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

Applications

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

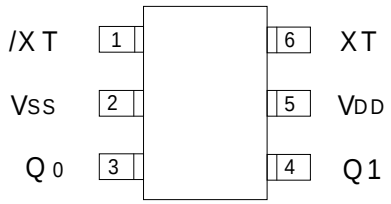
General Description

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.

Features

Output Frequencies : 10MHz to 100MHz (Qo = f0 x 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, compar ative 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 Configuration

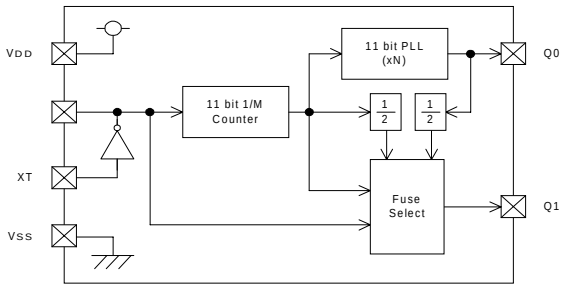


SOT-26
(TOP VIEW)

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