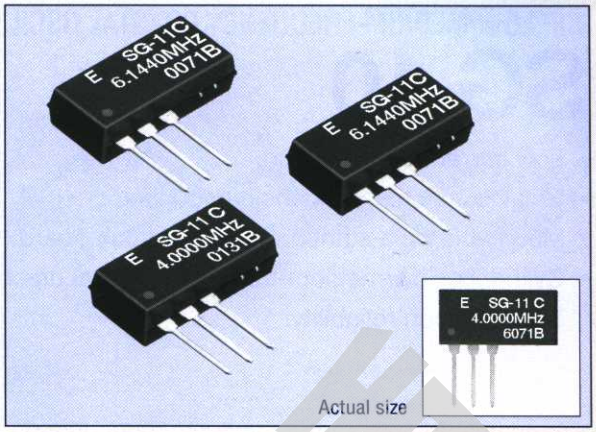
SIP HIGH-FREQUENCY CRYSTAL OSCILLATOR

SG-11

- Use of C-MOS IC allows low current consumption.
- Small suited to high-density mounting.
- Mountable on a standard printed board.
- Cylindrical AT-cut crystal unit builtin, thus assuring high reliability.



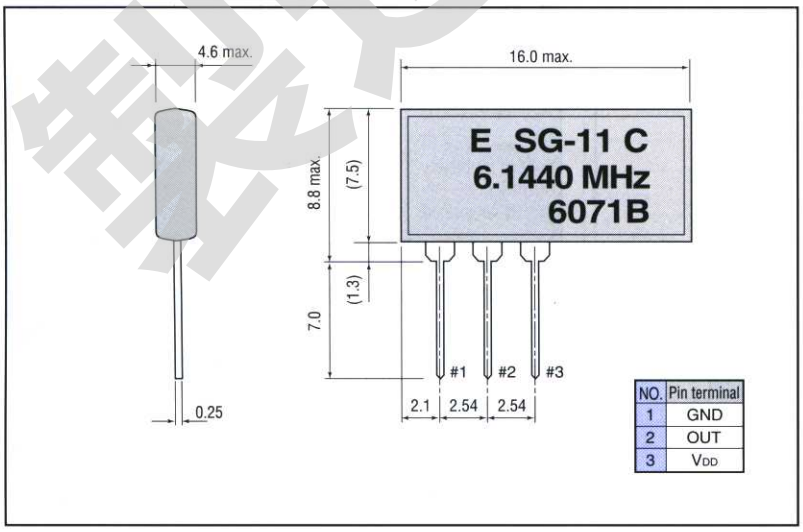
■ Specifications (characteristics)

Item		Symbol	Specifications	Remarks
Output frequency range		f_0	1.5 MHz to 24.0000 MHz	For output frequency, refer to the table below
Power source voltage	Max. supply voltage	V_{DD}-GND	-0.3V to +7.0V	
	Operating voltage	V_{DD}	4.5V to 5.5V	
Temperature range	Storage temperature	T_{STG}	-55°C to +125°C	
	Operating temperature	T_{OPR}	-10°C to +70°C	
Soldering condition (lead part)		T_{SOL}	Under 260°C within 10 sec.	Do not heat the package to more than 150°C
Frequency stability		$\Delta f/f_0$	C: ±100ppm	-10°C to +70°C
Current consumption		I_{OP}	10mA max.	No load condition
Duty		t_w/t	40% to 60%	1/2 V_{DD} or 1.4V level
Output voltage		V_{OH}	V_{DD} -0.4V min.	I_{OH}=-40μA
		V_{OL}	0.4V max.	I_{OL}=1.6mA
Output load condition (fan out)		N/C_L	1TTL max./15pF max.	TTL load /C-MOS load
Output rise time		t_{TLH}	20ns max.	
Output fall time		t_{THL}	15ns max.	
Oscillation start up time		t_{OSC}	10ms max.	For more than 1ms until V_{DD} =0V→4.5V Time at 4.5V to be 0 sec.
Aging		fa	±10ppm max. (3ppm typ.)	Ta=25°C ±3°C, V_{DD}=5V, first year
Shock resistance		S.R.	±10ppm max.	Three drops on a hard board from 75 cm or excitation test with 3000G x 0.3ms x 1/2 sine wave x 3 directions

Unless otherwise stated, characteristics (specifications) shown in the above table are based on the rated operating temperature and voltage condition.

■ External dimensions

(Unit: mm)



NO.	Pin terminal
1	GND
2	OUT
3	V_{DD}

■ Output frequency example

Output frequency
3.579545 MHz
4.0000 MHz
4.9152 MHz
6.1440 MHz
8.0000 MHz
9.8304 MHz
12.0000 MHz
14.31818 MHz
16.0000 MHz
18.4320 MHz
19.6608 MHz
20.0000 MHz
24.0000 MHz