

Travelling Merchant: \_\_\_\_\_

# DATASHEET

Standard:           **O11F-S319-12.80MHz-A**          

P/N: \_\_\_\_\_

| Plot             |         |          | The Label              |
|------------------|---------|----------|------------------------|
| Drew             | Audited | Approved | Stamp, please! Thanks! |
|                  |         |          |                        |
| Date: 2014.11.06 |         |          |                        |

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## 1. Electrical Parameters

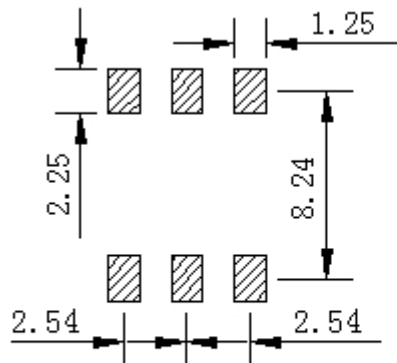
| MODEL: O11F-S319-12.80MHZ-A |   |            |      |        |                  |   |
|-----------------------------|---|------------|------|--------|------------------|---|
| Item                        | Description   | Parameters |      |        | Unit             | Test Condition  |
|                             |   | Min.       | Typ. | Max.   |                  |   |
| Output                      | Frequency   | 12.80      |      |        | MHz              |   |
|                             | Output Waveform   | HCMOS      |      |        |                  |   |
|                             | Output Low Voltage  |            |      | 0.4    | V                | $V_{cc}=3.3V, O_{load}=15pF$  |
|                             | Output High Voltage                                       | 2.4        |      |        | V                | $V_{cc}=3.3V, O_{load}=15pF$  |
|                             | Duty Cycle  | 45         | 50   | 55     | %                | @50%  |
|                             | Rise / Fall Time<br>(10%~90%)                             |            |      | 5      | ns               |   |
|                             | Load  | 15         |      |        | pF               |   |
| Frequency<br>Stabilities    | Frequency Tolerance<br>vs. Operating<br>Temperature Range | -0.025     |      | +0.025 | $\times 10^{-6}$ | $T_A$ varied from -40°C to 85°C, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2, V_{cc}=3.3V, O_{load}=15pF$ , temperature variable speed less than 2°C per minute. |
|                             | Initial Frequency<br>Tolerance                            | -0.5       |      | +0.5   | $\times 10^{-6}$ | Measurement referenced to frequency observed with $T_A=25^\circ C, V_{cc}=3.3V$ , and after 15 minutes of operation, within 30 days after ex-works.   |
|                             | Frequency Tolerance<br>vs. Supply Voltage                 | -0.01      |      | +0.01  | $\times 10^{-6}$ | measurement referenced to frequency observed $T_A=25^\circ C, V_{cc}$ varied from 3.13V to 3.47V, and $O_{Load}=15pF$ .   |
|                             | Frequency Tolerance<br>vs. Load                           | -0.01      |      | +0.01  | $\times 10^{-6}$ | 5% load change measurement referenced to frequency observed with $T_A=25^\circ C, V_{cc}=3.3V$ , and $O_{Load}=15pF$ .  |
|                             | Short-Term Stability:<br>Allan Variance                   |            |      | 0.1    | $\times 10^{-9}$ | Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to 25°C; 1s, using PN9000 equipment.   |
|                             | Aging Tolerance<br>Per Day                                | -5         |      | +5     | $\times 10^{-9}$ | $V_{cc}, T_A$ constant measurement referenced to frequency observed with $T_A=25^\circ C, V_{cc}=3.3V$ , and after 30 days of operation.  |
|                             | Aging Tolerance<br>1 Year                                 | -0.5       |      | +0.5   | $\times 10^{-6}$ |   |
|                             | Aging Tolerance<br>20 Years                               | -4.6       |      | +4.6   | $\times 10^{-6}$ |   |
| Power<br>Supply             | Supply Voltage  | 3.13       | 3.3  | 3.47   | V                |   |
|                             | Steady Consumption  |            |      | 200    | mA               | @25°C   |
|                             | Warm up current   |            |      | 500    | mA               |   |



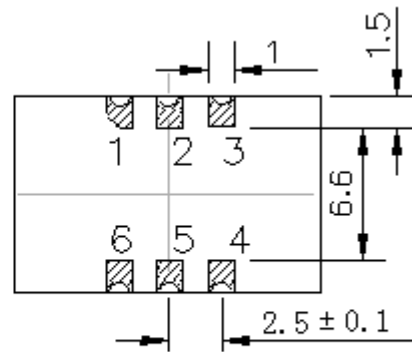
|                          |  |   |      |      |        |        |
|--------------------------|--|---|------|------|--------|--------|
| Phase Noise              | Phase Noise @25°C  |   | -100 | -90  | dBc/Hz | 10Hz   |
|                          |  |   | -130 | -120 |        | 100Hz  |
|                          |  |   | -150 | -145 |        | 1KHz   |
|                          |  |   | -150 | -145 |        | 10KHz  |
|                          |  |   | -150 | -145 |        | 100KHz |
|                          |  |   | -150 | -145 |        | 1MHz   |
| Environmental Conditions | Operable Temperature   | -40   |      | +85  | °C     |        |
|                          | Storage Temperature  | -55   |      | +105 | °C     |        |
|                          | ESD Level  | Human Body Model, class2: 2000V to 4000V; ANSI/ESDA/JEDEC JS-001-2010.  |      |      |        |        |
|                          |  | Machine Model, class B: 200V to 400V; ANSI/ESDA/JEDEC JS-001-2010.  |      |      |        |        |
|                          | Moisture Sensitivity Level   | Level 2.  |      |      |        |        |
|                          | Vibration  | Test Condition: 0.75mm ;acceleration:10g;10Hz~500Hz, one cycle per 30 min, test 2 hour. (3 times for each 3 directions X , Y , Z), IEC 68-2-06 Test Fc. |      |      |        |        |
| Shock                    | 50g; 11ms; half sine wave (3 times for each 3 directions X, Y, Z), IEC 68-2-27 Test Ea/Severity 50A. |   |      |      |        |        |



