



# 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**

**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: SMAC-3225B (4 solder pads)

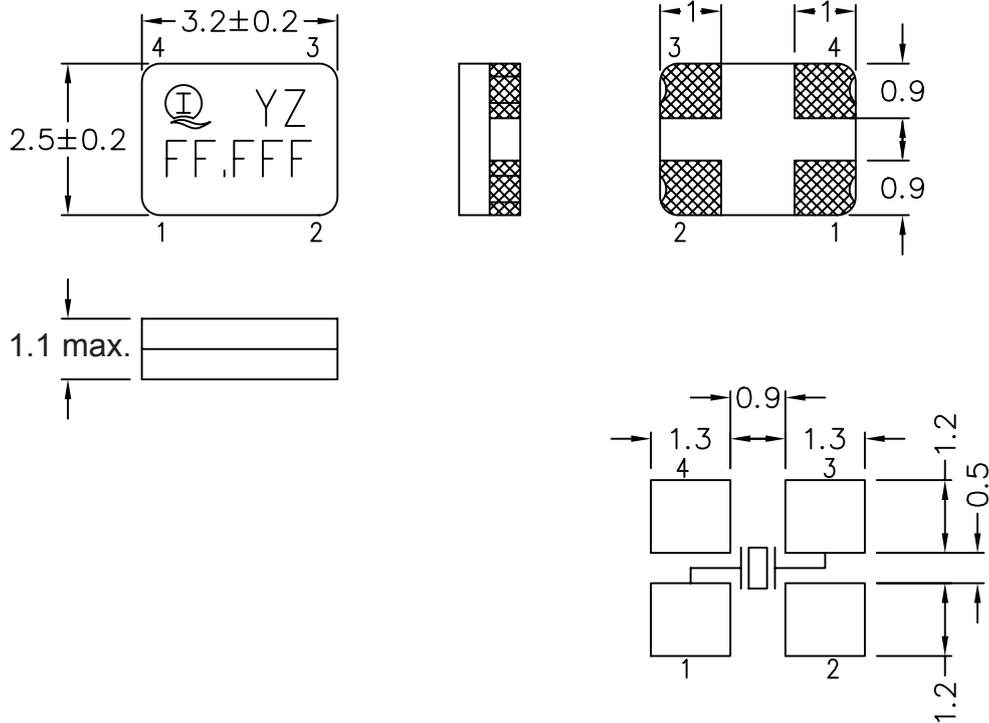
2.2 Enclosure Seal: Epoxy Resin Hermetic Seal (RoHS Compliant)

### 3. Characteristics:

3.1	Nominal Frequency Range	(f)	20.000000MHz
3.2	Mode of Vibration		Fundamental
3.3	Load Capacitance	(C <sub>L</sub> )	12pF
3.4	Frequency Tolerance at 25 °C±3 °C	(Δ f/f)	±30ppm
3.5	Resonance Resistance	(Ω)	120 Ohms Max.
3.6	Shunt Capacitance	(C <sub>0</sub> )	7pF Max.
3.7	Drive Level	(D <sub>L</sub> )	0.1mW
3.8	Frequency Deviation with Temperature	(Δ f/f)	±30ppm
3.9	Operating Temperature Range	(T <sub>OPR</sub> )	-40°C to 85°C
3.10	Storage Temperature Range	(T <sub>STG</sub> )	-55°C to 125°C
3.11	Insulation Resistance	(SR)	500M Ω or More
3.12	Aging	(Δ f <sub>A</sub> )	±5 ppm per Year Max.

TITLE				<b>CRYSTAL RESONATOR</b>		DWG.	M Zhao
						DATE	11-01-11
P/N:				<b>5YEA20000123TFA2Q3</b>	TOLERANCE	CHKD.	Cs Chiang
MODEL				<b>SMAC-3225B</b>	X± X.X±	DATE	11-01-11
					X.XX± ANGULAR±	APPD.	XM Sun
						DATE	11-01-11
DATE	MODIFY DESCRIPTION	BY	SALES : Gary Chan		SHEET	1/2	REV 0

## EXTERNAL DIMENSIONS



### MARKING SPECIFICATIONS

### RECOMMENDED SOLDERING PATTERN

 — INTERQUIP COMPANY'S LOGO

FF.FFF — REPRESENT FREQUENCY (MHz)

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

2. DO NOT SCALE DRAWING

NOTES: 1. ALL DIMENSIONS ARE IN MM



## Interquip Electronics Co., Ltd

TITLE				SMD RESONATOR		DWN.	M Zhao
						DATE	2009.9.18
PART NO.						CHKD	Johnson Mok
MODEL				SMAC-3225		DATE	2009.9.18
REMARK						APPD.	Xm_Sun
						DATE	2009.9.18
DATE	MODIFY	DESCRIPTION	BY	DWG.NO. 004-061J7-008		REV. 1	