# **Clock Crystal Oscillators CMOS Crystal Oscillators** KCEXO3 (EXO-3)



# **CMOS/5.0V**



#### **Features**

- Since it has a frequency deviding function, it is able to obtain a frequency devision of 1/2-1/28 (1/256)
- The symmetry of frequency devided output is within 50±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 Vcc=5.0V

## **Applications**

Amusement

## **How to Order**

 $\frac{\mathsf{KCEXO3-}}{(1)} \, \frac{20.0000}{2} \, \frac{\mathsf{C}}{3} \, \frac{5}{4} \, \frac{1}{5} \, \frac{\mathsf{B}}{6} \, \frac{00}{7}$ 

- 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**

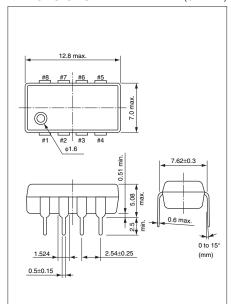
lto m	Symbol	Conditions	Specifications		Heite
Item			Min.	Max.	Units
Output Frequency Range	Fo		11.0592	24.576	MHz
Frequency Tolerance (Overall)	F_tol		-100	+100	×10 <sup>-6</sup>
Storage Temperature Range	T_stg		-40	+85	°C
<b>Operating Temperature Range</b>	T_use		-10	+70	°C
Supply Voltage	Vcc		4.5	5.5	V
Current Consumption	Icc		_	20	mA
Symmetry	SYM	@50% Vcc	40	60	%
Rise/ Fall Time	tr/ tf		_	15	nS
Low Level Output Voltage	Vol		_	10% Vcc	V
High Level Output Voltage	Vон		90% Vcc	_	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.

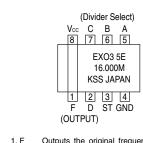
Please contact us for inquiries about operating temperature range, available frequencies and other conditions.

#### **Dimensions**

(Unit: mm)



## Settings of the frequency devision output



- Outputs the original frequency (fo) of the internal quartz crystal
- 2. D Outputs the frequency of programmed dividing ratio (fo/ 2<sup>n</sup>).
- Possible to be oscillated when set to HIGH level and stopped in oscillation when set to LOW level. when this function is not needed, be sure to set 3. ST the STANDBY pin to the HIGH level.

4. GND

5. A 6. B 7. C Used to program the dividing ratio for the original frequency. Supply voltage

8.Vcc

## Pin connection

	Inp	out		Output			
5	Select		ST	F	D Divided		
С	В	А	31	Original Frequency	Wave form		
L	L	L	Н	fo clock	fo·1/2 clock		
L	L	Н	Н	fo clock	fo· 1/ 2² clock		
L	Н	L	Н	fo clock	fo· 1/ 2³ clock		
L	Н	Н	Н	fo clock	fo· 1/ 24 clock		
Н	L	L	Н	fo clock	fo· 1/ 2 <sup>5</sup> clock		
Н	L	Н	Н	fo clock	fo· 1/ 26 clock		
Н	Н	L	Н	fo clock	fo· 1/ 27 clock		
Н	Н	Н	Н	fo clock	fo· 1/ 28 clock		
_	_	_	L	L	L		