

SPECIFICATION

Customer P/N:

Product Name: Crystal Resonator

P/N:S3225-16.000M-9-10-10-A

Frequency: 16.000MHz

Present Date: 2008-11-27

Customer Confirm		Customer Approval Chapter
Approver		
Department		
Date		



ISO9001:2000

ISO14001:2004

1. Electrical characteristics

Standard atmospheric conditions

Unless otherwise specified, the standard range of atmospheric conditions for making measurement and tests are as follow:

Ambient temperature : 22±5°C

Relative humidity : 40%~70%

If there is no doubt about the results, measurement shall be made within the following limits:

Ambient temperature : 22±1°C

Relative humidity : 40%~70%

Measure equipment

Electrical characteristics measured by HP E5100A or equivalent.

Crystal cutting type

The crystal is using AT CUT (thickness shear mode).

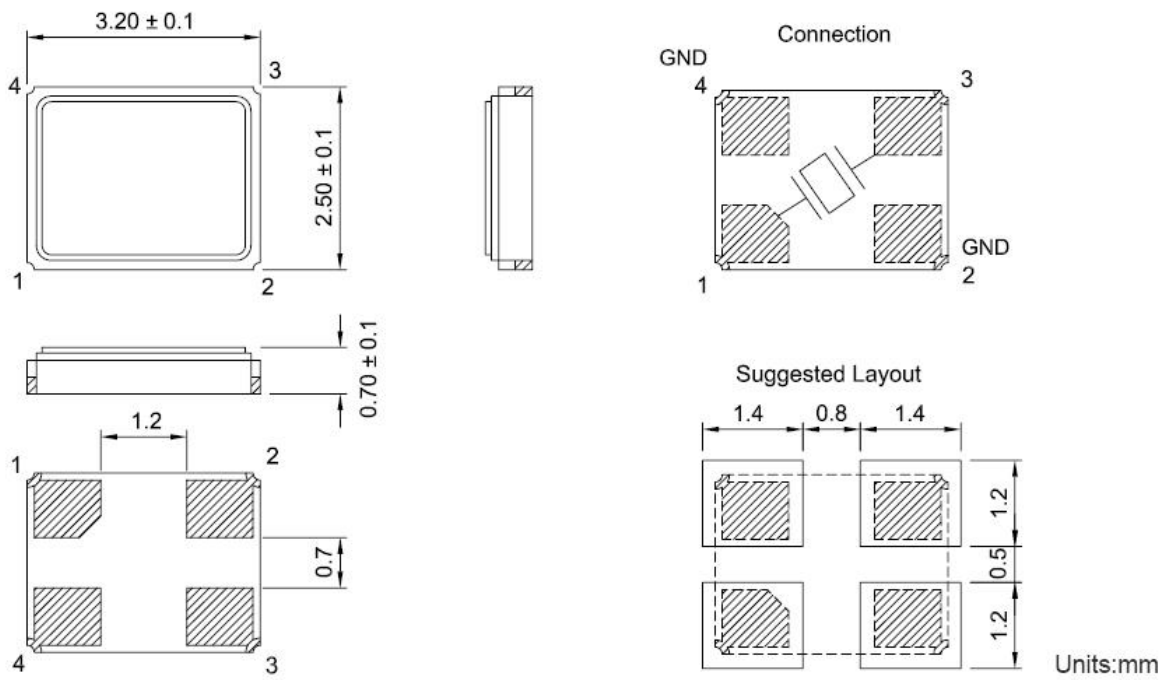
Unit Weight:

0.046±0.001 g/pcs

	Parameters	SY M.	Electrical Spec.				Notes
			MIN	TYPE	MAX	UNITS	
1	Nominal Frequency	FL	16.000			MHz -	-
2	Oscillation Mode	-	Fundamental			-	-
3	Load Capacitance	CL	9			pF	-
4	Frequency Tolerance	-	±10			ppm	at 25 °C ± 3 °C
5	Frequency Tolerance	-	±10			ppm	Over Operating Temp. Range (Reference 25°C)
6	Operating Temperature	-	-20	~	70	°C	-
7	Aging	-	±3			ppm	1st Year
8	Drive Level	DL	-	100	-	UW	-
9	Effective Resistance RR	Rr	-	-	80	Ω	-
10	Shunt Capacitance C0	C0	-	-	4.0	pF	-
11	Motional Capacitance C1	C1	-	-	NA	fF	-
12	C0/C1 Ratio				NA	%	
13	Q Factor				NA		
14	SPDB				NA	dB	± 5000ppm
15	Insulation Resistance	-	500	-	-	MΩ	at DC 100V
16	Storage Temperature Range	-	-40	~	85	..	-

