



深圳市科源信科技有限公司

Shenzhen KeYuanXin Technology CO.,LTD

产品规格书

SPECIFICATION FOR APPROVAL

深圳市福田区振华路 118 号华丽装饰一栋西座 306A
306A Block West Building 1, Huali Decoration
NO.118 Zhenhua Road Futian District Shenzhen
电话 TEL: 4008-735-535 传真 FAX: 0755-23616323



Product Name:

Crystal

Product Type:

SMD 5032G

Nominal Freq:

27.0000MHz

ProvideBrand:

TXC

P/N:

7A27000109

Customer P/N:

Approved By Customer

Signature:

Date:



Rev	Revise page	Revise contents	Date	Ref.No.	Reviser
A1	N/A	Initial released	6-Sep-04	N/A	Yachuan Miao
A2	3	Suggested Reflow Profile Change	2-Jun-05	ECN-05P050501	Yachuan Miao
A3	-	Document version chang C to D	10-Jul-06	DCN-06P030701	Yachuan Miao

ELECTRICAL SPECIFICATIONS

Standard atmospheric conditions

Unless otherwise specified, the standard range of atmospheric conditions for making measurement and tests are as follow:

Ambient temperature : 25±5
 Relative humidity : 40%~70%

If there is any doubt about the results, measurement shall be made within the following limits:

Ambient temperature : 25±3
 Relative humidity : 40%~70%

Measure equipment

Electrical characteristics measured by HP E5100A or equivalent.

Crystal cutting type

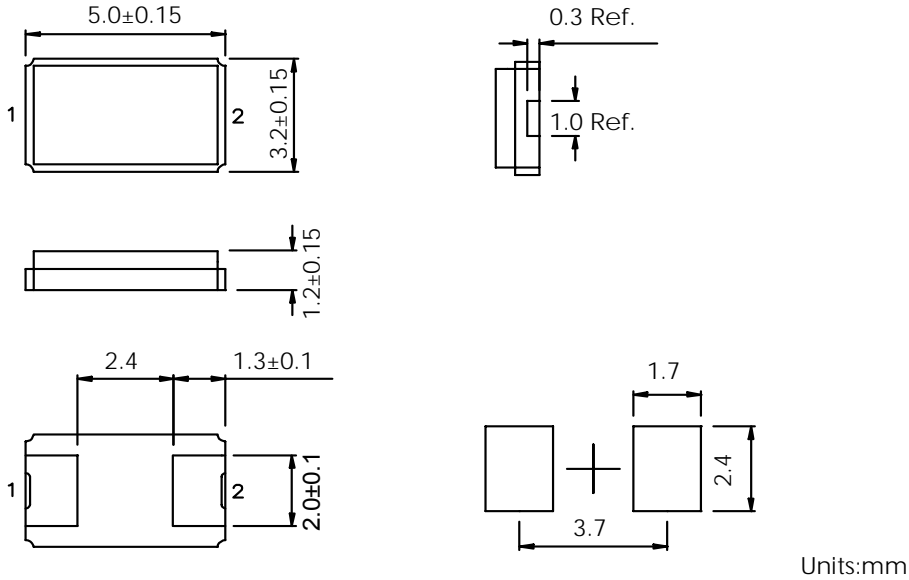
The crystal is using AT CUT (thickness shear mode).

Unit Weight:

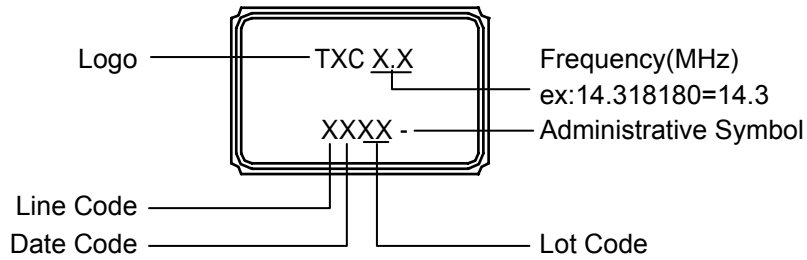
0.062±0.001 g/pcs

	Parameters	SYM.	Electrical Spec.				Notes
			MIN	TYPE	MAX	UNITS	
1	Nominal Frequency	FL	27.000000			MHz	-
2	Oscillation Mode	-	Fundamental			-	-
3	Load Capacitance	CL	20			pF	-
4	Frequency Tolerance	-	±30			ppm	at 25 ± 3
5	Frequency Tolerance	-	±30			ppm	Over Operating Temp. Range (Reference 25)
6	Operating Temperature	-	-10	~	70		-
7	Aging	-	±3			ppm	1st Year
8	Drive Level	DL	-	100	-	uW	-
9	Effective Resistance Rr	Rr	-	-	35	Ω	-
10	Shunt Capacitance C0	C0	-	-	5	pF	-
11	Insulation Resistance	-	500	-	-	MΩ	at DC 100V
12	Storage Temperature Range	-	-40	~	85		-

