics		
resistance to Soldering heat (IR reflow)	Temp./ Duration : 260°C /10sec x2 times Total time : 4min.(IR-reflow)	EIAJED-4701 -300(301)M(II)
Vibration	Total peak amplitude : 1.5mm Vibration frequency : 10 to 55 Hz Sweep period : 1.0 minute Vibration directions : 3 mutually perpendicular Duration : 2 hr / direc.	MIL-STD 202F method 201A
Mechanical Shock	directions : 3 impacts per axis Acceleration : 3000g's, +20/-0 % Duration : 0.3 ms (total 18 shocks) Waveform : Half-sine	MIL-STD 202F method 213C
Solderability	Solder Temperature:265±5°C Duration time: 5±0.5 seconds.	MIL-STD 883G method 2003
Environmental characteristics		
Thermal Shock	Heat cycle conditions -55 °C (30min) ↔ 125 °C (30min) * cycle time : 10 times	MIL-STD 883G method 1010.7
Humidity test	Temperature : 70 ± 2 °C Relative humidity : 90~95% Duration : 96 hours	MIL-STD 202F method 103B
Dry heat (Aging test)	Temperature : 125 ± 2 °C Duration : 168 hours	MIL-STD 883G method 1008.2 condition C
PCT test	Pressure: 2.06kg/cm ² (2.03*10 ⁵ pa) Temperature : 121 ± 2 °C Relative humidity : 100% Duration : 24 hours	EIAJED-4701-3 B-123A