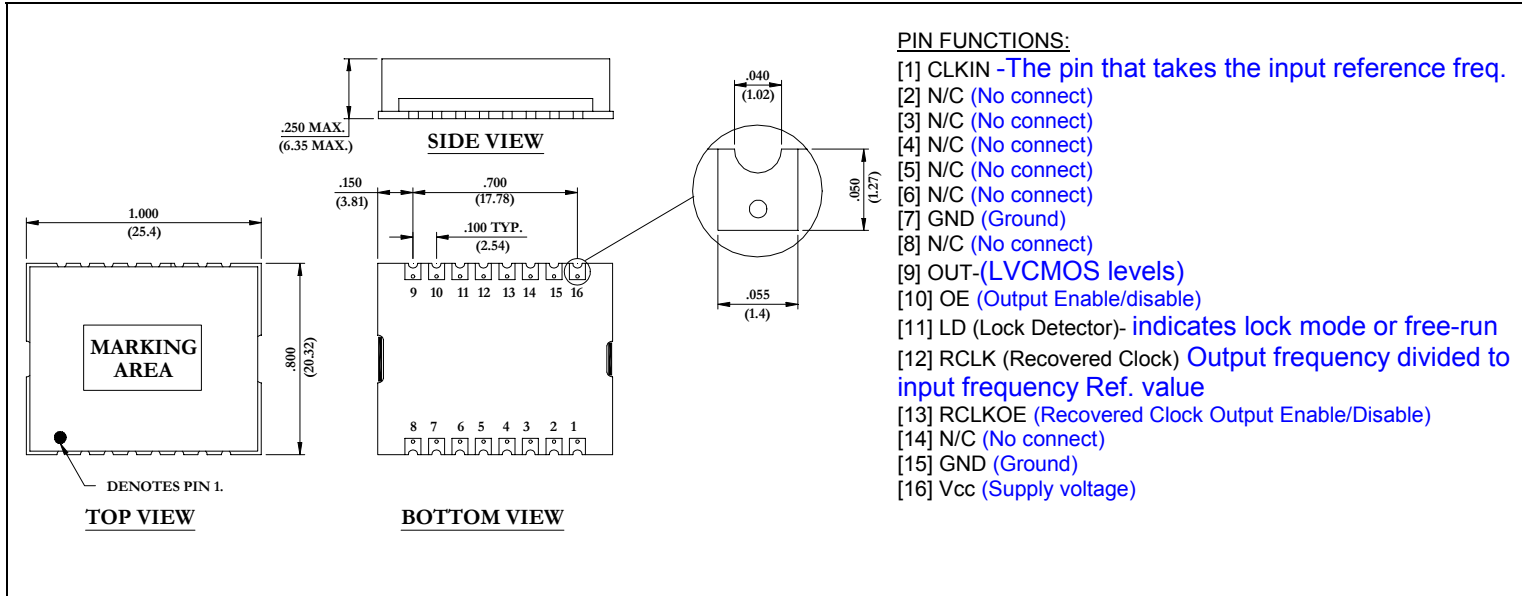


- **FEATURES** (PRELIMINARY)
 - 5V or 3.3 VOLT
 - LOW JITTER FREQUENCY TRANSLATOR CRYSTAL BASED MODULE

● **MECHANICAL SPECIFICATION**



■ **ELECTRICAL SPECIFICATION**

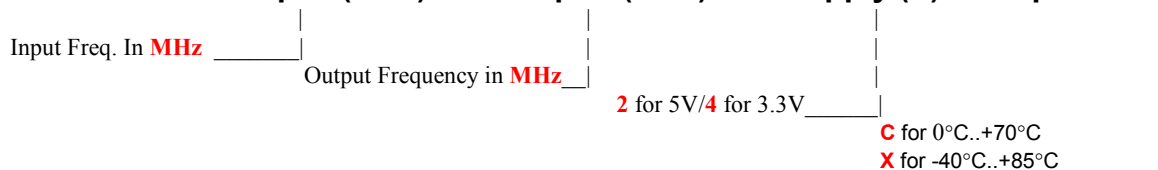
PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Input frequency, nom (Pre-selected)	fin	-	8KHz~19.44MHz	KHz
Output frequency, nom (Pre-selected)	fout	-	**1MHz~155.52MHz	MHz
Tracking/Capture range, min.		**Over 0°C...+70°C, supply range, and 10 year aging	±32.0	ppm
Input/Output relationship, nom.	I/O	-	0	°
Loop Filter	-	Internal to module	-	-
Input waveform	VI	CMOS: Fin-1KHz~10MHz	-	-
Output waveform, max./min.	VOH / VOL	Vcc=+3.3VDC (5V Optional), Ta=+25°C, load=15pF	2.97 / 0.33 for Vcc=3.3V 4.5/0.5 for Vcc=5V	V
Supply voltage, nom.	Vcc	Vcc±5%	+3.3 or 5V	V
Supply current, max.	Is	Vcc=+3.3VDC(5V Optional), Ta=+25°C, load=15pF	25.0	mA
Duty cycle	DC	load=15pF/ @50%Vcc	40...60	%
Rise- / fall time, typ.	tr / tf	20%~80% Vout, 80%~20% Vout	1.5	ns
Jitter generation, rms	Jgen	-	4.0	ps
Operating temperature	Ta	-	0...+70 or -40...+85	°C
