

SX7CTG HCMOS SURFACE MOUNT TEMPERATURE COMPENSATED CRYSTAL CLOCK OSCILLATOR

FEATURES

7.0 x 5.0 x 1.9 mm

- Miniature package
- High precision for -10° to +70°C , ± 0.05 ppm
-40° to +85°C , ± 0.20 ppm
- Applications: Femtocell, Base stations, Wireless communications, ...



Item	Specification																																																
Frequency Range	5.0 MHz ~ 52.0 MHz																																																
Standard Frequency	10.000 ; 12.800 ; 16.384 ; 19.200 ; 19.440 ; 20.00 ; 25.000 ; 26.00																																																
Output Logic	CMOS																																																
Supply Voltage Vdd (see options)	+2.5 V ±5% +3.3 V ±5%																																																
Supply Current Idd	6.0 mA max.																																																
Frequency Tolerance	±2.0 ppm max. at 25°C ±2°C (one hour after reflow)																																																
Frequency Stability vs Temperature (see options)	<table border="1"> <thead> <tr> <th></th> <th>±0.05 ppm</th> <th>±0.10 ppm</th> <th>±0.14 ppm</th> <th>±0.20 ppm</th> <th>±0.28 ppm</th> <th>±0.37 ppm</th> <th>±0.5 ppm</th> </tr> </thead> <tbody> <tr> <td>0° to +55°C</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> </tr> <tr> <td>-10° to +60°C</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> </tr> <tr> <td>-20° to +70°C</td> <td>∅</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> </tr> <tr> <td>-40° to +85°C</td> <td>x</td> <td>x</td> <td>x</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> </tr> <tr> <td></td> <td colspan="2">o = available</td> <td colspan="2">∅ = please contact us</td> <td colspan="3">x = not available</td> </tr> </tbody> </table>		±0.05 ppm	±0.10 ppm	±0.14 ppm	±0.20 ppm	±0.28 ppm	±0.37 ppm	±0.5 ppm	0° to +55°C	o	o	o	o	o	o	o	-10° to +60°C	o	o	o	o	o	o	o	-20° to +70°C	∅	o	o	o	o	o	o	-40° to +85°C	x	x	x	o	o	o	o		o = available		∅ = please contact us		x = not available		
	±0.05 ppm	±0.10 ppm	±0.14 ppm	±0.20 ppm	±0.28 ppm	±0.37 ppm	±0.5 ppm																																										
0° to +55°C	o	o	o	o	o	o	o																																										
-10° to +60°C	o	o	o	o	o	o	o																																										
-20° to +70°C	∅	o	o	o	o	o	o																																										
-40° to +85°C	x	x	x	o	o	o	o																																										
	o = available		∅ = please contact us		x = not available																																												
Frequency Stability vs Aging	±1.0 ppm max. per year at 25°C																																																
Frequency Stability vs Voltage Change	±0.05 ppm max., for a ±5% input voltage change																																																
Frequency Stability vs Load Change	±0.05 ppm max., for a ±10% load condition change																																																
Output Level	VOH ≥ 0.9 Vdd VOL ≤ 0.1 Vdd																																																
Output Load	15 pF																																																
Symmetry	45 / 55%																																																
Rise Time / Fall Time Fr / Ff	10 ns max.																																																
Start-up Time	2.0 ms max.																																																
Tri-state function (Only possible for A-version package)	pin #8 = high or open pin#5 ==> oscillation pin #8 = low pin#5 ==> high impedance																																																
Phase Noise	<table border="1"> <thead> <tr> <th>Offset / dBc / Hz</th> <th>100 Hz</th> <th>1 kHz</th> <th>10 kHz</th> </tr> </thead> <tbody> <tr> <td>(typical)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>12.800 MHz</td> <td>-130 dBc / Hz</td> <td>-145 dBc / Hz</td> <td>-154 dBc / Hz</td> </tr> </tbody> </table>	Offset / dBc / Hz	100 Hz	1 kHz	10 kHz	(typical)				12.800 MHz	-130 dBc / Hz	-145 dBc / Hz	-154 dBc / Hz																																				
Offset / dBc / Hz	100 Hz	1 kHz	10 kHz																																														
(typical)																																																	
12.800 MHz	-130 dBc / Hz	-145 dBc / Hz	-154 dBc / Hz																																														
Packing Unit	1000 pcs / reel																																																
Soldering Condition	260°C, 10 sec x2 max																																																

