

Preliminary

- ◆ CMOS Low Power Consumption
- ◆ Built-in Crystal Oscillator Circuit
- ◆ Reference Oscillation Frequencies : 5MHz to 35MHz
- ◆ Divider Ratios : 1 to 2047 divisions (laser trimming)
- ◆ Multiplier Ratios : 20 to 2047 multiplications (laser trimming)
- ◆ Comparative Frequencies : 14KHz to 500KHz
- ◆ Output Frequencies : 10MHz to 100MHz
- ◆ Mini Mold SOT-26 Package

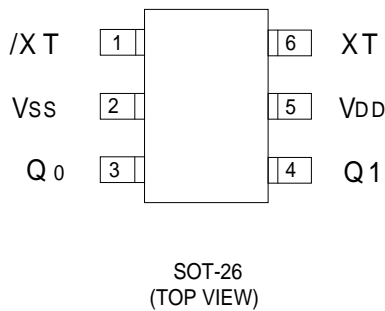
General Description

The XC25BS2 series are high frequency, low power consumption PLL clock generator ICs with built-in crystal oscillator circuits, divider circuits & multiplier PLL circuits.

Laser trimming gives the option of being able to select from divider ratios (M) of 1 to 2047 and multiplier ratios (N) of 20 to 2047.

Output frequency (Qo) is equal to reference oscillation (f0) multiplied by N/M, within a range of 10MHz to 100MHz. Q1 output is selectable from reference oscillation, comparative frequencies, PLL output frequencies/2, comparative frequencies/2. Further, comparative frequencies, within a range of 14KHz to 500KHz, can be obtained by dividing the reference oscillation.

Pin Configuration



Applications

- Crystal Oscillation Modules
- Personal Computers
- PDAs
- Portable Audio Systems
- Various System Clocks

Features

Output Frequencies : 10MHz to 100MHz ($Q_o = f_0 \times N/M$)

Reference Oscillation (f0) : 5MHz to 35MHz

Divider Ratios (M) : Selectable from divisions of 1 to 2047

Multiplier Ratios (N) : Selectable from multiplications of 20 to 2047

Output :

Q1 output selectable from reference oscillation, comparative frequencies, PLL output frequencies/2, comparative frequencies/2.

Operating Voltage Range : 3.0V to 5.5V

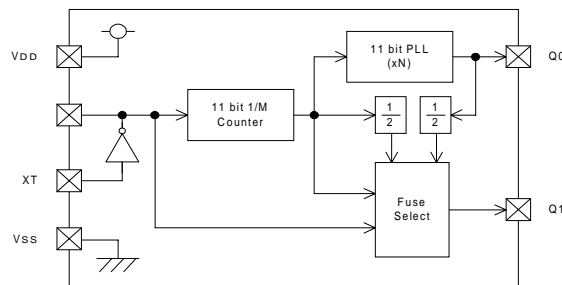
Low Power Consumption : CMOS

Ultra Small Package : SOT - 26 mini mold

Pin Assignment

PIN NUMBER	PIN NAME	FUNCTION
1	/XT	Crystal Oscillator Connection (Output)
2	VSS	GND
3	Qo	PLL Output
4	Q1	Reference Oscillation, PLL Output/2, Comparative Frequencies, Comparative Frequencies/2 Output
5	VDD	Power Supply
6	XT	Crystal Oscillator Connection (Input) or Standard Clock Input

Block Diagram



Absolute Maximum Ratings

Ta=25°C

PARAMETER	SYMBOL	CONDITIONS	UNITS
Supply Voltage	VDD	VSS - 0.3 to VSS + 7.0	V
XT Pin Voltage	VXT	VSS - 0.3 to VDD + 0.3	V
/XT Pin Voltage	V/XT	VSS - 0.3 to VDD + 0.3	V
Qo Pin Voltage	VQO	VSS - 0.3 to VDD + 0.3	V
Q1 Pin Voltage	VQ1	VSS - 0.3 to VDD + 0.3	V
Qo Output Current	IQO	+/- 50	mA
Q1 Output Current	IQ1	+/- 50	mA
Power Dissipation	PD	150	mW
Ambient Temp.	Topr	-30 to +80	°C
Storage Temp.	Tstg	-40 to +125	°C