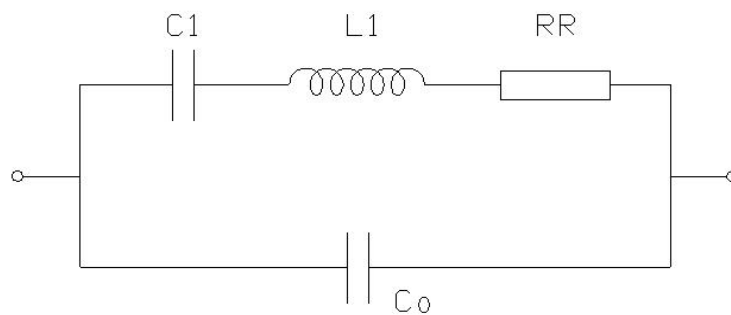
Remark: Sample Data See Attachment

2.Dimension (mm)



S3225 3.2mm*2.5mm

Equivalent Circuit:



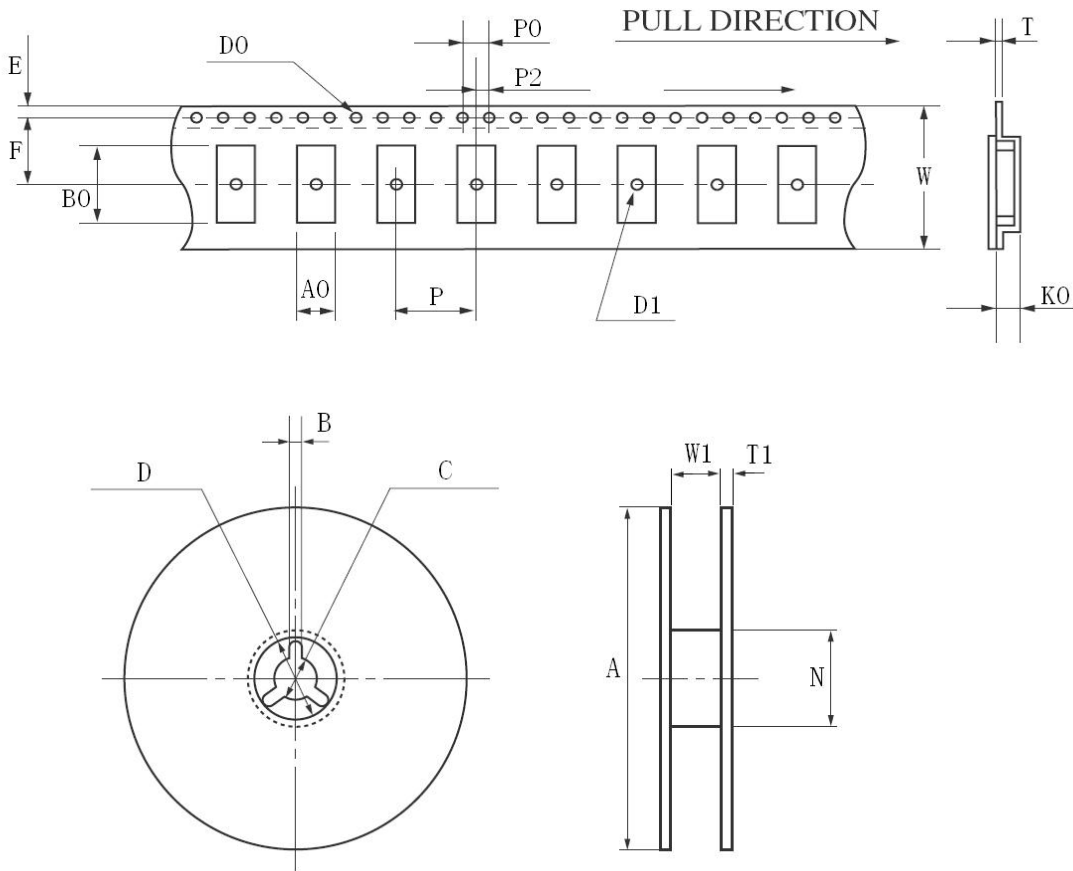
3. Marking

STRONG
16.000M

4. Reliability Specification

	Item	Condition	Standard
1.	Drop characteristics	Free drop from 75cm height on a hard wooden board for 3 times. (Board is thickness more than 30 mm.)	Frequency change: ≤±5ppm
2.	Mechanical shock	Device are shocked to half sine wave (1000g) three mutually perpendicular axes each 3 times	Frequency change: ≤±5ppm
3.	Shake characteristics	Shake frequency 10~55Hz, cycl1~2 minutes, swing 1.5mm, direction x/y/z, all 30 minutes, test after 1 hours.	Frequency change: ≤±5ppm
4.	Humidity characteristics	+40±2℃ & 90%~95% R.H. 250 hours	Frequency change: ≤±5ppm
5.	Low temperature characteristics	-40±2℃, 250 hours, put in room temperature, test after 1 hours.	Frequency change: ≤±5ppm
6.	High temperature characteristics	+85±2℃, 250 hours, put in room temperature, test after 1 hours.	Frequency change: ≤±5ppm
7.	Temperature cycling	-30±3℃/30±3 min~+85±2℃/30±3min, 5 cycles	Frequency change: ≤±5ppm
8.	Refluence examination	<p>1- Max 180 sec 2- Max 10 sec 3- Max 80 sec 4- Max 90 sec</p>	Frequency change: ≤±5ppm

5. Packing Specification



	HC-49SMD	S8045	S7050	S6035	S5032	S4025	S3225
W	24.00±0.30	16.00±0.05	16.00±0.05	12.00±0.05	12.00±0.05	12.00±0.05	12.00±0.05
