



广东惠伦晶体科技股份有限公司
GUANGDONG FAITH LONG CRYSTAL TECHNOLOGY Co.,Ltd.

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PRODUCT SPECIFICATION SHEET

CUSTOMER : _____
PRODUCT TYPE : 2.0x6.0 TF
NOMINAL FREQ. : 32.768000 KHz
FL P/N : D2SQ327002
REVISION : S0
CUSTOMER P/N : _____

CUSTOMER'S APPROVAL&DATE

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FL CORPORATION

APPROVED	CHECKED	DESIGNED
Liu Feng	Liao Xiaohua	Li Xiang

MSL1
RoHS Compliant



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ATTACHMENT (optional)

- ELECTRICAL CHARACTERISTICS TEST A YES NO
- TEMPERATURE CHARACTERISTICS TEST B YES NO

PRODUCT DESCRIPTION

Standard atmospheric conditions

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

Ambient temperature $25\pm 2^{\circ}\text{C}$
Relative humidity 40%~70%

If there is no doubt the results, measurement shall be made within the following limits:

Ambient temperature $25\pm 2^{\circ}\text{C}$
Relative humidity : 40%~70%

Measure equipment

Electrical characteristics measured by S&A250B or equivalent.

Crystal cutting type

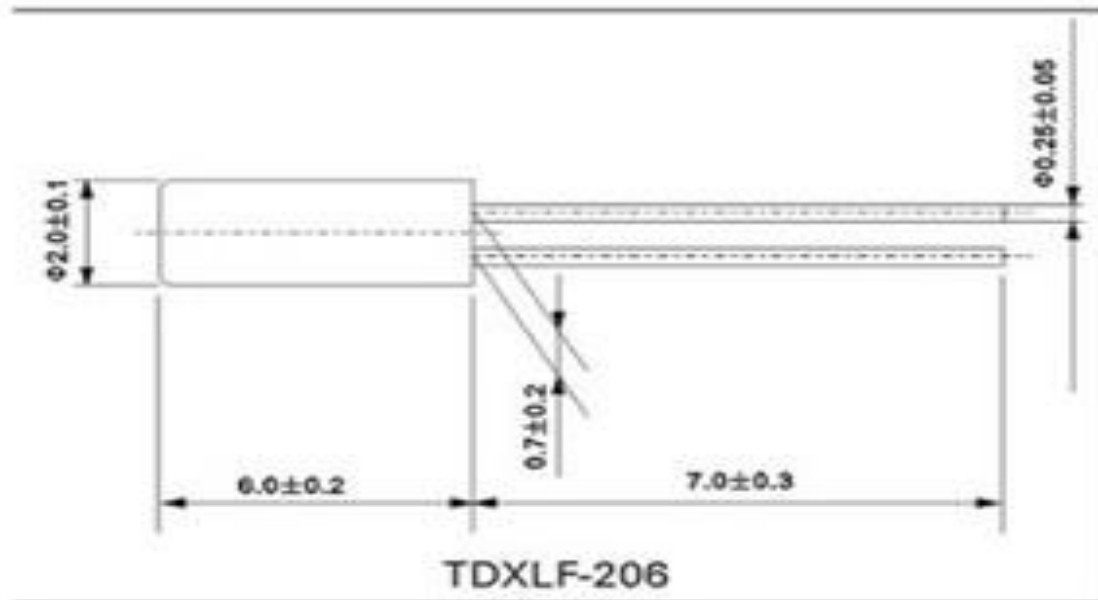
The crystal is using AT CUT (thickness shear mode)

ELECTRICAL SPECIFICATIONS

No.	Items	Electrical Spec.					Remarks
		Symbol	Min	Typ	Max	Units	
1	Nominal Frequency	FL	32.768000			KHz	-
2	Load Capacitance	CL	12.5			pF	-
3	Frequency Tolerance	-	± 20			ppm	at $25\pm 3^{\circ}\text{C}$
4	Shunt Capaitance	C0	-	1.3	-	pF	-
5	Operating Temperature	-	-10	-	60	$^{\circ}\text{C}$	-
6	Storage Temperature Range	-	-30	-	70	$^{\circ}\text{C}$	-
7	Drive Level	DL	-	-	1.0	μW	-
8	Effective Resistance	ESR	-	-	35	K Ω	at $25\pm 3^{\circ}\text{C}$
9	Insulation Resistance	IR	-	-	-	M-ohm	-
10	Aging	-	± 5			ppm/year	at $25\pm 3^{\circ}\text{C}$



DIMENSIONS UNITS: MM



MARKING



XXXX: Frequency
D: Administrative Symbol
G: Year month code
KK: Lot No.

		month											
year		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2021	2025	A	B	C	D	E	F	G	H	J	K	L	M
2022	2026	N	P	Q	R	S	T	U	V	W	X	Y	Z
2023	2027	a	b	c	d	e	f	g	h	j	k	l	m
2024	2028	n	p	q	r	s	t	u	v	w	x	y	z

SUGGESTED REFLOW PROFILE

Total time : 360 sec. Max.
Solder melting point :225 °C

