



Quartz Crystal - HC-49U

Pin Type Crystal - 13.46 x 10.21 x 4.65mm

• Features

- Low cost & wide applications
- Tight tolerance and Stability
- RoHS compliant

• General Specification

Type	HC-49U
Frequency Range	1.8432MHz to 150.000MHz
Frequency Tolerance at 25°C	± 5ppm to ± 100ppm
Frequency Stability	± 10ppm to ± 100ppm
Operating Temperature	-10 °C to +60 °C *
Load Capacitance	6pF to 50pF or Series
Shunt Capacitance	<7pF
Storage Temperature	-40°C to +85°C *
Drive Level	100uW *
Aging	<± 5ppm first year

* Can be changed according to Customer's requirement.

• Drive Level Codes (mW)

A = 0.1	B = 0.2	D = 0.05	E = 0.3	G = 0.5	I = 0.01
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• Load Capacitance Codes

12pF = A	12.5pF = B	14pF = C	16pF = D	17pF = E	18pF = F
20pF = G	25pF = H	30pF = I	32pF = J	33pF = K	Series = L
13pF = M	27pF = N	50pF = O	10pF = P	15pF = Q	22pF = R
15.8pF = S	8.5pF = T	8.2pF = U	40pF = V	9pF = W	11pF = X
13.8pF = Y	19.6pF = Z	6pF = a	7pF = d	8pF = e	19pF = f

• Operating Temperature Codes (°C)

A = -10 to +60	B = -20 to +70	C = -10 to +70	I = -40 to +85	X = -30 to +80	W = -10 to +50
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• Frequency Tolerance & Frequency Stability Codes (ppm)

P = ±10	S = ±20	T = ±30	U = ±50	V = ±100	W = ±5
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• Frequency Stability vs. Operating Temperature

	± 10ppm	± 20ppm	± 30ppm	± 50ppm	± 100ppm
-10°C - +60°C	⊙	⊙	●	⊙	⊙
-10°C - +70°C	⊙	⊙	●	⊙	⊙
-20°C - +70°C	⊙	⊙	●	●	⊙
-40°C - +85°C			⊙	●	⊙

⊙ Available ● Standard

• ESR (Series Resistance Rs) vs Standard Frequency, Vibration Mode & Codes

Frequency Range (MHz)	ESR Max (Ω)	Code	Vibration Mode	Code
1.8432 - 2.300	500	3	AT Fund	A
2.301 - 3.000	400	2	AT Fund	A
3.001 - 4.000	90	6	AT Fund	A
4.001 - 5.000	90	5	AT Fund	A
5.001 - 8.000	60	4	AT Fund	A
8.001 - 9.999	30	6	AT Fund	A
10.000 - 40.000	30	7	AT Fund	A
24.000 - 75.000	50	2	3rd OT	a3
75.001 - 125.000	80	0	3rd OT	a3
75.000 - 150.000	100	b	5th OT	a5

• Marking

Frequency + M (MHz) + Date code (Year Code + Month Code)

NEWXTAL (Company brand)

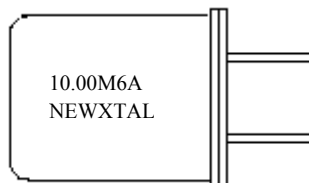
Year Code:

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
1	2	3	4	5	6	7	8	9	10	11	12

Month Code:

Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
A	B	C	D	E	F	G	H	I	J	K	L

For Example:



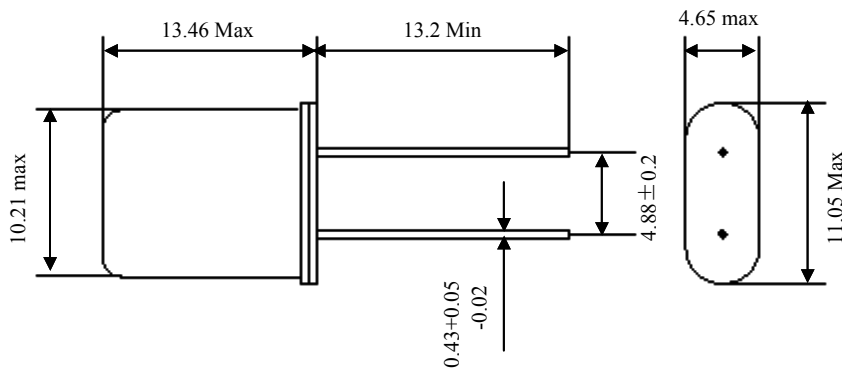
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Ordering Information

Drive Level	Load Capacitance	Operating Temperature	Frequency Tolerance	Frequency Stability	ESR	Type	Vibration Mode	Frequency	Lead-free	Packing
(mW)	(pF)	(°C)	(ppm)	(ppm)	(Ω)			(MHz)		
See Tables						A = HC-49U	See Table	xx.xxxM	LF=leadfree	Blank=bulk
0.1	20	-10 to +60	±30	±50	30		AT Fund			
A	G	A	T	U	7	A	A		LF	

For Example: **AGATU7AA-10.000MLF**

Dimensions

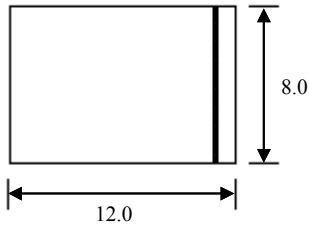


in mm

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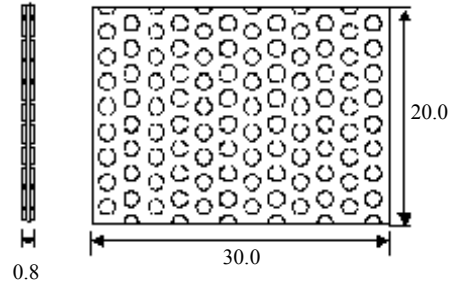
Bulk Packing Specification

1. Plastic Bag:



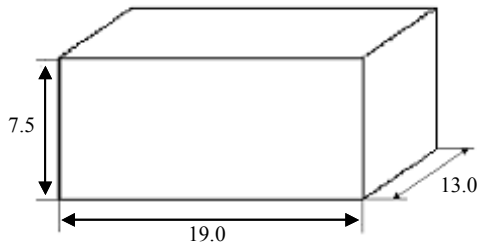
A plastic bag contains: 100pcs

2. Bubbles Bag



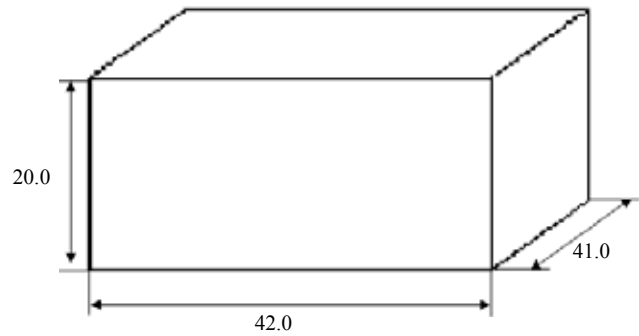
A bubbles bag contains: 10 plastic bags - 1,000pcs

3. Inside Paper Box



An inside box contains: 1 bubbles bag - 1,000pcs

4. Outside Paper Carton



An outside carton contains: 10 inside boxes - 10,000pcs

in cm

Wave Soldering Profile

Bath temperature (°C)

