

HCMOS 2.5x2.0mm 3.3V SMD Oscillator



Model: F237/F239 Series

RoHS Compliant / Pb Free

Rev. 12/2010

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Need a
Sample®

FEATURES

- 3.3V 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)
833-Frequency-xxxxx	F237	±15PPM	-10 ~ +70	4.000 ~ 54.000
833A-Frequency-xxxxx	F237R	±15PPM	-40 ~ +85	4.000 ~ 54.000
833B-Frequency-xxxxx	F239	±10PPM	-10 ~ +70	4.000 ~ 54.000
833C-Frequency-xxxxx	F239R	±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 (V _{DD})	3.3V ± 10%
Input Current	7mA
Output Symmetry (50% V _{DD})	45% ~ 55%
Rise Time (10% ~ 90% V _{DD})	5.0nS
Fall Time (90% ~ 10% V _{DD})	5.0nS
Output Voltage (V _{OL})	10% V _{DD}
(V _{OH})	90% V _{DD} Min
Output Current (I _{OL})	4mA Min
(I _{OH})	-4mA Min
Output Load (HCMOS)	15pF
Standby Current	10µA
Start-up Time (T _s)	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

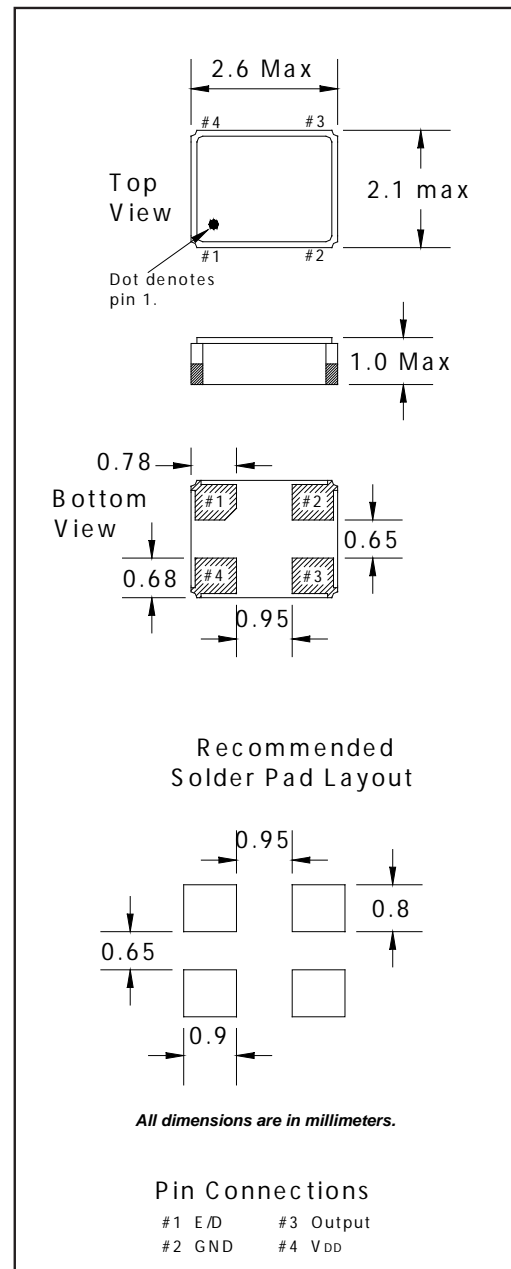
¹ Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, reflow and one year aging.

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 V_{DD} (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} ≥ 70% V _{DD}	ACTIVE
'0' Level V _{IL} ≤ 30% V _{DD}	High Z

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• TAPE SPECIFICATIONS (millimeters)							
MODEL	A	B	C	D	E	F	STD Reel QTY
F237/F239	∅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
F237/F239	2.0	∅13	∅21	∅60	∅180	9.0	2.0

