



# INTERQUIP ELECTRONICS CO., LIMITED

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## Crystal Resonator Specification and Approval Sheet

**Customer: RS COMPONENTS**

**Project Name: N/A**

**Applications: N/A**

**Contact Person: N/A**

**Customer Part Number: N/A**

### 1. Scope:

1.1 This specification applies to quartz crystal unit with a frequency of 20.000000MHz, which will be used in crystal oscillator applications.

### 2. Construction:

2.1 Type of Holder: SMAQ-7050A ( 2 Pads ) (RoHS Compliant)

2.2 Enclosure Seal: Epoxy Resin Hermetic Seal

### 3. Characteristics:

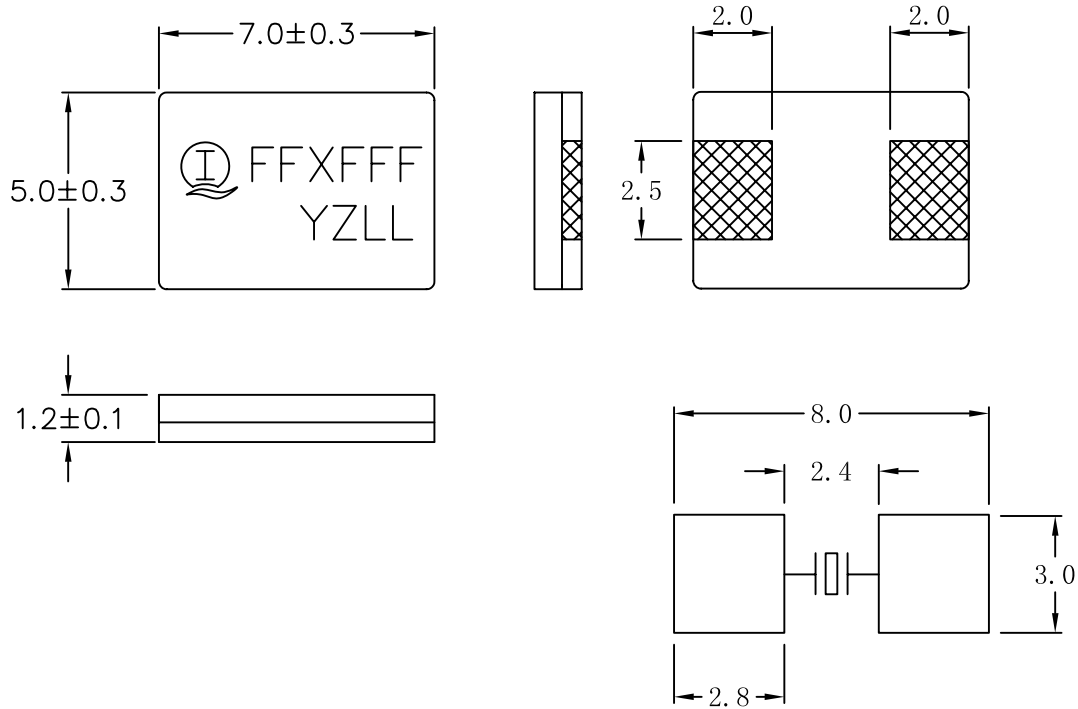
3.1	Nominal Frequency	(f)	<b>20.000000MHz</b>
3.2	Mode of Vibration		<b>Fundamental</b>
3.3	Load Capacitance	(C <sub>L</sub> )	<b>12pF</b>
3.4	Frequency Tolerance at 25 °C±3 °C	( Δ f/f)	<b>±30 ppm</b>
3.5	Resonance Resistance	(Ω)	<b>60 Ohm Max.</b>
3.6	Shunt Capacitance	(C <sub>0</sub> )	<b>7pF Max.</b>
3.7	Drive Level	(D <sub>L</sub> )	<b>0.1mW</b>
3.8	Frequency Deviation with Temperature	( Δ f/f)	<b>±30ppm</b>
3.9	Operating Temperature Range	(T <sub>OPR</sub> )	<b>-40°C to 85°C</b>
3.10	Storage Temperature Range	(T <sub>STG</sub> )	<b>-40°C to 85°C</b>
3.11	Insulation Resistance	(SR)	<b>500M Ω or More</b>
3.12	Aging	( Δ f <sub>A</sub> )	<b>±5 ppm per Year Max.</b>

### 4. Special Requirements:

No special requirement is needed

				TITLE <b>CRYSTAL RESONATOR</b>		DWG.	<b>M. Zhao</b>
						DATE	<b>11-01-13</b>
				PART NO <b>5PDA20000123TF60Q3</b>	TOLERANCE	CHKD.	<b>J Mok</b>
				MODEL <b>SMAQ-7050A( 2 pads )</b>	X± X.X±	DATE	<b>11-01-13</b>
				REMARK	X.XX± ANGULAR±	APPD.	<b>XM Sun</b>
						DATE	<b>11-01-13</b>
DATE	MODIFY DESCRIPTION	BY	SALESMAN :Gary Chan		SHEET 1/2	REV	<b>0</b>

EXTERNAL DIMENSIONS



MARKING SPECIFICATIONS

RECOMMENDED SOLDERING PATTERN

 — 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	2009	2010	2011	2012	2013
MARK	9	0	1	2	3

LL — REPRESENT LOT CODE (AA-ZZ)

2. DO NOT SCALE DRAWING

NOTES: 1. ALL DIMENSIONS ARE IN MM



Interqip Electronics Co., Ltd

				TITLE SMD RESONATOR		DWN.	H_Zhang
				PART NO.		DATE	2009.3.2
				MODEL SMAQ-7050		CHKD	M_Zhao
				REMARK		DATE	2009.3.2
						APPD.	Xm_Sun
						DATE	2009.3.2
DATE	MODIFY DESCRIPTION	BY		DWG.NO. 004-061F9-001		REV.5	