

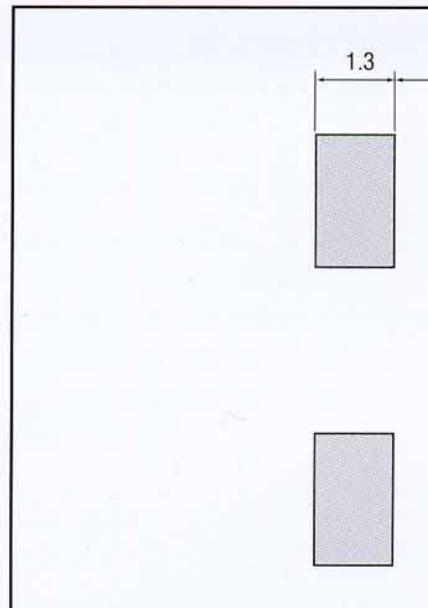
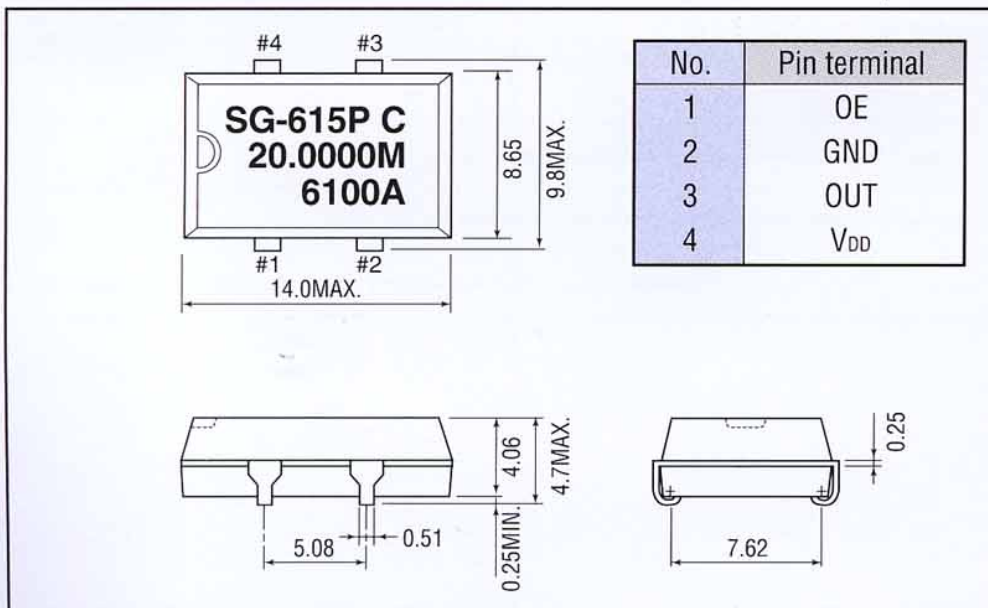
| Item                                |                       | Symbol         | SG-615P   | SG-615PTJ                | SG-615PH             |
|-------------------------------------|-----------------------|----------------|---|--------------------------|----------------------|
|                                     |                       |                | Specifications  |                          |                      |
| Output frequency range              |                       | $f_0$          | 1.0250MHz to 26.0000MHz   | 26.0001MHz to 66.6667MHz |                      |
| Power source voltage                | MAX. supply voltage   | $V_{DD-GND}$   | -0.3V to +7.0V  |                          |                      |
|                                     | Operating voltage     | $V_{DD}$       | 5.0V±0.5V   |                          |                      |
| Temperature range                   | Storage temperature   | $T_{STG}$      | -55°C to +125°C   |                          |                      |
|                                     | Operating temperature | $T_{OPR}$      | -10°C to 70°C (-40°C to 85°C)                                     |                          |                      |
| Soldering condition                 |                       | $T_{SOL}$      | Twice at under 260°C within 10sec.<br>or under 230°C within 3min. |                          |                      |
| Frequency stability                 |                       | $\Delta f/f_0$ | B : ±50ppm<br>C : ±100ppm   |                          |                      |
| Current consumption                 |                       | $I_{OP}$       | 23mA MAX.   | 35mA MAX.                |                      |
| Duty                                | C-MOS level           | $T_{W/T}$      | 40% to 60%  | —                        | 40% to 60%           |
|                                     | TTL level             |                | 45% to 55%  |                          | —                    |
| Output voltage                      |                       | $V_{OH}$       | $V_{DD} - 0.4V$ MIN.  | 2.4V MIN.                | $V_{DD} - 0.4V$ MIN. |
|                                     |                       | ( $I_{OH}$ )   | -400µA  |                          | -4mA                 |
|                                     |                       | $V_{OL}$       | 0.4V MAX.   |                          |                      |
|                                     |                       | ( $I_{OL}$ )   | 16mA  | 8mA                      | 4mA                  |
| Output load condition (fan out)     | C-MOS                 | CL             | 50pF MAX.   | —                        | 50pF MAX.            |
|                                     | TTL                   | N              | 10TTL MAX.  | 5TTL MAX.                | —                    |
| Output enable/disable input voltage |                       | $V_{IH}$       | 2.0V MIN.   | 3.5V MIN.                | 2.0V MIN.            |
|                                     |                       | $V_{IL}$       | 0.8V MAX.   | 1.5V MAX.                | 0.8V MAX.            |
| Output disable current              |                       | $I_{OE}$       | 12mA MAX.   | 28mA MAX.                | 20mA MAX.            |
| Output rise time                    | C-MOS level           | $T_{TLH}$      | 8nsec. MAX.   | —                        | 7nsec. MAX.          |
|                                     | TTL level             |                |   | 5nsec. MAX.              | —                    |
| Output fall time                    | C-MOS level           | $T_{THL}$      | 8nsec. MAX.   | —                        | 7nsec. MAX.          |
|                                     | TTL level             |                |   | 5nsec. MAX.              | —                    |
| Oscillation start up time           |                       | $t_{OSC}$      | 4msec. MAX.   | 10msec. MAX.             |                      |
| Aging                               |                       | $f_a$          | ±5ppm/year MAX.   |                          |                      |
| Shock resistance                    |                       | S.R.           | ±20ppm MAX.   |                          |                      |

