

# SP2C

# HCMOS SURFACE MOUNT CRYSTAL CLOCK OSCILLATOR

## FEATURES

- PCB based package with metal lid
- Low Phase Noise
- Tight Tolerances
- 4 pad or 6 pad version
- Applications: Base stations, Test equipment, Synthesizers

14.3 x 8.7 x 5.5 mm



Item	Specification	
Frequency Range	1.0 MHz - 800.0 MHz	
Standard frequencies	2.048 ; 10 ; 20 ; 24.705 ; 30.720 ; 32.768 ; 50 ; 61.44 MHz 76.8 ; 77.760 ; 81.92 ; 100 ; 125 ; 150 ; 155.52 ; 156.25 MHz	
Output Logic	CMOS	
Overall Frequency Stability *	± 15 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	+3.3V ±5%	+5.0V ±5%
Supply Current Idd	90 mA max	100 mA max
Output Level	VOH ≥ 0.9 Vdd	VOL ≤ 0.1 Vdd
Output Load	15 pF	
Symmetry	45 / 55 %	
Rise Time / Fall Time Fr/Ff	5 ns max	
Tri-state function	pin #1 or #2 = high or open pin #1 or #2 = low	pin #3 or pin #4 ==> oscillation pin #3 or pin #4 ==> high impedance
Start-up Time	10 ms max.	
RMS Jitter ( 12 kHz to 20 MHz band )	1 ps max.	
Packing Unit	800pcs / reel	
Soldering Condition	260°C, 10 sec x2 max	
	<b>Customer specifications on request</b>	

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

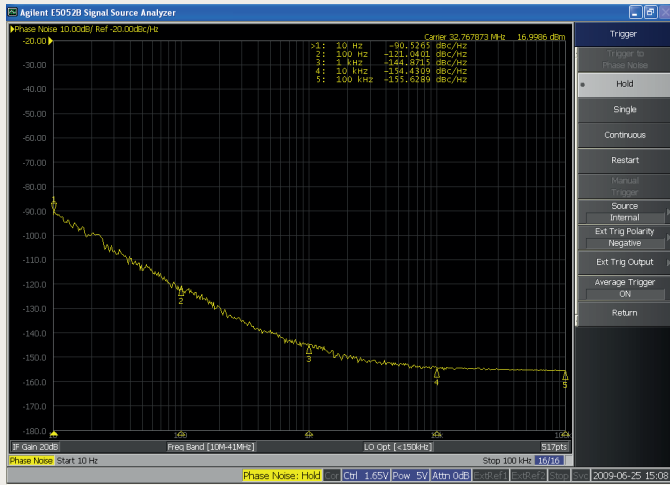
## OPTIONS & ORDERING INFORMATION

SP2C	.....	.....	.....	.....	..... MHz
Supply Voltage *	Operating Temp. *	Overall Stability *	Tri-state Function *2	Output Load *	Frequency in MHz
33 = +3.3V	C = 0° / +50°C	15 = ±15 ppm	E1 = Tri-state, pin #1	4P = 4-pad version	Please specify the
50 = +5.0V	D = -10° / +60°C	20 = ±20 ppm	E2 = Tri-state, pin #2	6P = 6-pad version	frequency in MHz
	E = 0° / +70°C	25 = ±25 ppm	F = no Tri-state		
	F = -20° / +70°C	30 = ±30 ppm			
	G = -30° / +75°C	50 = ±50 ppm			
	H = -30° / +85°C	100 = ±100 ppm			
	K = -40° / +85°C				

