HM International

Frequency Technology

#### European Crystal Organization

KLOVE ELECTRONICS

Frequency Technology

### SX3K

## 32.768 kHz SURFACE MOUNT CRYSTAL CLOCK OSCILLATOR

Frequency Technology

- FEATURES
  - Ultra-miniature package
  - AT-cut crystal built-in
  - Low power consumption of 10  $\mu A$  max
  - Supply voltage as wide as +1.8V to 3.3V
  - Applications : Portable electronics , ....



3.2 x 2.5 x 1.2 mm

Item	Specification					
Frequency Range	32.768 kHz					
Output Logic	CMOS					
Frequency stability	$\pm$ 20 ppm typ. ~ $\pm$ 50 ppm (see options)					
Operating Temperature Range	-40 ~ +85°C					
Supply Voltage Vdd	+1.8V ±5% +2.5V ±5%	+3.0V ±5%	+3.3V ±5%			
Supply Current Idd	10 µA max.					
Output Level	$VOH \ge 0.9 Vdd$	$VOL \le 0.1 Vdd$				
Output Load	15 pF					
Symmetry	45 / 55 %					
Rise Time / Fall Time Fr/Ff	7 ns typ., 20 ns max.					
Tri-state function	pin #1 = high or open		pin #3 ==> oscillation			
	pin #1 = low		pin #3 ==> high impedance			
Start-up Time	1 ms typ.					
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

# **OPTIONS & ORDERING INFORMATION**

SX3K					32.768 kHz
	Supply Voltage	Operating Temp. *	Overall Stability *	Tri-state Function	Frequency in kHz
	<b>18 =</b> +1.8V	<b>K =</b> -40° / +85°C	<b>20 =</b> ±20 ppm	E = Tri-state	
	<b>25 =</b> +2.5V		<b>25 =</b> ±25 ppm		
	<b>30 =</b> +3.0V		<b>30 =</b> ±30 ppm		
	<b>33 =</b> +3.3V		<b>50 =</b> ±50 ppm		

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

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# OUTLINE DIMENSIONS