DIMENSIONS



MARKING



Production location: China

Date Code

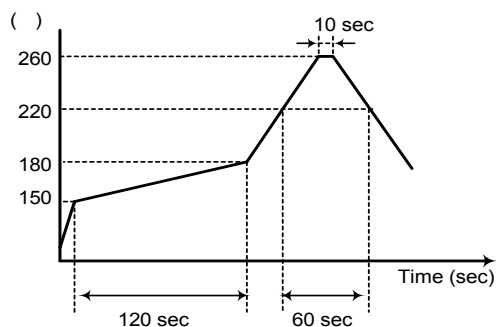
YEAR \ MONTH					JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
					A	B	C	D	E	F	G	H	J	K	L	M
2001	2005	2009	2013	2017	N	P	Q	R	S	T	U	V	W	X	Y	Z
2002	2006	2010	2014	2018	a	b	c	d	e	f	g	h	j	k	l	m
2003	2007	2011	2015	2019	n	p	q	r	s	t	u	v	w	x	y	z
2004	2008	2012	2016	2020												

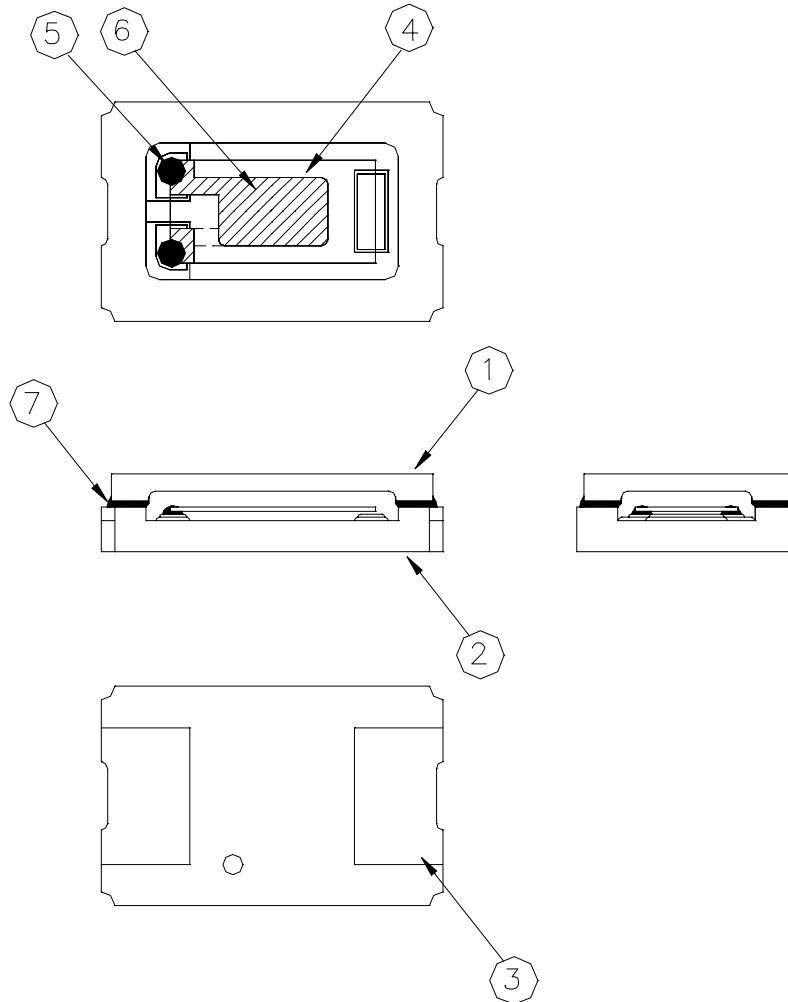
This date code will be cycled every four years

SUGGESTED REFLOW PROFILE

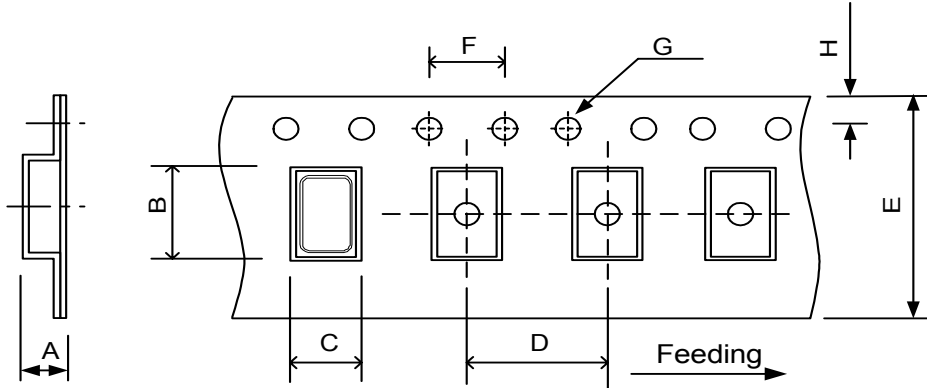
Total time : 200 sec. Max.

