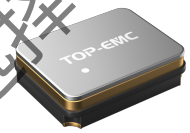
Spread Spectrum Clock Generator Ultra Low Power Mobile EMI Reduction Oscillator SSDPI series(Programmable)

■ Features



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

■ Electrical Specification

Item	Symbol	Specifications				Conditions/Remarks	
Supply voltage	V_{CC}	1.80 V Typ.		2.50 V Typ.	3.30 V Typ.	-	
		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_O	1 MHz ~ 170 MHz					
Storage temperature	T_stg	-40 ºC ~ +125 ºC				Storage as single product.	
Operating temperature	T_use	-40 ºC ~ +85 ºC					
Current consumption	I_{CC}	3.4 mA Max.	3.5 mA Max.	3.6 mA Max.	3.7 mA Max.	T_use = +85 ºC	No load, f_O = 20 MHz
		2.9 mA Typ.		3.0 mA Typ.	3.2 mA Typ.	T_use = +25 ºC	
		5.7 mA Max.	6.0 mA Max.	6.9 mA Max.	8.3 mA Max.	T_use = +85 ºC	No load, f_O = 170 MHz
		4.9 mA Typ.		5.9 mA Typ.	7.0 mA Typ.	T_use = +25 ºC	
Output disable current	I_dis	3.4 mA Max.	3.4 mA Max.	3.5 mA Max.	3.7 mA Max.	OE = GND, f_O = 170 MHz	
Symmetry	SYM	45 % ~ 55 %				50 % V Level	
Output load condition	L_CMOS	15 pF Max.				-	
Input voltage	V_{IH}	70 % V_{CC} Min.					
	V_{IL}	30 % V_{CC} Max.					
Rise and Fall time	tr/tf	3.0 ns Max.				f_O > 40 MHz	20 % - 80 % V_{CC}, L_CMOS = 15 pF
		6.0 ns Max.				f_O ≤ 40 MHz	
Disable Time	t_stp	1 µs Max.				Measured from the time OE pin crosses 30 % V_{CC}	
Enable Time	t_sta	1 µs Max.				Measured from the time OE pin crosses 70 % V_{CC}	
Start-up time	t_str	3 ms Max.				Measured from the time V_{CC} reaches its rated minimum value, 1.62 V	

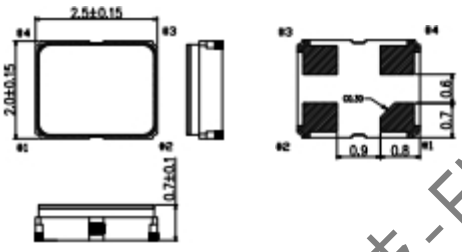
■ Pin description

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_{CC}	Power	Power supply	

■ External dimensions

(Unit: mm)

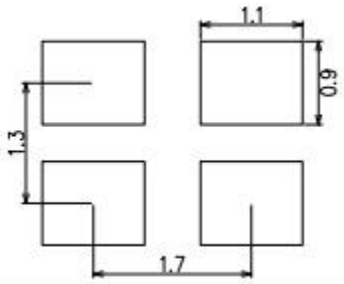
2520



■ Footprint (Recommended)

(Unit: mm)

2520



■Notes:

In order to achieve optimum jitter performance, the 0.1 µF capacitor between V_{CC} 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