

U1 , U5

[7.8 * 3.2 * 8.0 (6.0) mm]

U1SL

[7.8 * 2.6 * 8.0 mm]

Thru - Hole Crystals

Fund.

3rd O.T.

5th O.T.

Min.

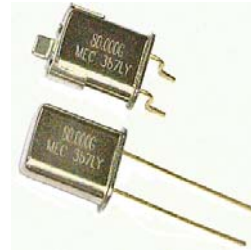
1.0MHz

Max.

200MHz

Features**Specifications**

- A round shaped AT-Cut crystal plate inside.
- Available up to 200 MHz using a 5th overtone crystal mode
- Annealed and pre-aged for low frequency drift over a long-term operation

General Specifications

RoHS Compliance

Item / Type	U1 ; U1SL ; U5 ; U1MJ ; U5MJ series
Frequency Range	U1 & U1MJ : 1.0 ~ 1.2MHz , 4.0 ~ 200.0MHz ; U5 : 10.0 ~ 200MHz
Load Capacitance	Series or Parallel (8 to 32 pF) resonance
Drive Level	100μ W typical (500μ W max.)
Frequency Tolerance	AT-cut : ± 5 ppm , ± 10 ppm , ± 20 ppm or ± 30 ppm at 25°C SL-cut : ± 50 ppm at 25°C
Frequency Stability	See Table 2
Aging	$\Delta F / F : \pm 3 \text{ ppm / year (max.)}$
Storage Temperature Range	- 50°C to 105°C

Table 1

U1 & U1MJ ESR (Equivalent Series Resistance)						U5 & U5MJ ESR (Equivalent Series Resistance)					
Freq.(MHz)	Osc. Mode	E.S.R.	Freq.(MHz)	Osc. Mode	E.S.R.	Freq.(MHz)	Osc. Mode	E.S.R.	Freq.(MHz)	Osc. Mode	E.S.R.
1.0 ~ 1.2	SL , Fund.	5K Ω	11.0 ~ 12.9	AT , Fund.	40 Ω	10.0 ~ 11.9	AT , Fund.	60 Ω	90.1 ~ 135.0	AT , 3rd	40 Ω
6.0 ~ 6.9	AT , Fund.	100 Ω	13.0 ~ 45.0	AT , Fund.	25 Ω	12.0 ~ 14.9	AT , Fund.	50 Ω	90.1 ~ 159.0	AT , 5th	100 Ω
7.0 ~ 7.9	AT , Fund.	90 Ω	30.0 ~ 50.0	AT , 3rd	40 Ω	15.0 ~ 35.0	AT , Fund.	30 Ω	160.0 ~ 200.0	AT , 5th	80 Ω
8.0 ~ 8.9	AT , Fund.	80 Ω	50.1 ~ 100.0	AT , 3rd	50 Ω	35.1 ~ 90.0	AT , 3rd	60 Ω			
9.0 ~ 10.9	AT , Fund.	90 Ω	80.0 ~ 200.0	AT , 5th	80 Ω						

Table 2

Frequency stability vs Operating temperature range									
Stability code	Temp. (°C) \ ppm	± 5	± 10	± 15	± 20	± 25	± 30	± 50	± 100 (SL-cut)
X	-10 to 60°C	○	○	○	○	○	○	○	○
Y	-20 to 70°C	▲	○	○	○	○	○	○	○
I	-40 to 85°C		▲	○	○	○	○	○	○

○ : available ; ▲ : contact Mercury

Outline Dimensions (Unit : mm)

Dip type (U1 , U1SL , U5)				Metal jacket (U1MJ , U5MJ)		
	H	T1	T2		H	W
U1	8.0 ± 0.2	2.2 ± 0.2	3.2 ± 0.2		8.0 ± 0.2	11.8 ± 0.2
U1SL	8.0 ± 0.2	1.8 ± 0.2	2.6 ± 0.2		6.0 ± 0.2	9.8 ± 0.2
U5	6.0 ± 0.2	2.2 ± 0.2	3.2 ± 0.2			

Mercury www.mercury-crystal.com

■ Taiwan : Tel (886)-2-2406-2779 / sales-tw@mercury-crystal.com
 ■ U.S.A: Tel: (1)-909-466-0427 / sales-us@mercury-crystal.com
 ■ China: Tel: (86)-512-5763-8100 / sales-cn@mecxtal.com