



INTERQUIP ELECTRONICS CO., LIMITED

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Crystal Resonator Specification and Approval Sheet

Customer: Apex Electronics Ltd.

Project Name: N/A

Applications: N/A

Contact Person: N/A

Customer P/N: N/A

1. Scope:

1.1 This specification applies to quartz crystal unit with a frequency of 3.686400MHz, which will be used in crystal oscillator applications.

2. Construction:

2.1 Type of Holder: THHF-49S3 (RoHS Compliant)

2.2 Enclosure Seal: Resistance weld

3. Characteristics:

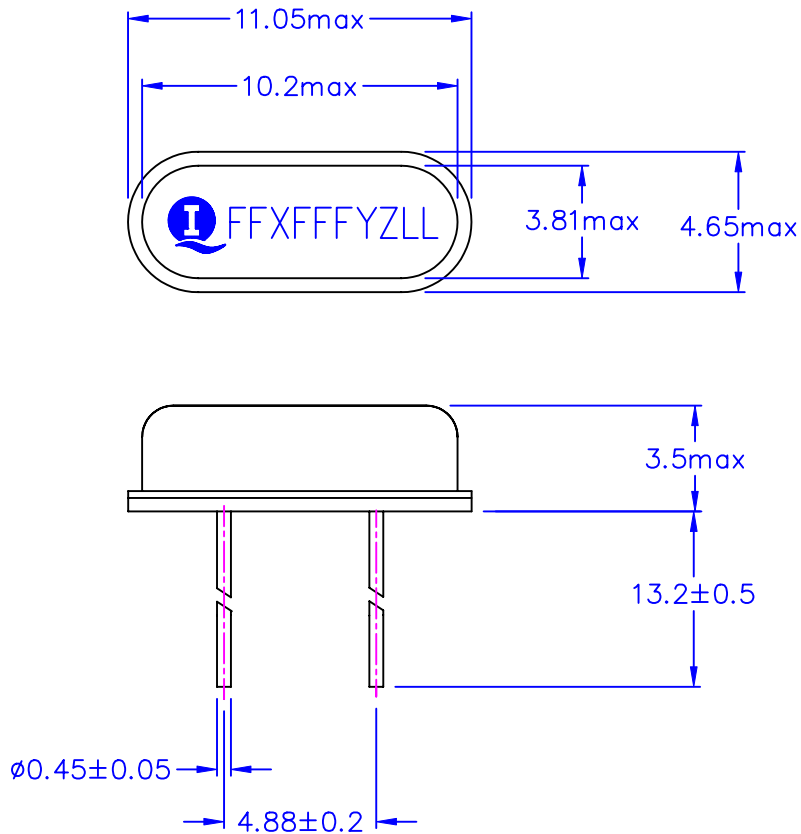
3.1	Nominal Frequency	(f)	3.686400MHz
3.2	Mode of Vibration		Fundamental
3.3	Load Capacitance	(C _L)	18pF
3.4	Frequency Tolerance at 25 °C±3 °C	(Δ f/f)	±30 ppm
3.5	Resonance Resistance	(Ω)	120 Ohm Max.
3.6	Shunt Capacitance	(C ₀)	7pF Max.
3.7	Drive Level	(D _L)	100uW
3.8	Frequency Deviation with Temperature	(Δ f/f)	±30 ppm
3.9	Operating Temperature Range	(T _{OPR})	-10°C to +70°C
3.10	Storage Temperature Range	(T _{STG})	-55°C to +125°C
3.11	Insulation Resistance	(SR)	500M Ω or More
3.12	Aging	(Δ f _A)	±5 ppm per Year Max.

4. Special Requirements:

No special requirement is needed

				TITLE CRYSTAL RESONATOR		DWG.	M Zhao	
						DATE	07-03-10	
				PART NO	7C03686183AIAFA2Q3	TOLERANCE	CHKD. J Mok	
				MODEL	THHF-49S3	X.± X.X±	DATE	07-03-10
				REMARK		X.XX± ANGULAR±	APPD.	XM Sun
						DATE	07-03-10	
DATE	MODIFY DESCRIPTION	BY	SALESMAN : Raymond Chan		SHEET	1/2	REV	0

EXTERNAL DIMENSIONS



MARKING SPECIFICATIONS

-  — COMPANY'S LOGO
- FF FFF — REPRESENT FREQUENCY (MHz)
- X — REPRESENT PRODUCTION LINE CODE
- YZ — REPRESENT MONTH & YEAR CODE RESPECTIVELY
- " Y " :

MONTH	Jan	Feb	Mar	Apr.	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
MARK	A	B	C	D	E	F	G	H	J	K	L	M

" Z " CODE IS THE LAST NUMBER OF PRODUCTION YEAR

FOR INSTANCE:

YEAR	2000	2001	2002	2003	2004
MARK	0	1	2	3	4

LL — REPRESENT LOT CODE (AA-ZZ)

2. DO NOT SCALE DRAWING
 NOTES: 1. ALL DIMENSIONS ARE IN MM



Interquip Electronics Co., Ltd

				TITLE		RESONATOR		DWN.	M.Zhao
				PART NO.				DATE	2004.2.10
				MODEL		THHF-49S3		CHKD	Johnson Mok
				REMARK				DATE	2004.2.10
								APPD.	XM.Sun
								DATE	2004.2.10
DATE	MODIFY	DESCRIPTION	BY					DWG.NO.	004-06121-003
								REV.3	