Note: • Unless otherwise stated, characteristics (specifications) shown in the above table are based on the rated operating conditions.  
• External by-pass capacitor is recommended.

## External Dimensions

(Unit : mm)

## Recommended solder



| Item                                |                       | Symbol              | SG-615 PCV   |                                      |
|-------------------------------------|-----------------------|---------------------|--|--------------------------------------|
|                                     |                       |                     | Specifications   |                                      |
| Output frequency range              |                       | f <sub>0</sub>      | 40.0000MHz to 80.0000MHz                                       |                                      |
|                                     |                       |                     | 40.0000MHz to 125.0000MHz                                      |                                      |
| Power source voltage                | MAX. supply voltage   | V <sub>DD-GND</sub> | -0.5V to +7.0V   |                                      |
|                                     | Operating voltage     | V <sub>DD</sub>     | 2.7V to 5.5V   |                                      |
| Temperature range                   | Storage temperature   | T <sub>STG</sub>    | -55°C to +125°C  |                                      |
|                                     | Operating temperature | T <sub>OPR</sub>    | -10°C to +70°C   |                                      |
| Soldering condition                 |                       | T <sub>SOL</sub>    | Twice at under 260°C within 10sec. or under 230°C within 3min. |                                      |
| Frequency stability                 |                       | △f/f <sub>0</sub>   | C : ±100ppm  |                                      |
| Current consumption                 |                       | I <sub>OP</sub>     | 50mA MAX.  |                                      |
| Duty                                |                       | T <sub>w</sub> /T   | 35% to 60%   |                                      |
| Output voltage                      |                       | V <sub>OH</sub>     | V <sub>DD</sub> -0.5V  |                                      |
|                                     |                       | (I <sub>OH</sub> )  | -16mA  |                                      |
|                                     |                       | V <sub>OL</sub>     | 0.4V MAX.  |                                      |
|                                     |                       | (I <sub>OL</sub> )  | 16mA   |                                      |
| Output load condition (fan out)     |                       | CL                  | 25pF MAX.  |                                      |
|                                     |                       |                     | 15pF MAX.  |                                      |
| Output enable/disable input voltage |                       | V <sub>IH</sub>     | 0.7V <sub>DD</sub> MIN.  |                                      |
|                                     |                       | V <sub>IL</sub>     | 0.2V <sub>DD</sub> MAX.  |                                      |
| Output disable current              |                       | I <sub>OE</sub>     | 27mA MAX.  |                                      |
| Output rise time                    |                       | T <sub>TLH</sub>    | 4nsec.   |                                      |
| Output fall time                    |                       | T <sub>THL</sub>    |  |                                      |
| Oscillation start up time           |                       | t <sub>OSC</sub>    | 10msec. MAX.   |                                      |
| Aging                               |                       | f <sub>a</sub>      | ±5ppm/year MAX.  |                                      |
| Shock resistance                    |                       | S.R.                | ±20ppm MAX.  |                                      |
|                                     |                       |                     |  | Drop test or excitation in 3 directi |

Note: • Unless otherwise stated, characteristics (specifications) shown in the above table are based on the rated operating conditions.  
• External by-pass capacitor is recommended.

## Frequency table

| Model     | Frequency | 1MHz<br>▼ | 26MHz<br>▼ | 40MHz<br>▼ |
|-----------|-----------|-----------|------------|------------|
| SG-615P   |           | —————     |            |            |
| SG-615PTJ |           |           | —————      |            |
| SG-615PH  |           |           | —————      |            |
| SG-615PCV |           |           |            | —————      |