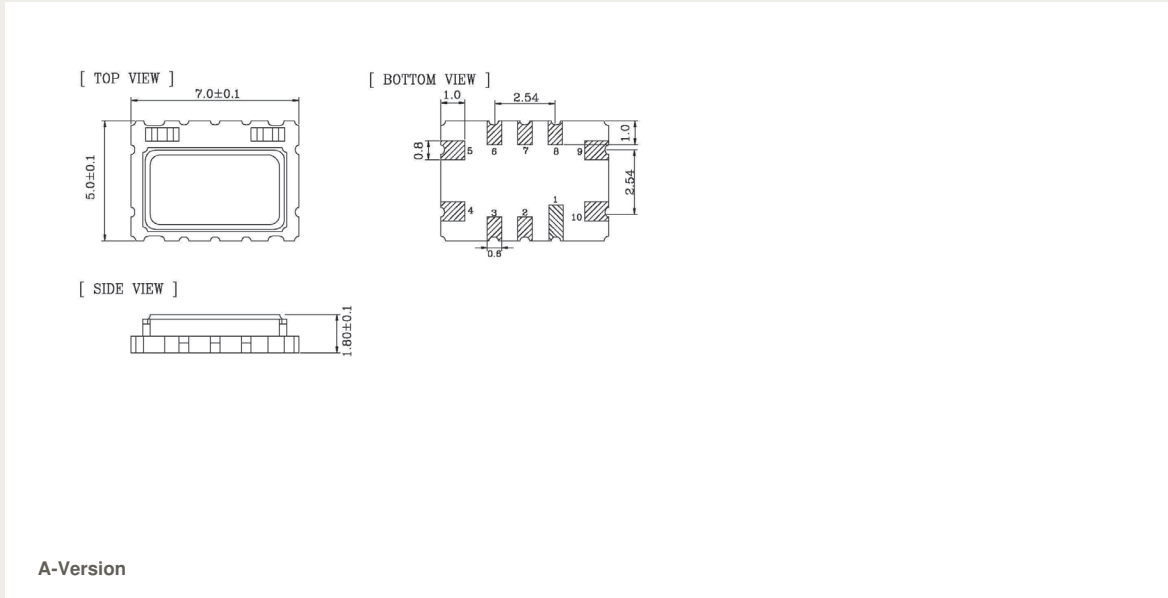
OPTIONS & ORDERING INFORMATION

SX7CTG

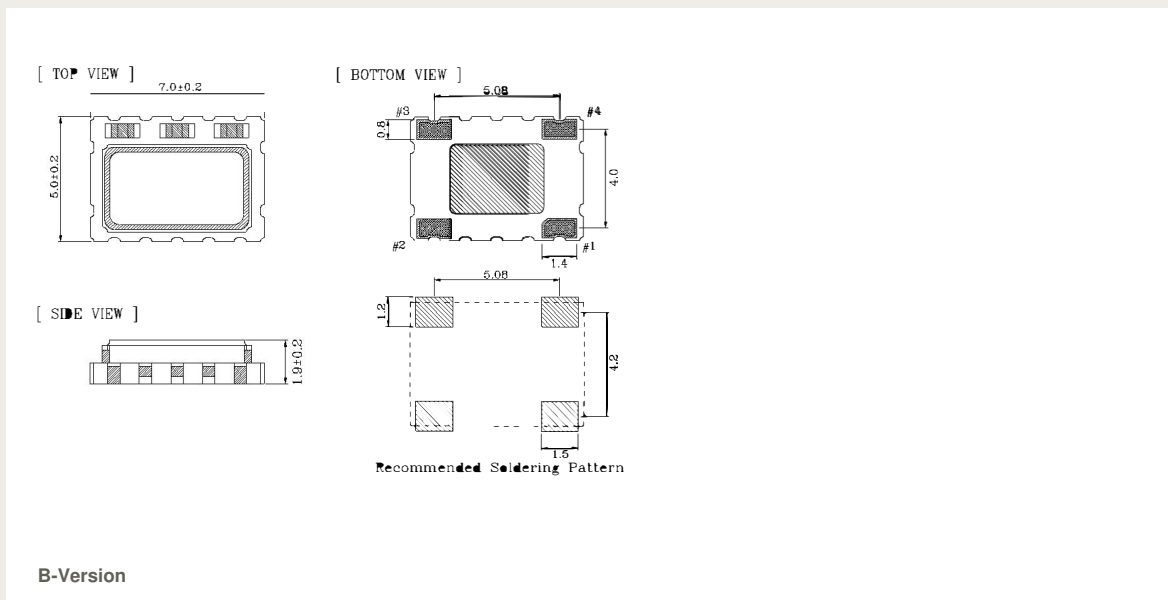
.....	- MHz
Supply Voltage *	Operating Temp. *	Temperature Stability *	Tri-state Function *	Package type	Frequency in MHz
25 = +2.5V	C = 0° / +55°C	0.05 = ±0.05 ppm	E8 = Tri-state, pin #8	A = A-version	Please specify the frequency in MHz
33 = +3.3V	D = -10° / +60°C	0.10 = ±0.10 ppm	F = No Tri-state	B = B-version	
	F = -10° / +70°C	0.14 = ±0.14 ppm			
	K = -40° / +85°C	0.20 = ±0.20 ppm			
		0.28 = ±0.28 ppm			
		0.37 = ±0.37 ppm			
		0.50 = ±0.50 ppm			

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

OUTLINE DIMENSIONS



Pin Connections	#1 : NC	#2 : NC	#3 : NC	#4 : GND	#5 : Output
	#6 : NC	#7 : NC	#8 : E/D	#9 : Vdd	#10 : GND



Pin Connections	#1 : GND	#2 : GND	#3 : Output	#4 : Vdd
-----------------	----------	----------	-------------	----------