

# 5.0V, HCMOS, SMD Oscillator



Model: F3345 SERIES

RoHS Compliant / Pb Free

Rev. 1/29/2014

Page 1 of 2

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## FEATURES

- 5.0V Operation
- HCMOS/TTL Output
- Tri-State Enable/Disable
- Tape and Reel (2,000 pcs. STD)

## OPTIONS

- Standby Function (F4101)

## • PART NUMBER SELECTION

| Part Number         | Model Number | Frequency Stability <sup>1</sup> | Operating Temperature (°C) | Frequency Range (MHz) |
|---------------------|--------------|----------------------------------|----------------------------|-----------------------|
| 092-Frequency-xxxxx | F3345        | ±100PPM                          | -10 ~ +70                  | 1.000 ~ 80.000        |
| 093-Frequency-xxxxx | F3345R       | ±100PPM                          | -40 ~ +85                  | 1.000 ~ 80.000        |
| 090-Frequency-xxxxx | F3340        | ±50PPM                           | -10 ~ +70                  | 1.000 ~ 80.000        |
| 091-Frequency-xxxxx | F3340R       | ±50PPM                           | -40 ~ +85                  | 1.000 ~ 80.000        |
| 094-Frequency-xxxxx | F3346        | ±25PPM                           | -10 ~ +70                  | 1.000 ~ 80.000        |
| 095-Frequency-xxxxx | F3346R       | ±25PPM*                          | -40 ~ +85                  | 1.000 ~ 80.000        |
| 096-Frequency-xxxxx | F3348        | ±20PPM*                          | -10 ~ +70                  | 1.000 ~ 80.000        |

## • ELECTRICAL CHARACTERISTICS

| PARAMETERS                                               | MAX (unless otherwise noted) |
|----------------------------------------------------------|------------------------------|
| Frequency Range (Fo)                                     | 1.000 ~ 80.000 MHz           |
| Storage Temperature Range (T <sub>STG</sub> )            | -55°C ~ +125°C               |
| Supply Voltage (V <sub>DD</sub> )                        | 5.0V ± 10%                   |
| Input Current (I <sub>DD</sub> )                         |                              |
| 1.000 ~ 25.000 MHz                                       | 25mA                         |
| 25.000+ ~ 50.000 MHz                                     | 40mA                         |
| 50.000+ ~ 67.000 MHz                                     | 60mA                         |
| 67.000+ ~ 80.000 MHz                                     | 73mA                         |
| Output Symmetry (50% V <sub>DD</sub> )                   | 45% ~ 55%                    |
| Rise Time (10% ~ 90% V <sub>DD</sub> ) (T <sub>R</sub> ) | 7nS                          |
| Fall Time (90% ~ 10% V <sub>DD</sub> ) (T <sub>F</sub> ) | 7nS                          |
| Output Voltage (V <sub>OL</sub> )                        | 10% V <sub>DD</sub>          |
| (V <sub>OH</sub> )                                       | 90% V <sub>DD</sub> Min      |
| Output Current (I <sub>OL</sub> )                        | 16mA Min                     |
| (I <sub>OH</sub> )                                       | -16mA Min                    |
| Output Load                                              |                              |
| TTL                                                      | 10TTL                        |
| HCMOS                                                    | 50pF                         |
| Start-up Time (T <sub>s</sub> )                          | 10mS                         |
| Enable/Disable Time <sup>2</sup>                         | 100nS                        |
| Maximum Soldering Temp / Time                            | 260°C / 10 Seconds           |
| Moisture Sensitivity Level (MSL)                         | 1                            |
| Termination Finish                                       | Au                           |

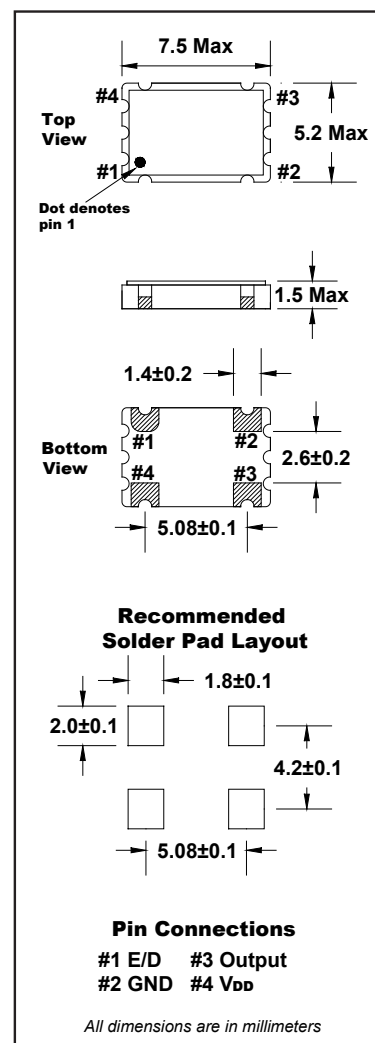
<sup>1</sup> Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, aging, shock, and vibration. \*Excludes Shock/Vibration

<sup>2</sup> 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

| INH (Pin 1)                                     | OUTPUT (Pin 3) |
|-------------------------------------------------|----------------|
| OPEN <sup>2</sup>                               | ACTIVE         |
| '1' Level V <sub>IH</sub> ≥ 70% V <sub>DD</sub> | ACTIVE         |
| '0' Level V <sub>IL</sub> ≤ 30% V <sub>DD</sub> | High Z         |

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Page 2 of 2

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| • TAPE SPECIFICATIONS (millimeters) |      |     |     |     |      |      |              |
|-------------------------------------|------|-----|-----|-----|------|------|--------------|
| MODEL                               | A    | B   | C   | D   | E    | F    | STD Reel QTY |
| F3345 Series                        | Ø1.5 | 4.0 | 8.0 | 7.5 | 16.0 | 2.15 | 2,000        |

| • REEL SPECIFICATIONS (millimeters) |     |     |     |     |      |      |     |
|-------------------------------------|-----|-----|-----|-----|------|------|-----|
| MODEL                               | G   | H   | I   | J   | K    | L    | M   |
| F3345 Series                        | 2.0 | Ø13 | Ø21 | Ø80 | Ø255 | 17.5 | 2.0 |