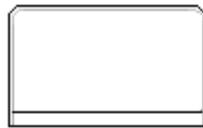
## 2. Mechanical Structure (mm)



Solder Pad layout



Bottom view



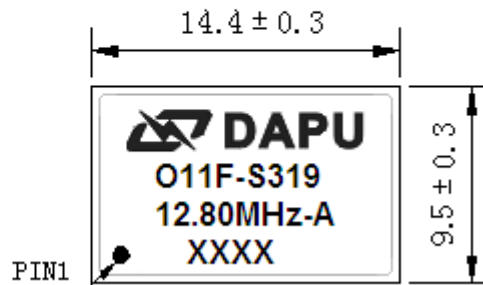
Right view



Side view

### PIN FUNCTION

| PIN | NOTATION | FUNCTION       |
|-----|----------|----------------|
| 1   | NC       | Not Connect    |
| 2,5 | NC       | Not Connect    |
| 3   | GND      | GND            |
| 4   | OUTPUT   | RF Output      |
| 6   | VCC      | Supply Voltage |



Top view

**Note1:** Tolerance  $\pm 0.2\text{mm}$  without mark

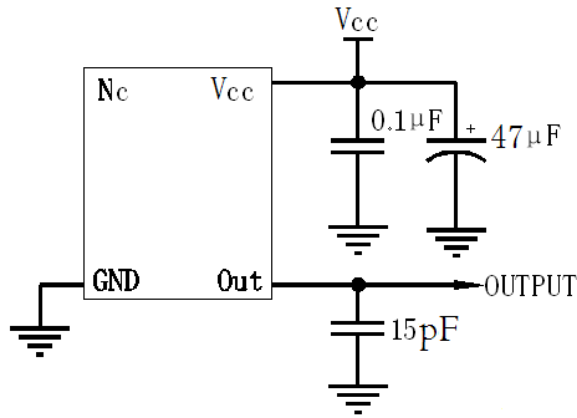
**Note2:** The first two xx representative: week  
After two xx representative: year

**Note3:** Referential Weight 1.5g

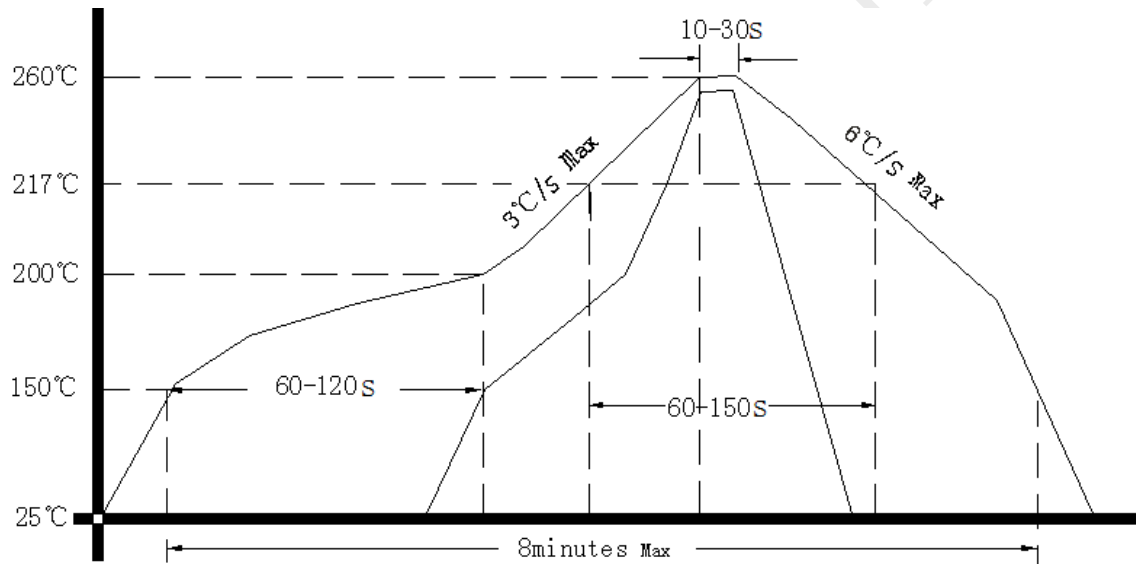
**Note4:** NC is not connect



### 3. Test Circuit



### 4. Reflow Soldering Curve (RoHS)



### 5. Package: Tape & Reel (mm)