E	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10
F	11.5±0.10	7.5±0.10	7.5±0.10	5.5±0.10	5.5±0.10	5.5±0.10	5.5±0.10
T	0.40±0.05	0.35±0.05	0.35±0.05	0.35±0.05	0.35±0.05	0.35±0.05	0.30±0.05
P	12.00±0.10	8.00±0.10	8.00±0.10	8.00±0.10	8.00±0.10	8.00±0.10	8.00±0.10
P0	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10
P2	2.00±0.10	2.00±0.10	2.00±0.10	2.00±0.10	2.00±0.10	2.00±0.10	2.00±0.10
D0	φ 1.50+0.10	φ 1.50+0.10	φ 1.50+0.10	φ 1.50+0.10	φ 1.50+0.10	φ 1.50+0.10	φ 1.50+0.10
D1	φ 1.50MIN	φ 1.50MIN	φ 1.50MIN	φ 1.50MIN	φ 1.50MIN	φ 1.50MIN	φ 1.50MIN
A0	4.60±0.10	4.85±0.10	5.40±0.10	3.90±0.10	3.60±0.10	2.80±0.10	2.85±0.10
K0	4.40±0.10	1.90±0.10	1.80±0.10	1.50±0.10	1.10±0.10	0.90±0.10	0.85±0.10
B0	14.20±0.15	8.60±0.15	7.40±0.10	6.40±0.10	5.40±0.10	4.30±0.10	3.55±0.10
A	φ 330±1.0	φ 178±2.0	φ 178±2.0	φ 178±2.0	φ 178±2.0	φ 178±2.0	φ 178±2.0
B	2.30±0.20	2.00±0.50	2.00±0.50	2.00±0.50	2.00±0.50	2.00±0.50	2.00±0.50
C	φ 13.5±0.20	φ 13.2±0.20	φ 13.2±0.20	φ 13.2±0.20	φ 13.2±0.20	φ 13.2±0.20	φ 13.2±0.20
D	φ 21.5±0.20	φ 20.0±0.50	φ 20.0±0.50	φ 20.0±0.50	φ 20.0±0.50	φ 20.0±0.50	φ 20.0±0.50
N	φ 100.0±0.5	φ 60.5±1.0	φ 60.5±1.0	φ 60.5±1.0	φ 60.5±1.0	φ 60.5±1.0	φ 60.5±1.0
W1	24.5±0.20	16.5±0.20	16.5±0.20	12.5±0.20	12.5±0.20	12.5±0.20	12.5±0.20
T1	2.30±0.20	1.80±0.20	1.80±0.20	1.80±0.20	1.80±0.20	1.80±0.20	1.80±0.20

单击下面可查看定价，库存，交付和生命周期等信息

[>>StrongFirst\(思硕\)](#)