

HCMOS 2.5x2.0mm 2.5V SMD Oscillator



Model: F240 Series

RoHS Compliant / Pb Free

Rev. 6/30/2011

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FEATURES

- Tight Stability
- 2.5V Operation
- HCMOS Output
- Standby Function
- Tape and Reel (3,000 pcs. STD)

• PART NUMBER SELECTION [Learn More](#) - Internet Required

| Part Number | Model Number | Frequency Stability ¹ | Operating Temperature (°C) | Frequency Range (MHz) |
|----------------------|--------------|----------------------------------|----------------------------|-----------------------|
| 833J-Frequency-xxxxx | F246R | ±25PPM | -40 ~ +85 | 4.000 ~ 54.000 |
| 833D-Frequency-xxxxx | F247 | ±15PPM | -10 ~ +70 | 4.000 ~ 54.000 |
| 833E-Frequency-xxxxx | F247R | ±15PPM | -40 ~ +85 | 4.000 ~ 54.000 |
| 833F-Frequency-xxxxx | F249 | ±10PPM | -10 ~ +70 | 4.000 ~ 54.000 |
| 833G-Frequency-xxxxx | F249R | ±10PPM | -40 ~ +85 | 4.000 ~ 54.000 |

• ELECTRICAL CHARACTERISTICS

| PARAMETERS | MAX (unless otherwise noted) |
|----------------------------------|------------------------------|
| Frequency Range (Fo) | 4.000 ~ 54.000 MHz |
| Storage Temperature Range | -40°C ~ +85°C |
| Supply Voltage (VDD) | 2.5V ± 10% |
| Input Current | 7.0mA |
| Output Symmetry (50% VDD) | 45% ~ 55% |
| Rise Time (10% ~ 90% VDD) | 5.0nS |
| Fall Time (90% ~ 10% VDD) | 5.0nS |
| Output Voltage (VOL) | 10% VDD |
| (VOH) | 90% VDD Min |
| Output Current (IOL) | 4mA Min |
| (IOH) | -4mA Min |
| Output Load (HCMOS) | 15pF |
| Standby Current | 10µA |
| Start-up Time (Ts) | 10mS |
| Output Disable Time ² | 250nS |
| Output Enable Time ² | 10mS |
| Phase Noise (@ 10kHz offset) | -145dBc/Hz Typ. |
| Period Jitter | 3pS RMS Typ. |
| Reflow Soldering Temp / Time | 260°C / 10 Seconds |
| Moisture Sensitivity Level (MSL) | 1 |
| Termination Finish | Au over Ni |

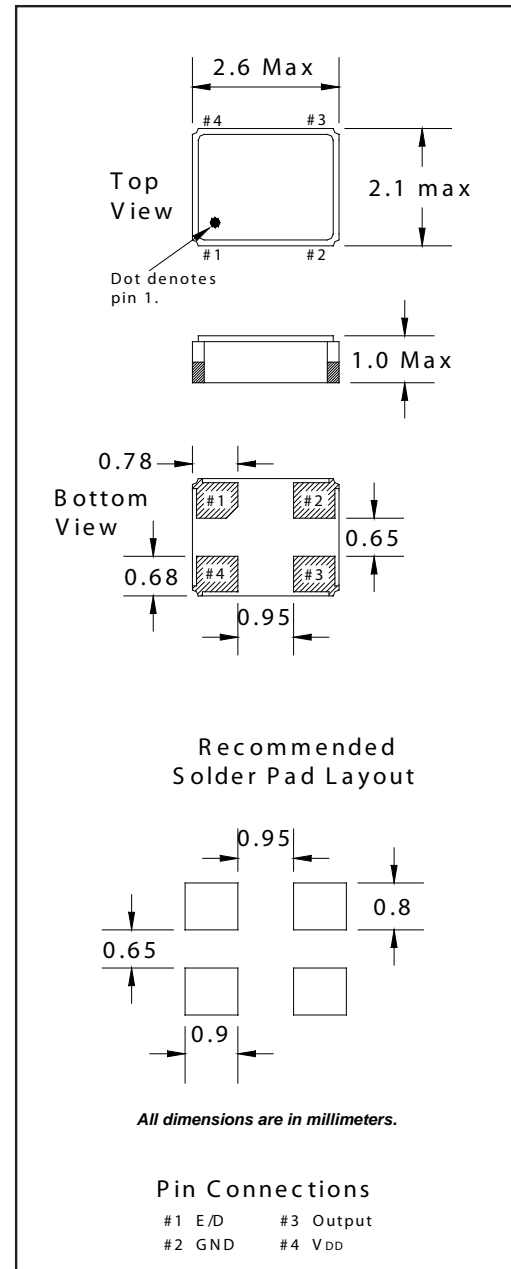
¹ Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, reflow and one year aging.

² An internal pullup resistor from pin 1 to pin 4 allows active output if pin 1 is left open.

Note: A 0.01µF bypass capacitor should be placed between VDD (Pin 4) and GND (Pin 2) to minimize power supply line noise.

Drawing is for reference to critical specifications defined by size measurements.

Certain non-critical visual attributes, such as side castellations, reference pin shape, etc. may vary. All specifications subject to change without notice.



• ENABLE / DISABLE FUNCTION

| Pin 1 | OUTPUT (Pin 3) |
|-------------------------------------|----------------|
| OPEN ² | ACTIVE |
| '1' Level $V_{IH} \geq 70\% V_{DD}$ | ACTIVE |
| '0' Level $V_{IL} \leq 30\% V_{DD}$ | High Z |

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Need a
Sample®

| • TAPE SPECIFICATIONS (millimeters) | | | | | | | |
|-------------------------------------|------|-----|-----|-----|-----|------|--------------|
| MODEL | A | B | C | D | E | F | STD Reel QTY |
| F240 | ∅1.5 | 4.0 | 4.0 | 3.5 | 8.0 | 1.15 | 3,000 |

| • REEL SPECIFICATIONS (millimeters) | | | | | | | |
|-------------------------------------|-----|-----|-----|-----|------|-----|-----|
| MODEL | G | H | I | J | K | L | M |
| F240 | 2.0 | ∅13 | ∅21 | ∅60 | ∅180 | 9.0 | 2.0 |

