



REV O Dec 01 2016

Oscilent Controlled Document

Series Number	Product Description
1146-4	MEMS Oscillator Low Power Programmable 2.5x2.0x0.75mm

## Contents

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

## Features

- o 115 ~ 137 MHz accurate to 6 decimals.
- o LVCMOS / HCMOS outputs
- o Low power consumption of 4.9 mA typical at 1.8V
- o Stand by Mode for longer battery life
- o RoHS Compliant / Pb Free

## Application

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





Series Number  
**1146-4**

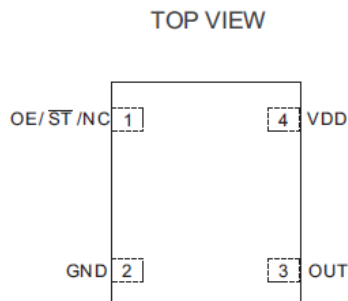
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**MEMS Oscillator Low Power Programmable 2.5x2.0x0.75mm**

### Part Number Builder

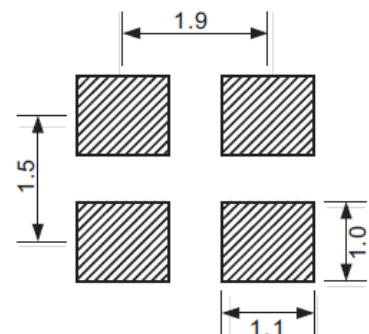
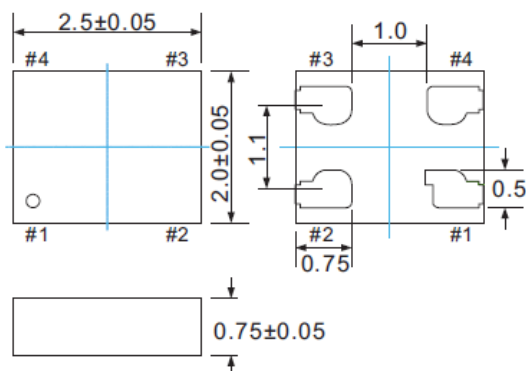
Series Number	Select Frequency	Supply Voltage	Frequency Stability	Operating Temperature	Pin 1 Function	Packaging
<b>1146 – 4 –</b>	<b>M</b>	–			–	–
Enter Frequency		7 = 3.3V 6 = 3.0V 3 = 2.8V 2 = 2.5V 1 = 1.8V	E = ±50 ppm F = ±25 ppm G = ±20 ppm	D = -20~+70°C N = -40~+85°C	OE = Output Enable ST = Standby NC = No Connect	TR = Tape +Reel Blank = Bulk

### Pin Description



Pin	Sym	Function
1	OE	Output Enable H: specified frequency output L: output is high impedance. Only output device is disabled
	ST	Standby H: specified frequency output L: output is low (weak pull down). Device goes to sleep mode, Supply current reduces to I_std
	NC	No Connect Any voltage between 0 and Vdd or open: Specified frequency output. Pin 1 has no function
2	GND	Power Electrical Ground
3	Output	Output Oscillator Output
4	VDD	Power Power Supply Voltage

### Package Size and Recommended Land Pattern



**Electrical Specifications**

Parameters Description	
Frequency Output	115~137MHz
Frequency Stability	±20ppm, ±25ppm, ±50ppm, or specify
Operating Temperature Range	-20~+70°C / -40~+85°C
Supply Voltage	1.8V, 2.5V, 2.8V, 3.0V, 3.3V
Current Consumption	4.9mA Typ.
OE Disable Current	4.2mA Max.
Standby Current	0.6mA Typ.
Duty Cycle	45-55%
Rise/ Fall Time	2ns Max.
Output High Voltage	90% VDD
Output Low Voltage	10% VDD
Input High Voltage	70% VDD
Input Low Voltage	30% VDD
Startup Time	5ms Max.
Enable/ Disable Time	130ns Max.
Resume Time	5ms Max.
RMS Period Jitter	1.8ps Typ.
Peak-to-Peak Period Jitter	12ps Typ.
RMS Phase Noise (random)	0.5ps Typ.
Storage Temperature Range	-65~+150°C
Output Type	LVC MOS / HCMOS