



INTERQUIP ELECTRONICS CO., LIMITED

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Crystal Resonator Specification and Approval Sheet

Customer: Apex Electronics

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 32.000000MHz, which will be used in crystal oscillator applications.

2. Construction:

2.1 Type of Holder: SMCE-3225 (RoHS Compliant)

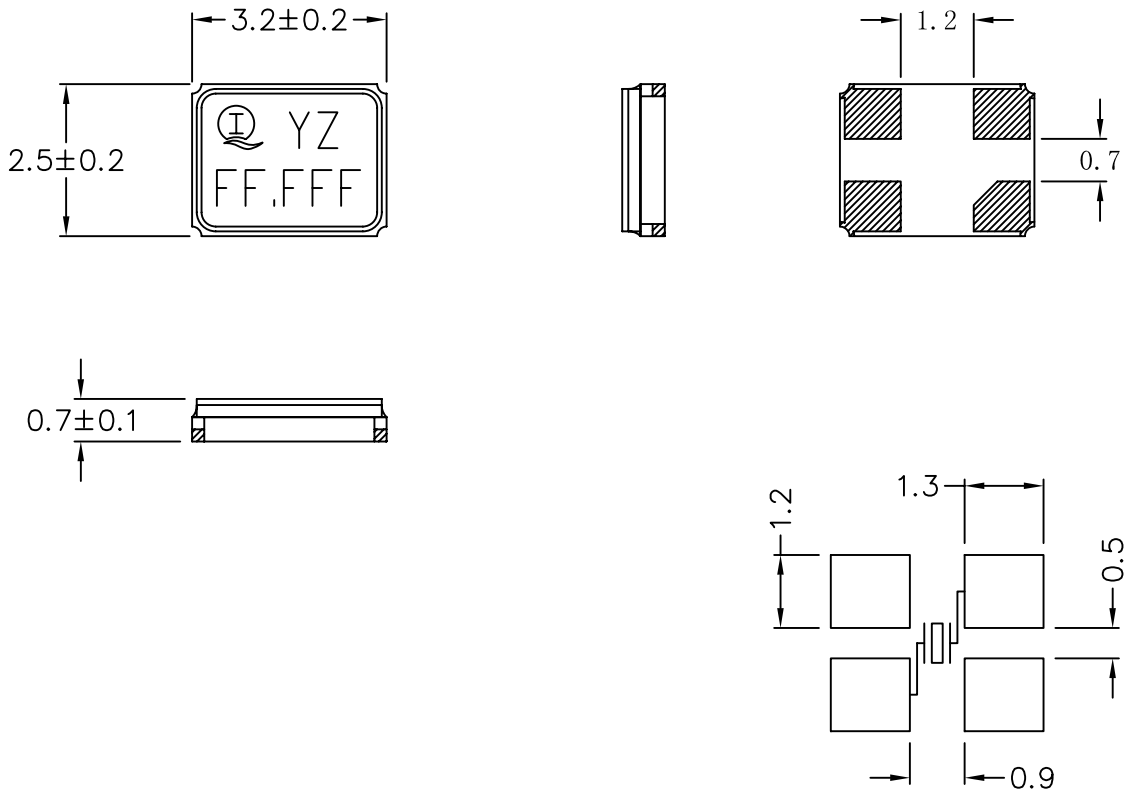
2.2 Enclosure Seal: Seam Welded Seal

3. Characteristics:

3.1	Nominal Frequency	(f)	32.000000MHz
3.2	Mode of Vibration		Fundamental
3.3	Load Capacitance	(C _L)	16pF
3.4	Frequency Tolerance at 25 °C±3 °C	(Δ f/f)	±15ppm
3.5	Resonance Resistance	(Ω)	60 Ohm Max.
3.6	Shunt Capacitance	(C ₀)	7.0pF Max.
3.7	Drive Level	(D _L)	0.1mW
3.8	Frequency Deviation with Temperature	(Δ f/f)	±15ppm
3.9	Operating Temperature Range	(T _{OPR})	-30°C to 85°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)	±2 ppm per years

				TITLE CRYSTAL RESONATOR		DWG.	M. Zhao	
						DATE	09-03-04	
				PART NO	5YAA3200016BSF60QB	TOLERANCE	CHKD.	J Mok
				MODEL	SMCE-3225	X± X.X±	DATE	09-03-04
				REMARK		X.XX± ANGULAR±	APPD.	XM Sun
							DATE	09-03-04
DATE	MODIFY DESCRIPTION	BY	SALESMAN : 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
				PART NO.				DATE	2009.2.4
				MODEL		SMCE-3225		CHKD	Johnson Mok
				REMARK				DATE	2009.2.4
								APPD.	XM.Sun
								DATE	2009.2.4
DATE	MODIFY DESCRIPTION	BY		DWG.NO. 004-061J7-002				REV.	2