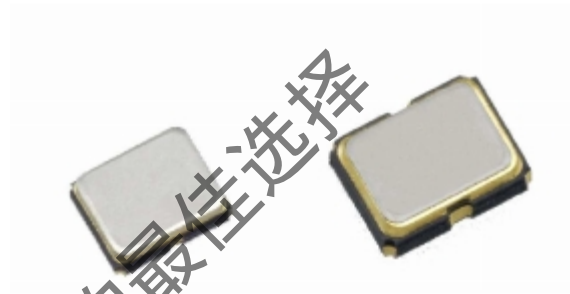


# Spread Spectrum Clock Generator Ultra Low Power Mobile EMI Reduction Oscillator SSDPI series(Programmable)

## ■ Features

- Frequency range : 1 MHz ~ 170 MHz (20 ppm)
- Supply voltage : 1.62 V ~ 3.63 V
- Package : 2.5 x 2.0, 3.2 x 2.5 (mm)
- FCC approved EMI attenuation



## ■ Electrical Specification

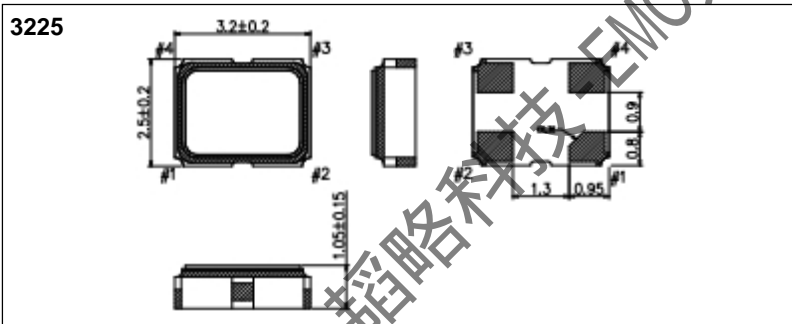
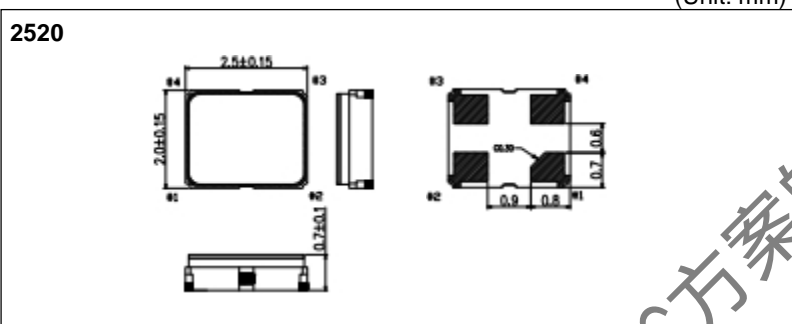
Item	Symbol	Specifications				Conditions/Remarks		
		1.80 V Typ.	2.50 V Typ.	3.30 V Typ.				
Supply voltage	V <sub>cc</sub>	1.62 V ~ 1.98 V	1.98 V ~ 2.20 V	2.20 V ~ 2.80 V	2.70 V ~ 3.63 V			
Output frequency range	f <sub>o</sub>	1 MHz ~ 170 MHz						
Storage temperature	T <sub>stg</sub>	-40 °C ~ +125 °C				Storage as single product.		
Operating temperature	T <sub>use</sub>	-40 °C ~ +85 °C						
Current consumption	I <sub>cc</sub>	3.4 mA Max.	3.5 mA Max.	3.6 mA Max.	3.7 mA Max.	T <sub>use</sub> = +85 °C	No load, f <sub>o</sub> = 20 MHz	
		2.9 mA Typ.		3.0 mA Typ.		T <sub>use</sub> = +25 °C		
		5.7 mA Max.	6.0 mA Max.	6.9 mA Max.	8.3 mA Max.	T <sub>use</sub> = +85 °C		No load, f <sub>o</sub> = 170 MHz
		4.9 mA Typ.		5.9 mA Typ.		T <sub>use</sub> = +25 °C		
Output disable current	I <sub>dis</sub>	3.4 mA Max.	3.4 mA Max.	3.5 mA Max.	3.7 mA Max.	OE = GND, f <sub>o</sub> = 170 MHz		
Symmetry	SYM	45 % ~ 55 %				50 % V Level		
Output load condition	L <sub>CMOS</sub>	15 pF Max.						
Input voltage	V <sub>IH</sub>	70 % V <sub>cc</sub> Min.						
	V <sub>IL</sub>	30 % V <sub>cc</sub> Max.						
Rise and Fall time	tr/tf	3.0 ns Max.				f <sub>o</sub> > 40 MHz	20 % - 80 % V <sub>cc</sub> , L <sub>CMOS</sub> = 15 pF	
		6.0 ns Max.				f <sub>o</sub> ≤ 40 MHz		
Disable Time	t <sub>stp</sub>	1 μs Max.				Measured from the time OE pin crosses 30 % V <sub>cc</sub>		
Enable Time	t <sub>sta</sub>	1 μs Max.				Measured from the time OE pin crosses 70 % V <sub>cc</sub>		
Start-up time	t <sub>str</sub>	3 ms Max.				Measured from the time V <sub>cc</sub> reaches its rated minimum value, 1.62 V		

### Pin description

Pin	Name	I/O type	Function	
1	OE	Input	Output enable	High: Specified frequency output from OUT pin Low: Out pin is low (weak pull down), only output driver is disabled.
2	GND	Power	Ground	
3	OUT	Output	Clock output	
4	V <sub>CC</sub>	Power	Power supply	

