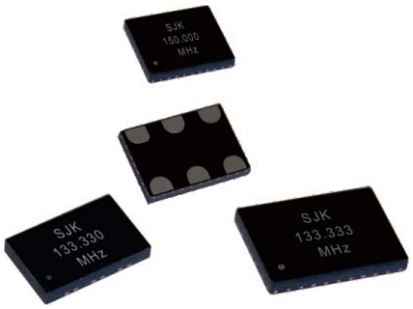
MEMS Oscillators

High Performance Differential Output MEMS Oscillators

Features

- Any frequency between 1MHz and 220MHz accurate to 6 decimal place.
- LVDS and LVPECL output signaling types.
- 0.6ps RMS phase jitter (random) over 12kHz to 20MHz bandwidth.
- Frequency stability as low as ±10ppm.
- Package size: 3.2×2.5mm, 5.0×3.2mm, 7.0×5.0mm.
- Industrial and extended commercial temperature ranges.
- Faster delivery.
- RoHS Compliant /Pb-Free.
- Applications: SONET, SATA, SAS, Fibre Channel, Telecom, Network, Servers, Storage, and more.



Electrical Specifications

Item /Type	S6XX (Differential Output MEMS Oscillators)	
Frequency Output	1~220MHz	
Output Type	LVPECL	LVDS
Frequency Stability	±10ppm, ±20ppm, ±25ppm, ±50ppm, or specify	
Operating Temperature Range	-20~+70ºC / -40~+85ºC	
Supply Voltage	2.5V /3.3V	
Input High Voltage	70% VDD	
Input Low Voltage	30% VDD	
Input Pull-up Impedance	100 KΩ Typ.	
Startup Time	10ms Max.	
Resume Time	10ms Max.	
Duty Cycle	45~55%	
Current Consumption	69mA Max.	55mA Max.
OE Disable Supply Current	35mA Max.	
Output Disable Leakage Current	1μA Max.	
Standby Current	100μA Max.	
Maximum Output Current	30mA Max.	-
Output High Voltage	Vdd-1.1 ~ Vdd-0.7	-
Output Low Voltage	Vdd-1.9 ~ Vdd-1.5	-
Output Differential Voltage Swing	2.0V Max.	-
Rise /Fall Time	300ps Typ.	495ps Typ.
OE Enable /Disable Time	115ns Max.	
RMS Period Jitter	1.7ps Max.	
RMS Period Jitter (random)	0.85ps Max.	
Differential Output Voltage	-	450mV Max.
VOD Magnitude Change	-	50mV Max.
Offset Voltage	-	1.375V Max.
VOS Magnitude Change	-	50mV Max.
Storage Temperature Range	-65~+150ºC	

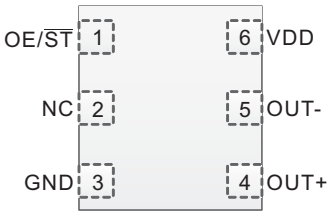
MEMS Oscillators

Low Power Programmable Oscillators

Pin Description

Pin	Symbol	Function	
1	OE	Input	H or Open: specified frequency output. L: output is high impedance.
	$\overline{ST}$	Input	H or Open: specified frequency output. L: Device goes to sleep mode.Supply current reduces to I_std.
2	NC	NA	No Connect; Leave it floating or connect to GND for better heat dissipation.
3	GND	Power	VDD Power Supply Ground
4	OUT+	Output	Oscillator output
5	OUT-	Output	Complementary oscillator output
6	VDD	Power	Power supply voltage

TOP VIEW



Dimensions

Units:mm

Package Size	Recommended Land Pattern
3.2×2.5×0.75 mm	
5.0×3.2×0.75 mm	
7.0×5.0×0.90 mm