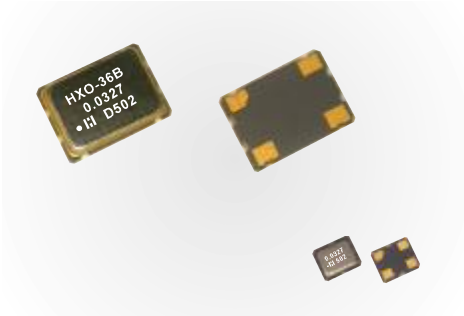




# SMD CRYSTAL OSCILLATOR



## • DxSX Series RTC (32.768KHz OSC)



### FEATURES

- 32.768KHz
- Tri-State Enable/Disable
- TTL/CMOS compatible
- Tape and Reel
- Low current consumption
- 3.3V, 2.5V and 1.8V option
- RF power saving application on portable devices

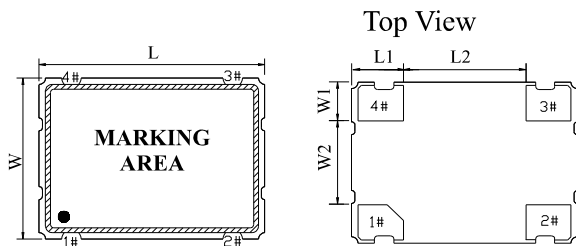
### Electrical Specifications

Parameter	Condition	D2SX/D3SX/D5SX/D7SX		
Frequency Range	F0	32.768KHz		
Frequency Stability*	All Condition	± 15ppm, ± 25ppm, ± 50ppm		
Operating Temperature Range	T <sub>OPR</sub>	-20°C ~ +70°C (-40°C ~ +85°C option)		
Storage Temperature Range	T <sub>STG</sub>	-55°C ~ +125°C		
Power supply Voltage	V <sub>DD</sub>	3.3V ± 10%	2.5V ± 10%	1.8V ± 10%
Supply Current	I <sub>DD</sub>	30uA Max		
Output Symmetry	Sym	At 1/2V <sub>DD</sub>		
Rise time	T <sub>r</sub>	10%V <sub>DD</sub> ~90%V <sub>DD</sub>		
Fall Time	T <sub>f</sub>	90%V <sub>DD</sub> ~10%V <sub>DD</sub>		
Output Voltage	V <sub>OH</sub> V <sub>OL</sub>	90%V <sub>DD</sub> Min 10%V <sub>DD</sub> Max		
Output Load HCMOS Load	CL	15pF Max		
Start Time	T <sub>s</sub>	10mS Max		
Aging(First Year)		± 2ppm Max		
Pin 1, tri-state function		Pin 1=H or open....Output active at pin 3 Pin 1=L....high impedance at pin 3		
Packing Unit		1000pcs/reel(HXO-D3x/5x) 3000pcs/reel(HXO-DSx/Nx)		

\*Include: 25°C tolerance, operating temperature range, input voltage change, aging, load change, shock and vibration

\*\*Please contact us for inquiries regarding other frequency

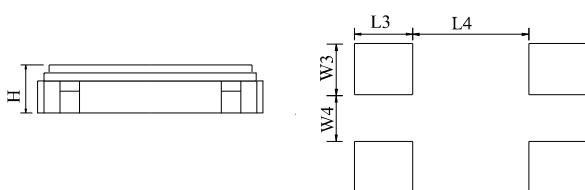
### Mechanical Dimensions(mm)



Offset:0.1mm

Product	L	W	H(Max.)	L1	L2	L3	L4	W1	W2	W3	W4
D7SX	7.00	5.00	1.50	1.60	3.80	1.80	3.60	1.20	2.60	1.60	2.00
D5SX	5.00	3.20	1.30	1.83	1.34	1.40	1.14	1.00	1.20	1.20	1.00
D3SX	3.20	2.50	1.20	1.00	1.20	1.20	1.00	0.75	1.00	0.95	0.80
D2SX	2.50	2.00	0.90	0.80	0.90	1.00	0.70	0.70	0.60	0.90	0.40

### Recommended Solder Pattern



Pin	Connection
#1	Tri-State
#2	GND
#3	Output
#4	V <sub>DD</sub>

\*\*\*Note: 0.01uF bypass capacitor should be placed between V<sub>DD</sub>(Pin4) and GND(Pin2) to Minimize power supply line noise