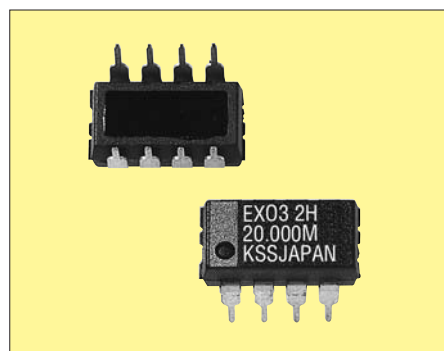




Ph Free

RoHS Compliant

### Features

- Since it has a frequency dividing function, it is able to obtain a frequency division of  $1/2 - 1/2^8$  ( $1/256$ )
- The symmetry of frequency divided output is within  $50 \pm 2\%$
- The oscillation start time has the fast starting characteristic of being 1.5m sec. or less
- The pin arrangement is DIP 8PIN
- Supply voltage  $V_{CC}=5.0V$

### Applications

- Amusement

### How to Order

**KCEXO3-** 20.0000 C 5 1 B 00  
 ① ② ③ ④ ⑤ ⑥ ⑦

- ① Type
- ② Output Frequency
- ③ Output Type (CMOS)
- ④ Supply Voltage (5.0V)
- ⑤ Frequency Tolerance
- ⑥ Symmetry/ Enable Function (40/ 60%, Stand-by)
- ⑦ Customer Special Model Suffix (STD Specification is "00")

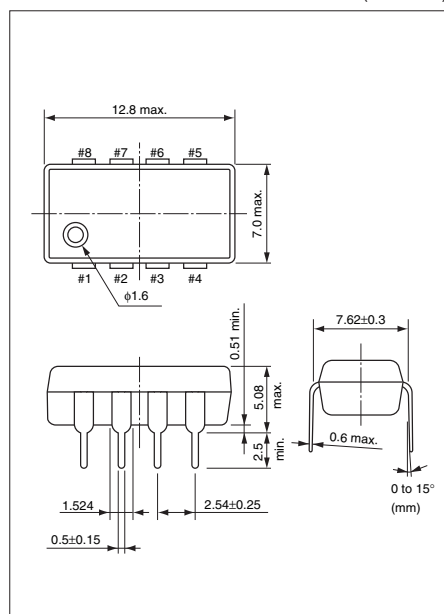
### Specifications

| Item                          | Symbol      | Conditions    | Specifications |              | Units            |
|-------------------------------|-------------|---------------|----------------|--------------|------------------|
|                               |             |               | Min.           | Max.         |                  |
| Output Frequency Range        | $F_o$       |               | 11.0592        | 24.576       | MHz              |
| Frequency Tolerance (Overall) | $F_{tol}$   |               | -100           | +100         | $\times 10^{-6}$ |
| Storage Temperature Range     | $T_{stg}$   |               | -40            | +85          | $^{\circ}C$      |
| Operating Temperature Range   | $T_{use}$   |               | -10            | +70          | $^{\circ}C$      |
| Supply Voltage                | $V_{CC}$    |               | 4.5            | 5.5          | V                |
| Current Consumption           | $I_{CC}$    |               | —              | 20           | mA               |
| Symmetry                      | SYM         | @50% $V_{CC}$ | 40             | 60           | %                |
| Rise/ Fall Time               | $t_r / t_f$ |               | —              | 15           | nS               |
| Low Level Output Voltage      | $V_{OL}$    |               | —              | 10% $V_{CC}$ | V                |
| High Level Output Voltage     | $V_{OH}$    |               | 90% $V_{CC}$   | —            | V                |
| Output Load                   | CL          |               | —              | 50           | pF               |
| Start-up Time                 | $t_{str}$   |               | —              | 1.5          | mS               |

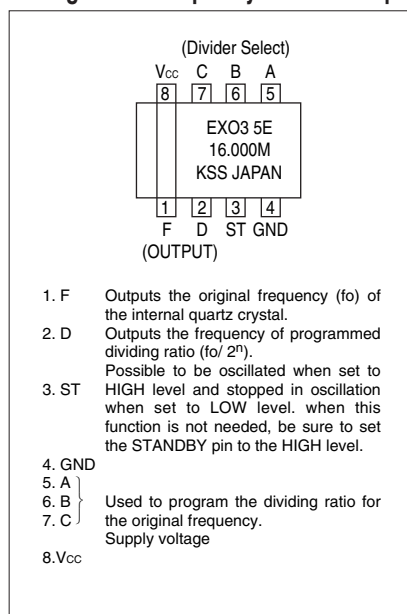
Note: All electrical characteristics are defined at the maximum load and operating temperature range.  
 Please contact us for inquiries about operating temperature range, available frequencies and other conditions.

### Dimensions

(Unit: mm)



### Settings of the frequency division output



### Pin connection

| Input  |   |   |    | Output                     |                           |
|--------|---|---|----|----------------------------|---------------------------|
| Select |   |   |    | F<br>Original<br>Frequency | D<br>Divided<br>Wave form |
| C      | B | A | ST |                            |                           |
| L      | L | L | H  | $f_o$ clock                | $f_o \cdot 1/2$ clock     |
| L      | L | H | H  | $f_o$ clock                | $f_o \cdot 1/2^2$ clock   |
| L      | H | L | H  | $f_o$ clock                | $f_o \cdot 1/2^3$ clock   |
| L      | H | H | H  | $f_o$ clock                | $f_o \cdot 1/2^4$ clock   |
| H      | L | L | H  | $f_o$ clock                | $f_o \cdot 1/2^5$ clock   |
| H      | L | H | H  | $f_o$ clock                | $f_o \cdot 1/2^6$ clock   |
| H      | H | L | H  | $f_o$ clock                | $f_o \cdot 1/2^7$ clock   |
| H      | H | H | H  | $f_o$ clock                | $f_o \cdot 1/2^8$ clock   |
| —      | — | — | L  | L                          | L                         |