

### 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

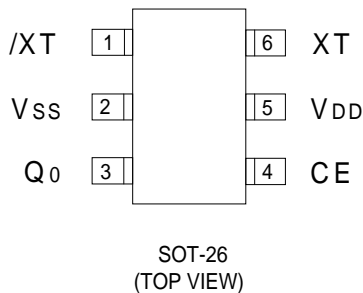
The XC25BS1 series are high frequency, low power consumption PLL clock generator ICs with built-in crystal oscillator circuits, divider circuits & multiplier PLL circuits.

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. Further, comparative frequencies, within a range of 14KHz to 500KHz, can be obtained by dividing the reference oscillation. By halting oscillation via the CE pin, consumption current can be controlled.

Output will be one of high impedance.

#### Pin Configuration



#### CE, Q0 Pin Function

CE	FUNCTION
H	Clock output. Qo = PLL output (N/M)
L	Standby. Output pin = high impedance
Open	Standby. Output pin = high impedance (Vss pin pull down due to IC's internal resistance)

#### 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
CE Pin Voltage	VCE	VSS - 0.3 to VDD + 0.3	V
Qo Pin Voltage	VQO	VSS - 0.3 to VDD + 0.3	V
Qo Output Current	IQO	+/- 50	mA
Power Dissipation	PD	150	mW
Ambient Temp.	Topr	-30 to +80	°C
Storage Temp.	Tstg	-40 to +125	°C

#### Applications

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

#### 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** : 3 State

**Operating Voltage Range** : 3.0V to 5.5V

**Low Power Consumption** : CMOS (standby function included) \*

**Ultra Small Package** : SOT - 26 mini mold

\* High output impedance during standby

#### Pin Assignment

PIN NUMBER	PIN NAME	FUNCTION
1	/XT	Crystal Oscillator Connection (Output)
2	VSS	GND
3	Qo	PLL Output
4	CE	Chip Enable
5	VDD	Power Supply
6	XT	Crystal Oscillator Connection (Input) or Standard Clock Input

#### Block Diagram

