



REV O Dec 01 2016

Oscilent Controlled Document

Series Number	Product Description
1193-6	High Performance MEMS Oscillator Differential Output 5.0x7.0mm

Contents

- o Part Number Builder
- o Pin Description
- o Package Size and Recommended Land Pattern
- o Electrical Specifications

Features

- o 1 ~ 220 MHz standard frequencies
- o LVDS / LVPECL outputs
- o 0.6ps RMS phase jitter (random) over 12kHz to 20 MHz bandwidth
- o Low frequency stability
- o RoHS Compliant / Pb Free

Application

- o SONET
- o SATA
- o SAS
- o Fiber Channel
- o Telecom
- o Network
- o Servers
- o Storage



Oscilent Corporation
Telephone: 1.949.252.0522
Fax: 1.949.252.0599
Email: sales@oscilent.com



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1193-6

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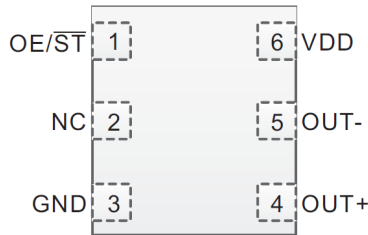
High Performance MEMS Oscillator Differential Output 5.0x7.0mm

Part Number Builder

Series Number	Select Frequency	Supply Voltage	Frequency Stability	Operating Temperature	Pin 1 Function	Packaging
1193 – 6 –	M	–			–	–
Enter Frequency		6 = 2.5V 3 = 3.3V	E = ±50 ppm F = ±25 ppm G = ±20 ppm H = ±10 ppm	D = -20~+70°C N = -40~+85°C	OE = Output Enable ST = Standby	TR = Tape +Reel Blank = Bulk

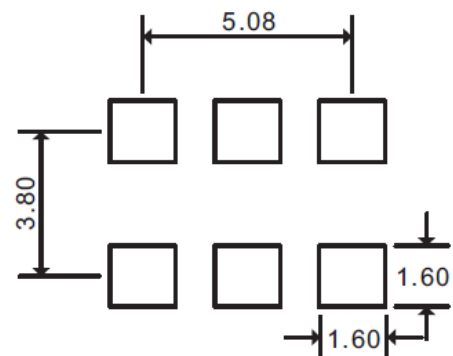
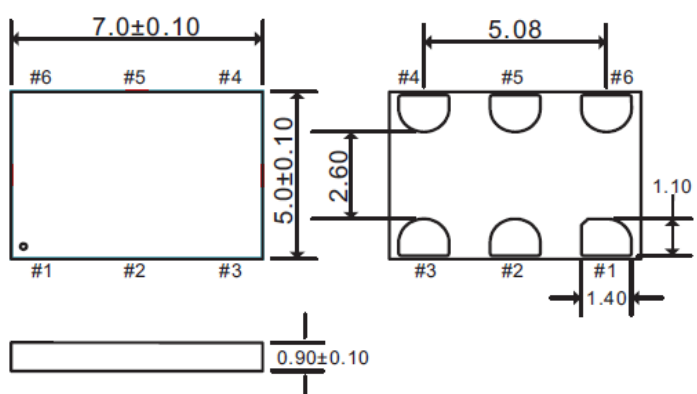
Pin Description

TOP VIEW



Pin	Sym	Function	
1	OE	Input	H or Open: specified frequency output L: output is high impedance
	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 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

Package Size and Recommended Land Pattern





Electrical Specifications

Parameters Description		
Frequency Output	1 ~ 220 MHz	
Output Type	LVPECL	LVDS
Frequency Stability	±10ppm, ±20ppm, ±25ppm, ±50ppm (custom avail)	
Operating Temperature Range	-20~+70°C / -40~+85°C	
Supply Voltage	2.5V / 3.3V	
Input High Voltage	70% VDD	
Input Low Voltage	30% VDD	
Input Pull-up Impedance	100KΩ 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~+150°C	