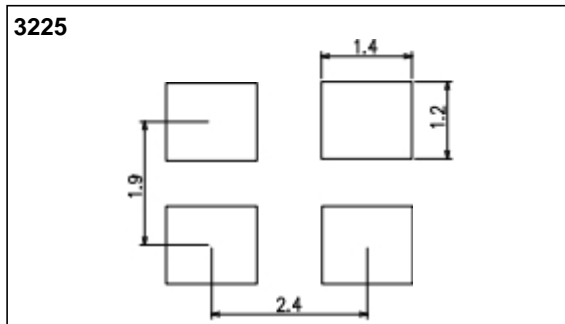
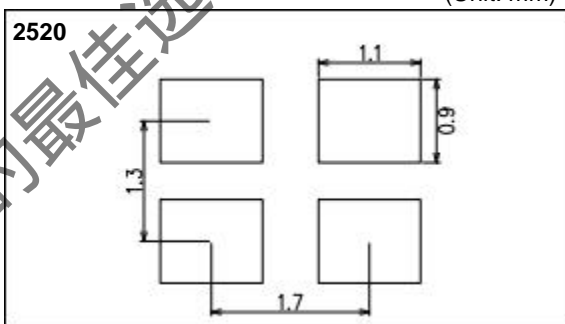
### External dimensions

(Unit: mm)



### Footprint (Recommended)

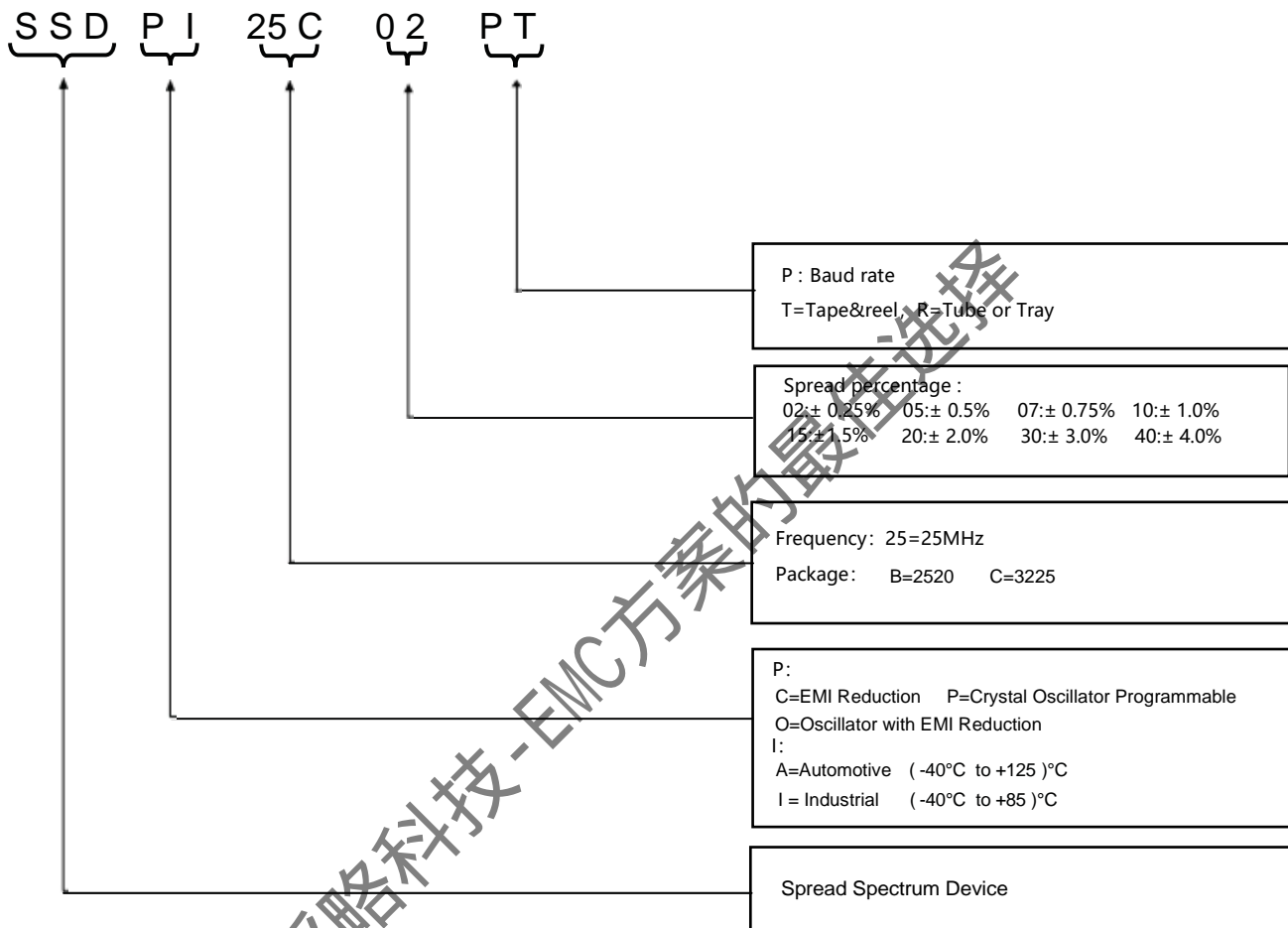
(Unit: mm)



### Notes:

In order to achieve optimum jitter performance, the 0.1  $\mu$ F capacitor between V<sub>CC</sub> and GND should be placed. It is also recommended that the capacitors are placed on the device side of the PCB, as close to the device as possible and connected together with short wiring pattern.

## Device Ordering Information



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