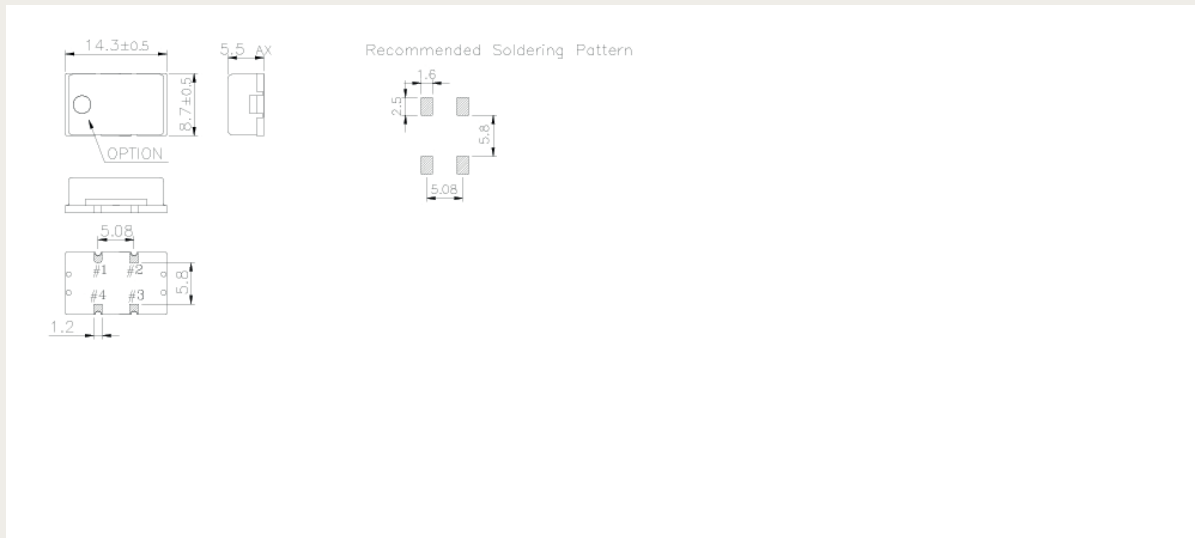
(\*) Note : Not all combinations are possible, please consult us.

(\*2) Tri-state at pin #2, only possible with 6-pad version

## PHASE NOISE (32.768 MHz)

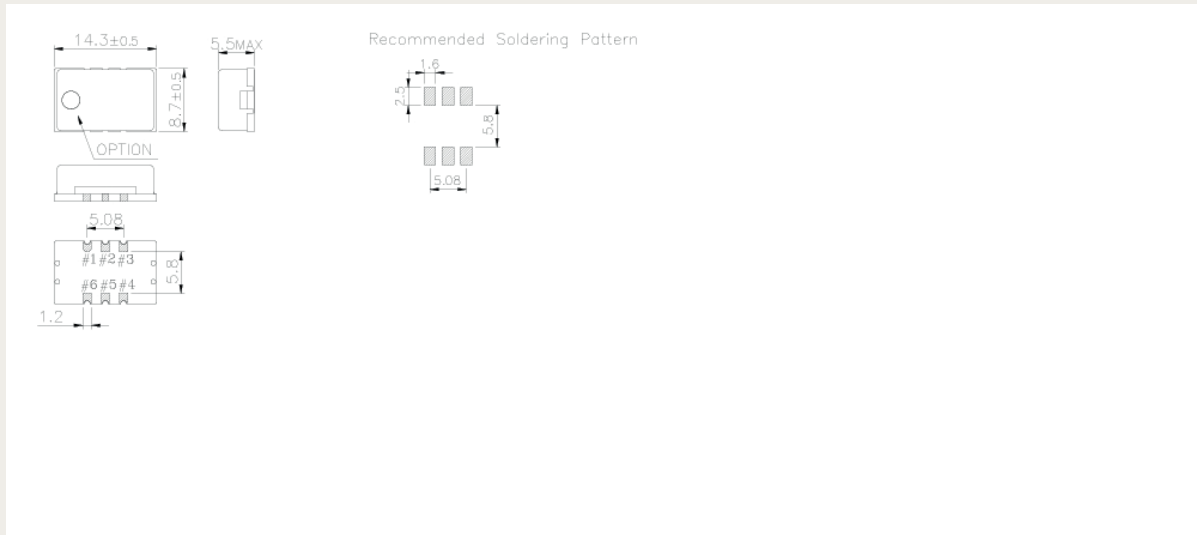


## OUTLINE DIMENSIONS (mm)



Pin Connections    #1 : E/D or NC                    #2 : GND                    #3 : Output                    #4 : Vdd

## OUTLINE DIMENSIONS (mm)



### Pin Connections

#1 : E/D or NC  
#4 : Output

#2 : E/D or NC  
#5 : NC

#3: GND  
#6: Vdd