



INTERQUIP ELECTRONICS CO., LIMITED

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Crystal Resonator Specification and Approval Sheet

Customer: Apex Electronics Ltd.

Project Name: N/A

Contact Person: N/A

Applications: N/A

Customer Part Number: N/A

1. Scope:

1.1 This specification applies to quartz crystal unit with a frequency of 12.000000MHz, which will be used in crystal oscillator applications.

2. Construction:

2.1 Type of Holder: SMCE-5032 (RoHS Compliant)

2.2 Enclosure Seal: Seam Weld

3. Characteristics:

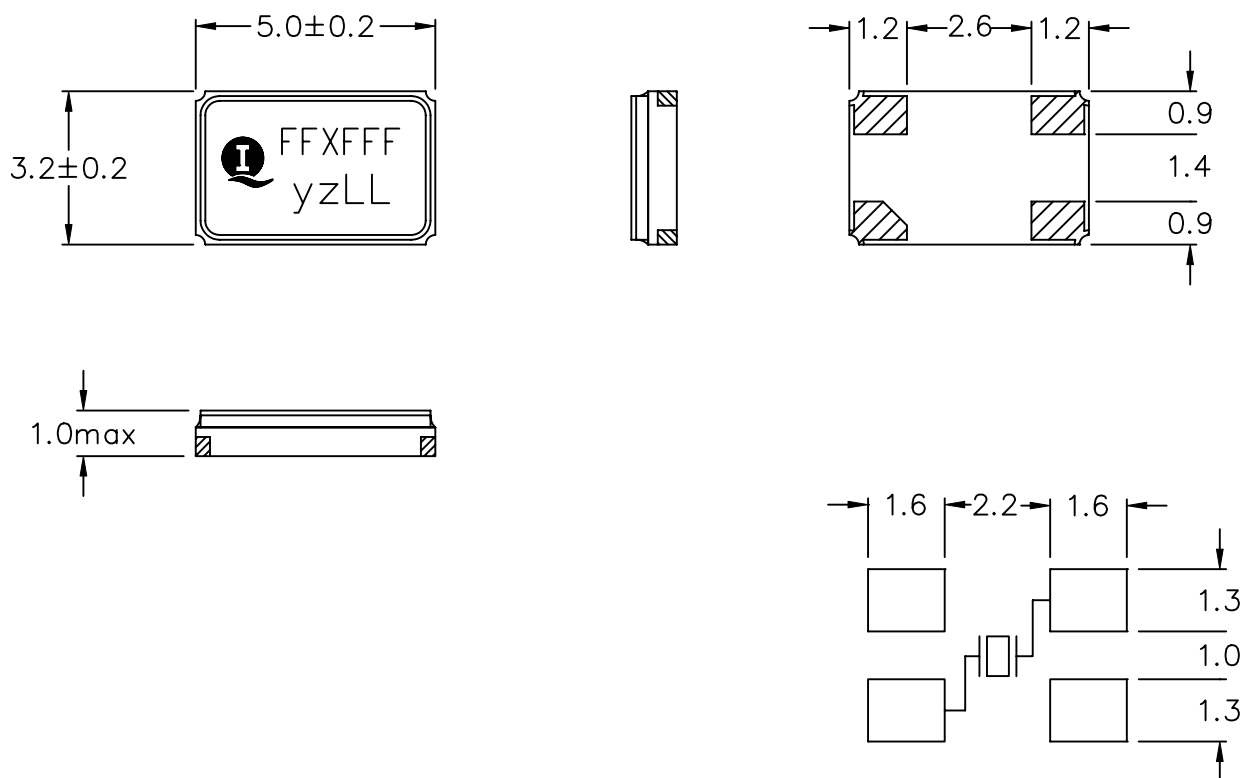
3.1	Nominal Frequency	(f)	12.000000MHz
3.2	Mode of Vibration		Fundamental
3.3	Load Capacitance	(C _L)	18pF
3.4	Frequency Tolerance at 25°C±3°C	(Δf/f)	±30 ppm
3.5	Resonance Resistance	(Ω)	60 Ohm Max.
3.6	Shunt Capacitance	(C ₀)	7.0pF Max.
3.7	Drive Level	(D _L)	100uW
3.8	Frequency Deviation with Temperature	(Δf/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)	500MΩ or more
3.11	Aging	(Δf/f)	±5ppm per year Max.

4. Special Requirements:

No special requirement is needed

				TITLE	CRYSTAL RESONATOR	DWG.	M Zhao
						DATE	07-03-10
				PART NO	5X12000183SIAF60Q3	CHKD.	J Mok
				MODEL	SMCE-5032	DATE	07-03-10
				REMARK		APPD.	XM Sun
						DATE	07-03-10
	DATE	MODIFY DESCRIPTION	BY	SALESMAN	Raymond Chan	SHEET	1/2
						REV	0

EXTERNAL DIMENSIONS



RECOMMENDED SOLDERING PATTERN

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 SMD RESONATOR		DWN.	M Zhao
						DATE	2004.2.10
				PART NO.		CHKD	Johnson Mok
				MODEL	SMCE-5032	DATE	2004.2.10
				REMARK		APPD.	XM.Sun
						DATE	2004.2.10
DATE	MODIFY	DESCRIPTION	BY	DWG.NO. 004-06187-000		REV.2	