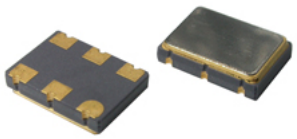
Datasheet

SX7EFV LVPECL SURFACE MOUNT VOLTAGE CONTROLLED CRYSTAL CLOCK OSCILLATOR

FEATURES

- Miniature package
- Low jitter multiplier circuit
- Wide pulling range
- Applications: SONET, xDSL, SDH, Set-top box, ...

7.0 x 5.0 x 1.8 mm



Item	Specification
Frequency Range	38 MHz ~ 640 MHz
Output Logic	LVPECL
Overall Frequency Stability *	± 20 ppm ~ ± 100 ppm (see options)
Operating Temperature Range	0 ~ +70°C commercial application (see options) -40 ~ +85°C industrial application (see options)
Supply Voltage Vdd	+3.3 V ±5%
Supply Voltage Center	+1.65 V
Control Voltage Range	0.0 V to 3.0 V
Supply Current Idd	38 MHz ~ 100 MHz: 65 mA max. 100.01 MHz ~ 320 MHz : 80 mA max. 320.01 MHz ~ 640 MHz : 90 mA max.
Output Voltage HIGH VOH	Vdd -1.025 V min. ; Vdd -0.95 V typ. ; Vdd -0.88 V max
Output Voltage LOW VOL	Vdd -1.810 V min. ; Vdd -1.70 V typ. ; Vdd -1.62 V max
Output Load	50 ohm to Vdd-2V
Symmetry	45 / 55 %
Rise Time / Fall Time Fr / Ff	0.4 ns typ. ; 0.5 ns max.
Tri-state Function	pin #2 = high or open — pin #4 - pin#5 ==> oscillation pin #2 = low — pin #4 - pin#5 ==> high impedance
Start-up Time	3 ms typ. ; 10 ms max.
Integrated Phase Jitter (12 kHz to 20 MHz band)	0.4 ps typical ; 0.5 ps max (For 156.250 MHz)
Period Jitter RMS	3.0 ps typical ; 5.0 ps max (For 156.250 MHz)
Period Jitter peak-to-peak	20.0 ps typical ; 30.0 ps max (For 156.250 MHz)
Phase Noise (typical)	**Offset** — **Frequency 156.250 MHz** 10 Hz — -62 dBc / Hz 100 Hz — -92 dBc / Hz 1 kHz — -120 dBc / Hz 10kHz — -132 dBc / Hz 100 kHz — -128 dBc / Hz
Frequency Pulling Range	standard ±80 ppm min. ; ±100 ppm min. ; ±150 ppm min. (See options)
Linearity	6% typical ; 10% max.
Slope Polarity	Positive (Increasing control voltage always increases output frequency)
Modulation Bandwidth	25 kHz min. (-3 dB)
Input Impedance	60 kΩ min.
Packing Unit	1000pcs / reel
Soldering Condition	260°C , 10 sec x2 max
	Customer specifications on request

(*) Includes initial tolerance @+25°C, stability over operating temperature, stability vs. load change, stability vs. supply change and one year aging

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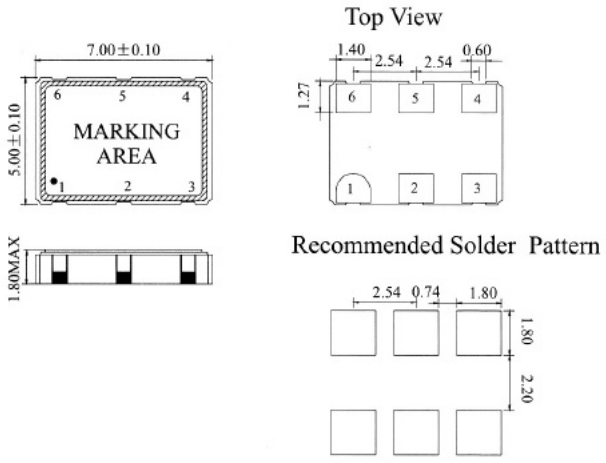
OPTIONS & ORDERING INFORMATION

SX7EFV .... - ..... MHz

Supply Voltage	Operating Temp. *	Overall Stability *	Tri-state Function	Package type	Pulling *	Frequency in MHz
33 = +3.3 V	**E =** 0° / +70°C	**20 =** ±20 ppm	**E2 =** Tri-state, pin #2	**6P =** 6-pad version	**80 =** ±80 ppm min.	Please specify the frequency in MHz
	F = -20° / +70°C	**25 =** ±25 ppm			**100 =** ±100 ppm min.	
	K = -40° / +85°C	**30 =** ±30 ppm			**150 =** ±150 ppm min.	
		50 = ±50 ppm				
		100 = ±100 ppm				

(*) Note : Not all combinations are possible, please consult us.

OUTLINE DIMENSIONS



Pin Connections			
	#1 : Control Voltage	**#2** : E/D	**#3**: GND
	#4 : Output	**#5** : Complementary Output	**#6**: Vdd

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