

EXO-3

CMOS Crystal Oscillator

■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 plus/minus 2%.
- The oscillation start time has the fast starting characteristic of being 2msec. or less.
- The pin arrangement is DIP 8PIN that can be automatically mounted.



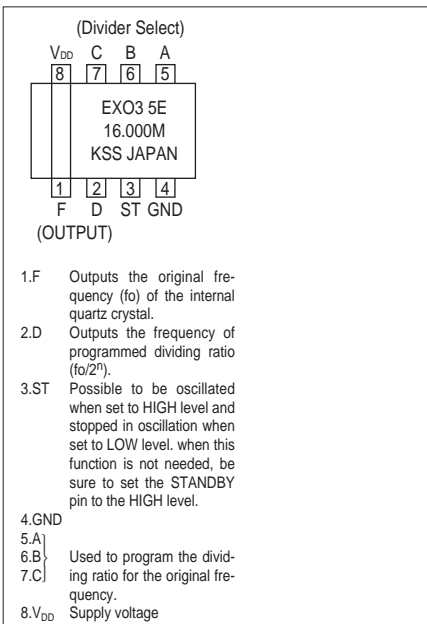
■Specifications

Item	Type	EXO-3	
Frequency Range		12~24.576MHz	30~32MHz
Standard Frequency		Table 1	
Frequency Stability		$\pm 100 \times 10^{-6}$	$\pm 150 \times 10^{-6}$
Operating Temperature Range		-10~+70°C	
Storage Temperature Range		-40~+85°C	
Supply Voltage		5V±0.5V	
Current		20mA MAX.	
Load		50pF	15pF
Output Level		$V_{OH} : V_{DD} - 0.5V / V_{OL} : 0.5V$ MAX.	
Output Symmetry		40~60%	
Rise Time/Fall Time		15ns MAX.	
Start-up Time		1.5ms MAX.	2 ms 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 ⁰	
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	30.000
16.384	32.000

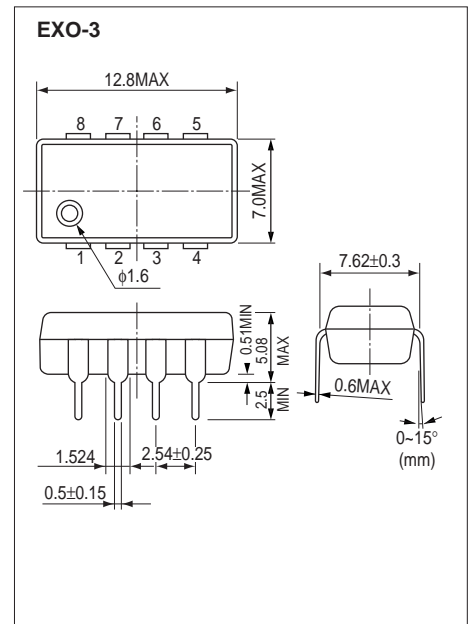
■Pin connection



■Settings of the frequency division output

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

■Outline



Dimensions(mm)