



# 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 12.000000MHz, which will be used in crystal oscillator applications.

### 2. Construction:

2.1 Type of Holder: SMAQ-5032A ( 2pads) RoHS Compliant

2.2 Enclosure Seal: Epoxy Resin Hermetic Seal

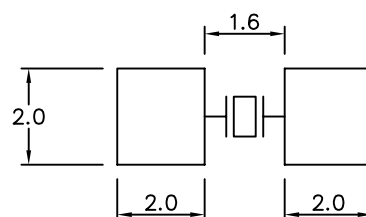
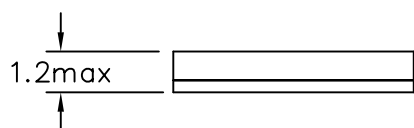
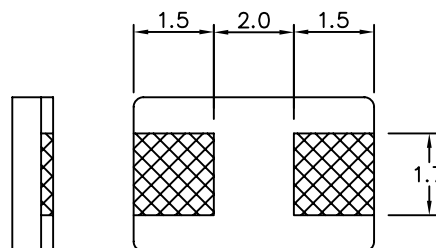
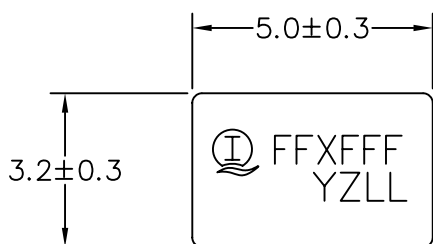
### 3. Characteristics:

3.1	Nominal Frequency	(f)	<b>12.000000MHz</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>80 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>±30 ppm</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>

				TITLE <b>CRYSTAL RESONATOR</b>		DWG.	<b>M Zhao</b>
						DATE	<b>11-01-11</b>
				PART NO <b>5RDA12000123TF80Q3</b>	TOLERANCE	CHKD.	<b>J Mok</b>
				MODEL <b>SMAQ-5032A (2 pads)</b>	X± X.X±	DATE	<b>11-01-11</b>
				REMARK	X.XX± ANGULAR±	APPD.	<b>XM Sun</b>
						DATE	<b>11-01-11</b>
DATE	MODIFY DESCRIPTION	BY	SALESMAN :Gary Chan		SHEET 1/3	REV	<b>0</b>

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	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



Interquip Electronics Co., Ltd

				TITLE SMD RESONATOR		DWN.	H_Zhang
						DATE	2009.3.2
				PART NO.	TOLERANCE	CHKD	M_Zhao
				MODEL SMAQ-5032	X.±0.3 X.X±0.15	DATE	2009.3.2
				REMARK	X.XX±0.05 ANGULAR±	APPD.	Xm_Sun
						DATE	2009.3.2
DATE	MODIFY DESCRIPTION	BY		DWG.NO. 004-061G9-006		REV.1	