Solder melting point :220

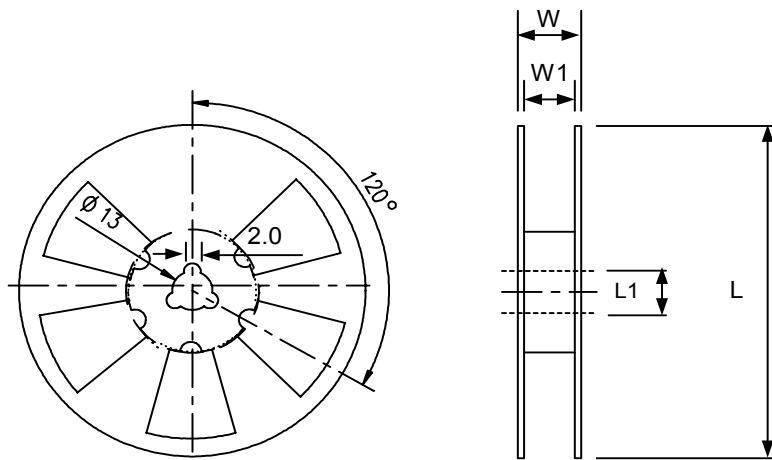
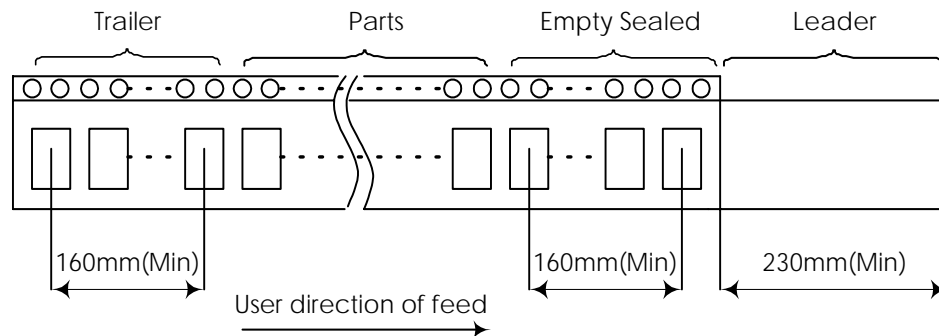


STRUCTURE ILLUSTRATION


NO	COMPONENTS	MATERIALS	QTY	FINISH/SPECIFICATIONS
1	Cap	Ceramic	1	-
2	Base(Package)	Ceramic (Al ₂ O ₃)	1	Color black
3	PAD	Au	2	Tungsten metalize + Ni plating + Au plating
4	Crystal blank	SiO ₂	1	-
5	Conductive adhesive	Ag	4	Silicon resin
6	Electrode	Ag + Cr	2	-
7	Glass	-	-	-

PACKING : (EIA-481-2)


DIMENSIONS	A	B	C	D	E	F	G	H	(UNIT : mm)
	1.40	5.40	3.60	8.00	12.00	4.00	1.55	1.75	

REMARK :


DIMENSIONS	L	L1	W	W1	pcs / Reel (UNIT : mm)
	180	13	16.5	12	Standard Reel Quantity is 1,000 pcs per reel

RELIABILITY SPECIFICATIONS
1.Mechanical Endurance

No.	Test Item	Test Methods	REF.DOC
1.1	Drop Test	75 cm height, fall freely onto concrete floor 3 times.	JIS C6701
1.2	Mechanical Shock	Device are shocked to half sine wave (1000 G) three mutually perpendicular axes each 3 times. 0.5m sec. duration time	MIL-STD-202F
1.3	Vibration	Frequency range 10 ~ 2000 Hz Amplitude 1.52 mm/20G Sweep time 20 minute Perpendicular axes each test time 4 hours (Total test time 12 hours)	MIL-STD-883E
1.4	Gross Leak	Standard Sample For Automatic Gross Leak Detector, Test Pressure: 2Kg / cm ²	MIL-STD-883E
1.5	Fine Leak	Helium Bombing 4.5 Kgf / cm ² for 2 hr	
1.6	Solderability	Temperature 260 ± 5 Immersing depth 0.5 mm minimum Immersion time 5 ± 1 seconds Flux Rosin resin methyl alcohol solvent (1 : 4)	MIL-STD-883E

2.Environmental Endurance

No.	Test Item	Test Methods	REF. DOC
2.1	Resistance To Soldering Heat	Pre-heat temperature 125 Pre-heat time 60 ~ 120 sec. Test temperature 260 ± 5 Test time 10 ± 1 sec.	MIL-STD-202F
2.2	High Temp. Storage	+ 125 ± 3 for 1000 ± 12 hours	MIL-STD-883E
2.3	Low Temp. Storage	- 40 ± 3 for 1000 ± 12 hours	
2.4	Thermal Shock	Total 100 cycles of the following temperature cycle 	MIL-STD-883E
2.5	High Temp & Humidity	85 ± 3 , RH 85% , 1000Hrs	JIS C5023
2.6	Pressure Cooker Storage	121 ± 3 , RH100% , 2 bar , 240Hrs	JIS C6701



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