



Data Sheet



Product Category: SMD Oscillators

| | | | |
|---------------|-------------------|----------------------|---------------|
| Series Number | Package | Description | Last Modified |
| 433 | 7 x 5 SMD Ceramic | Ultra Low Jitter 1pS | Jan. 01 2007 |

FEATURES

- Ultra low jitter at 1 ps
- Low power consumption
- Standby function
- Tape and Reel
- Miniature profile
- 3.3V or 5.0V optional
- RoHs / Lead Free compliant



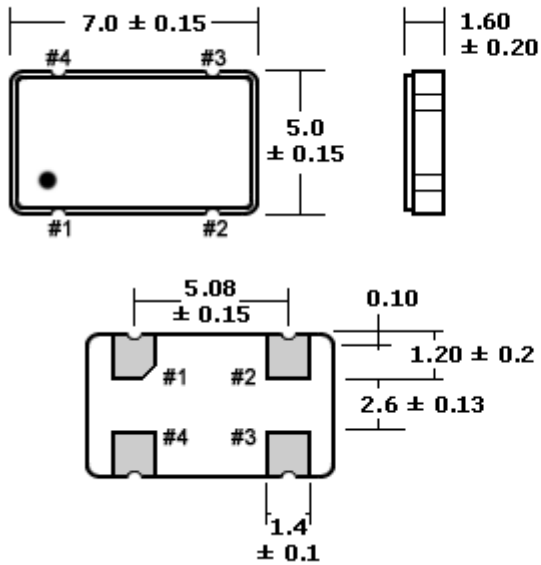
OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

| PARAMETERS | CONDITIONS | CHARACTERISTICS | | UNITS |
|--|-----------------------------|--|---------------|--------|
| Output Logic | - | HCMOS / TTL Output | | - |
| Input Voltage (VDD) | - | 3.3 ±10% | 5.0 ±10% | VDC |
| Frequency Range (f_O) | - | 1.544 ~ 133.333 | | MHz |
| Operating Temperature (T_{OPR}) | - | 0 ~ +70 (Std.) / -40 ~ 85 (Option) | | °C |
| Storage Temperature (T_{STG}) | - | -55 ~ +125 | | °C |
| Frequency Stability | a + b + c + d | ±25, ±50, ±100 max. | | PPM |
| | (a) Frequency Tolerance | Inclusive of Overall Stability | | - |
| | (b) Temperature Stability | Inclusive of Overall Stability (Operating Temperature) | | - |
| | (c) Input Voltage Stability | Inclusive of Overall Stability (VDD ±10%) | | - |
| | (d) Load Stability | Inclusive of Overall Stability (RL ±5%) | | - |
| Input Current (I_{DD}) | - | 12 ~ 60 max. | 25 ~ 100 max. | mA |
| Aging | @ 25°C | ±5 max. | | PPM/Y |
| Rise Time (T_R) / Fall Time (T_F) | - | 8 max. (0.4V to 2.4V w/ TTL, 20% ~ 80% / HCMOS) | | nS |
| PIN 1 Tri-State | - | Option | | - |
| Output Voltage High "1" VOH | TTL Load | 2.4 min. | | VDC |
| | HCMOS Load | 2.7 min. | VDD-0.5 min. | |
| Output Voltage Low "0" VOL | TTL Load | 0.4 max. | | VDC |
| | HCMOS Load | 0.5 max. | | |
| Duty Cycle | - | 50 ±10 (Std.) / 50 ±5 (Option) | | % |
| Start-Up Time (T_S) | 1 ~ 35 MHz | 4 max. | | mS |
| | 35 ~ 125.000 MHz | 10 max. | | |
| Jitter | (Bandwidth 12KHz ~ 20Mhz) | ±1 | | ps RMS |

PIN CONNECTIONS

| | |
|--|--|
| | |
|--|--|

PACKAGE DIMENSIONS (mm)



Suggested Solder Pad Layout



| | |
|----|--|
| #1 | No Connection or Tri-State Enable High |
| #2 | Case Ground |
| #3 | Output |
| #4 | Vdd |

PART NUMBER GUIDE

| Series Number | Frequency | Voltage Supply Option | Frequency Tolerance & Stability (max.) | Operating Temp. (°C) | Duty Cycle | Pin 1 Connection |
|--|---|------------------------|--|---|-------------------------------|--|
| 433 | - 24.0M | - 3 | E | N | - T | TS |
| Oscilent SMD Oscillators | Enter your desired frequency e.g. 24.0M = 24.000MHz | 5 = 5VDC 3 = 3.3VDC | D = ±100 PPM E = ±50 PPM F = ±25 PPM G = ±20 PPM J = ±15 PPM | Blank* = 0~+70 C = -10~+70 D = -20~+70 N = -40~+85 | Blank* = 50±10% T = -50±5% | NC = No Connection TS = Tri-State Enable High |
| <p>NOTE: - Deviations on all parameters available. Please consult Oscilent for details. DEFINITIONS: - Click on the characteristic names above, for definitions of the particular characteristic. *STANDARDS: - "Blank" part number selections, indicate standard variables for the particular characteristic. PACKAGING: - Add -TR for Tape/Reel. Click here for tape/reel specifications</p> | | | | | | |

Series No.: 433

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