



Oscillation Frequency and Load Capacitance

振荡频率和负荷容量

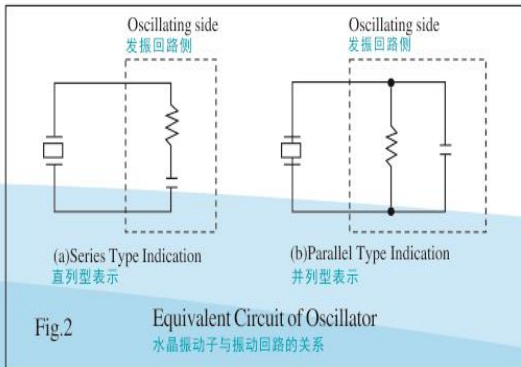
In an oscillation circuit in which a quartz resonator works as inductive impedance, the equivalent circuit is indicated by the negative resistance and capacitance, as shown in Fig.2.

Fig.2 (a) expresses the oscillation circuit with a series circuitry, while (b) expresses a parallel circuitry.

Here the capacitance C_L is an effective capacitance when the oscillating side is viewed from the ends of the quartz resonator, usually called a load capacitance, and $-R$ and $-\rho$ are negative resistances of the oscillating side.

In this type of oscillation circuit, the quartz resonator works as a series circuitry of an inductive reactance X_e and a resistance R_e , as shown in Fig.3, and its oscillation frequency is expressed by:

$$X_e = \frac{1}{2\pi f_e C_L}$$



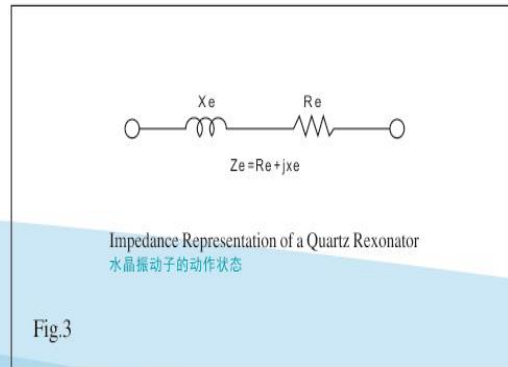
在振荡回路内石英谐振子作为感性阻抗时，等效回路则是由负性电阻和电容量来表示如图2所示。

图2 (a) 表示说明振荡回路为一串联电路，而 (b) 则表示一个并联电路。

此处电容量 C_L 是一个有效的电容量，当振荡是从石英谐振器末端来看的话，通常称作负荷容量，而 $-R$ 和 $-\rho$ 是振荡边的负性阻抗。

在此种型的振荡回路，石英谐振子是为串联电路的一个感性电抗 X_e 和电阻 R_e ，如图3所示，而其振荡频率则表示如下：

$$X_e = \frac{1}{2\pi f_e C_L}$$



除表中所示参数外，可根据客户需要设计
We shall design according to customer requests besides these specifications in the table.