Storage temperature	T(stg)	-	-40...+85	°C
Absolute voltage range	Vcc(abs)	Non-destructive, DC	-0.5...+6.0	V

1/8/02 marketing-rfq, Synch Sy0012

**Below 19.44MHz specific output combinations available. Please consult factory for options available.

P/N selection

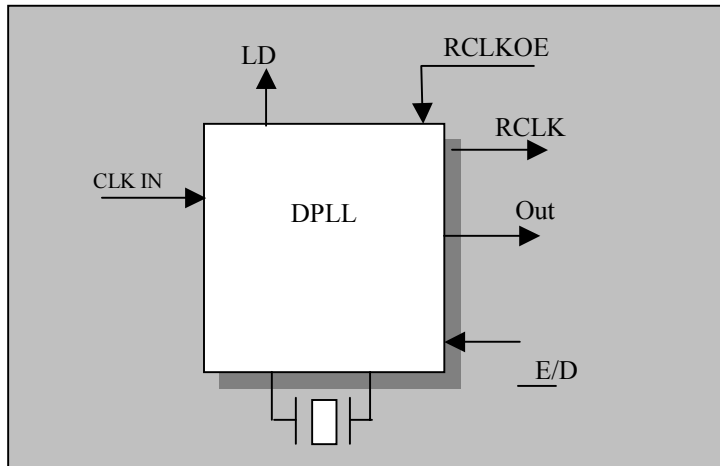
SY12- <freq./In (MHz)> - <freq/out(MHz)> - <Supply (V)> - <Oper. Temp. suffix>



Examples:

1. SY12-0.008-19.44-2-X; – Input – 8KHz/Output – 19.44MHz/5V supply/-40°C..+85°C
- SY12-0.512-38.88-4-C; - Input-512KHz/ Output 38.88MHz/3.3V supply/ 0°C..70°C

Block Diagram



PIN FUNCTIONS:

- [1] CLKIN -The pin that takes the input reference freq.
- [2] N/C (No connect)
- [3] N/C (No connect)
- [4] N/C (No connect)
- [5] N/C (No connect)
- [6] N/C (No connect)
- [7] GND (Ground)
- [8] N/C (No connect)
- [9] OUT-(LVCMOS levels)
- [10] OE (Output Enable/disable)
- [11] LD (Lock Detector)- indicates lock mode or free-run
- [12] RCLK (Recovered Clock) Output frequency divided to input frequency Ref. value
- [13] RCLKOE (Recovered Clock Output Enable/Disable)
- [14] N/C (No connect)
- [15] GND (Ground)
- [16] Vcc (Supply voltage)