



INTERQUIP ELECTRONICS CO., LIMITED

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Crystal Resonator Specification and Approval Sheet

Customer: APEX Electronics Ltd

Project Name: N/A

Applications: N/A

Contact Person: Donald McLellan

Customer Part Number: N/A

1. Scope:

1.1 This specification applies to quartz crystal unit with a frequency of 24.000000MHz, which will be used in crystal oscillator applications.

2. Construction:

2.1 Type of Holder: SMCE-2520 (RoHS Compliant)

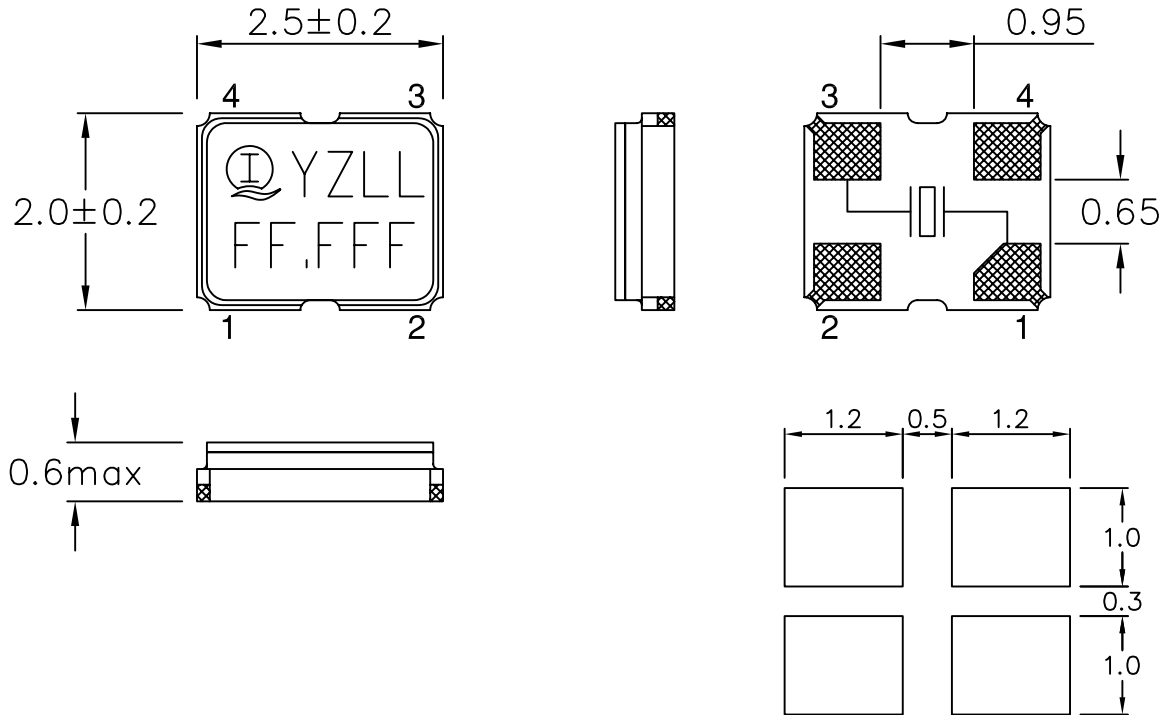
2.2 Enclosure Seal: Seam Welded Seal

3. Characteristics:

3.1	Nominal Frequency	(f)	24.000000MHz
3.2	Mode of Vibration		Fundamental
3.3	Load Capacitance	(C _L)	18pF
3.4	Frequency Tolerance at 25 °C±3 °C	(Δ f/f)	±30ppm
3.5	Resonance Resistance	(Ω)	150 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)	±30ppm
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)	±3 ppm per years

				TITLE CRYSTAL RESONATOR		DWG.	M. Zhao
						DATE	12-10-08
				PART NO 5ZAA24000183SFA5Q3	TOLERANCE	CHKD.	J Mok
				MODEL SMCE-2520	X± X.X±	DATE	12-10-08
				REMARK	X.XX± ANGULAR±	APPD.	XM Sun
						DATE	12-10-08
DATE	MODIFY DESCRIPTION	BY	SALESMAN : Gary Chan		SHEET 1/2	REV	0

EXTERNAL DIMENSIONS



MARKING SPECIFICATIONS

— 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

LL — REPRESENT LOT CODE (AA-ZZ)

RECOMMENDED SOLDERING PATTERN

2. DO NOT SCALE DRAWING
 NOTES: 1. ALL DIMENSIONS ARE IN MM



Interquip Electronics Co., Ltd

TITLE SMD RESONATOR				DWN.	M_Zhao
				DATE	2011.10.19
PART NO.			TOLERANCE		CHKD
MODEL SMCE-2520			X.±0.3 X.X±0.15		DATE
REMARK			X.XX±0.05 ANGULAR±		APPD.
					DATE
DATE	MODIFY DESCRIPTION	BY	DWG.NO. 004-061P7-000		REV. 3