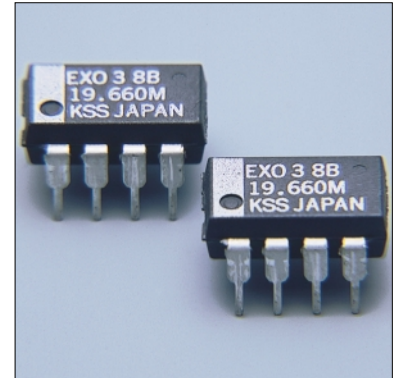


# EXO-3

## CMOS Crystal Oscillator

### Features

- Since it has a frequency dividing function, it is able to obtain a frequency division of  $1/2 \cdot 1/2^8$  (1/256).
- The symmetry of frequency divided output is within 50 plus/minus 2%.
- The oscillation start time has the fast starting characteristic of being 1.5msec. or less.
- The pin arrangement is DIP 8PIN.



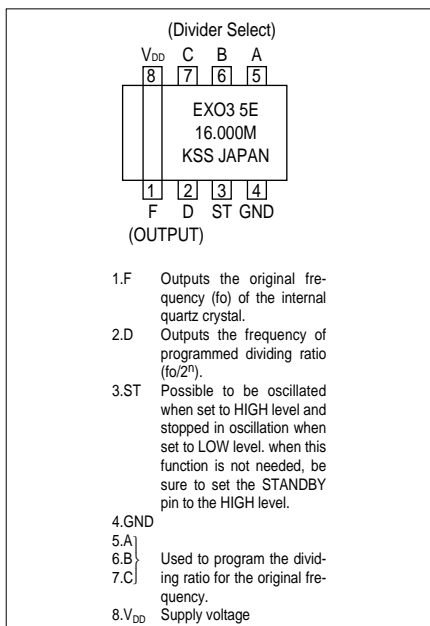
### Specifications

Item	Type	EXO-3
Frequency Range		12~24.576MHz
Standard Frequency		Table 1
Frequency Stability		$\pm 100 \times 10^{-6}$
Operating Temperature Range		-10~+70°C
Storage Temperature Range		-40~+85°C
Supply Voltage		5V $\pm$ 0.5V
Current		20mA MAX.
Load		50pF
Output Level		V <sub>OH</sub> : V <sub>DD</sub> -0.5V/V <sub>OL</sub> : 0.5V MAX.
Output Symmetry		40~60%
Rise Time/Fall Time		15ns MAX.
Start-up Time		1.5ms MAX.
Vibration		10~55Hz Amplitude 1.5mm, 50~2000Hz Amplitude 20G Cycle 1 minute, 3 direction, 1 hour each
Shock		1000G
Weight		0.6g

Table 1  
Original Frequencies

Frequency (MHz)1/2 <sup>0</sup>	
12.000	17.734476
12.288	18.432
12.800	19.0909
14.31818	19.200
14.500	19.6608
14.7456	20.000
14.9105	20.48
15.000	21.47727
15.360	22.000
15.9744	22.1184
16.000	24.000
16.128	24.576
16.257	
16.384	

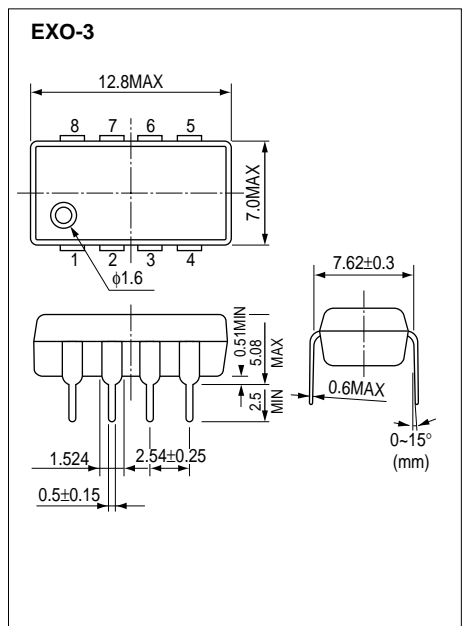
### Pin connection



### Settings of the frequency division output

Input				Output	
Select	ST			F Original Frequency	D Divided Wave form
C	B	A	ST	F	D
L	L	L	H	fo clock	fo · 1/2 clock
L	L	H	H	fo clock	fo · 1/2 <sup>2</sup> clock
L	H	L	H	fo clock	fo · 1/2 <sup>3</sup> clock
L	H	H	H	fo clock	fo · 1/2 <sup>4</sup> clock
H	L	L	H	fo clock	fo · 1/2 <sup>5</sup> clock
H	L	H	H	fo clock	fo · 1/2 <sup>6</sup> clock
H	H	L	H	fo clock	fo · 1/2 <sup>7</sup> clock
H	H	H	H	fo clock	fo · 1/2 <sup>8</sup> clock
-	-	-	L	L	L

### Outline



Dimensions(mm)