Travelling Merchant:_____

# DATASHEET

Standard: **O11F-L411-100.00MHz-A**

P/N: _____

| Plot | | | The Label |
|---|---|---|---|
| Drew | Audited | Approved | |
| Amway.wei | Tony · Wang | James.Liu | |
| Date: 2019.08.08 | | | Stamp, please! Thanks! |


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# Table of amendment

| Version | Revision contents | Prepared by | Revised date |
|---|---|---|---|
| 1.0 | The first issued | Amway | 2017.08.07 |
| 1.1 | The“Mechanical Structure”changed | Amway | 2019.08.08 |
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## 1. Electrical Parameters

| **MODEL：O11F-L411-100.00MHz-A** | | | | | | |
|---|---|---|---|---|---|---|
| Item | Description | Parameters | | | Unit | Test Condition |
| | | Min. | Typ. | Max. | | |
| Output | Frequency | | 100.00 | | MHz | |
| | Output Waveform | | Sine wave | | | |
| | Level | 5 | | | dBm | |
| | Load | | 50 | | Ω | |
| | Harmonics Suppression | | | -30 | dBc | |
| | Spurious Suppression | | | -60 | dBc | |
| Frequency Stabilities | Frequency Tolerance vs. Operating Temperature Range | -0.05 | | +0.05 | $\times 10^{-6}$ | $T_A$ varied from-40℃ to 85℃, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$, $V_{cc}$=3.3V, $V_c$=1.65V, $O_{load}$=50Ω, temperature variable speed less than 2℃per minute. |
| | Initial Frequency Tolerance | -0.5 | | +0.5 | $\times 10^{-6}$ | Measurement referenced to frequency observed with $T_A$=25℃, $V_{cc}$=3.3V, $V_c$=1.65V and after 15 minutes of operation, within 30 days after ex-works. |
| | Frequency Tolerance vs. supply voltage | -0.02 | | +0.02 | $\times 10^{-6}$ | measurement referenced to frequency observed $T_A$=25℃, $V_{cc}$ varied from 3.13V to 3.47V, $V_c$=1.65V, $O_{load}$=50Ω. |
| | Frequency Tolerance vs. Load | -0.02 | | +0.02 | $\times 10^{-6}$ | 5% Load Change Measurement referenced to frequency observed with $T_A$=25℃, $V_{cc}$=3.3V, $V_c$=1.65V, $O_{load}$=50Ω. |
| | Short Term Stability | | | 0.1 | $\times 10^{-9}$ | Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to 25℃; 1s, using PN9000 equipment. |
| | Aging Tolerance per day | -5 | | +5 | $\times 10^{-9}$ | $V_{cc}$,$V_c$, $T_A$ constant Measurement referenced to frequency observed with $T_A$=25℃,$V_{cc}$=3.3V, $V_c$=1.65V, $O_{load}$=50Ω and after 30 days of operation. |
| | Aging Tolerance 1Year | -0.5 | | +0.5 | $\times 10^{-6}$ | |
| Power Supply | Supply Voltage | 3.13 | 3.3 | 3.47 | V | |
| | Current Consumption | | | 300 | mA | @25℃ |
| | Current Consumption during warm up | | | 600 | mA | |
| | Warm-Up Time | | | 5 | min | @25℃within $\pm 0.1\times 10^{-6}$ of final frequency with reference after 1 hour on. |

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| | | | | | | |
|---|---|---|---|---|---|---|
| Voltage Control Characteristics | Frequency Tuning Range | -8 | | -3 | $\times 10^{-6}$ | $V_c$=0V. measurement referenced to $V_c$=1.65V. |
| | | -0.5 | | +0.5 | $\times 10^{-6}$ | $V_c$=1.65V. measurement referenced to exactly 100.00MHz. |
| | | +3 | | +8 | $\times 10^{-6}$ | $V_c$=3.3V. measurement referenced to $V_c$=1.65V. |
| | Linearity | | | 10 | % | |
| | Slope | Positive | | | | |
| | Input Impedance | 100 | | | KΩ | |
| Phase Noise | Phase Noise | | -85 | -75 | dBc/Hz | 10Hz |
| | | | -120 | -110 | | 100Hz |
| | | | -140 | -135 | | 1KHz |
| | | | -150 | -145 | | 10KHz |
| | | | -150 | -145 | | 100KHz |
| | | | -150 | -145 | | 1MHz |
| Environmental Conditions | Operable Temperature | -40 | | +85 | ℃ | |
| | Storage Temperature | -55 | | +105 | ℃ | |
| | 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. | | | | |
| Full Package Storage | Relative humidity (%) | 20%～70% | | | | |
| | Temperature (℃) | -10~35℃ | | | | |

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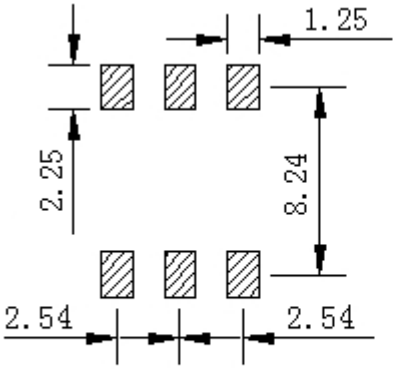
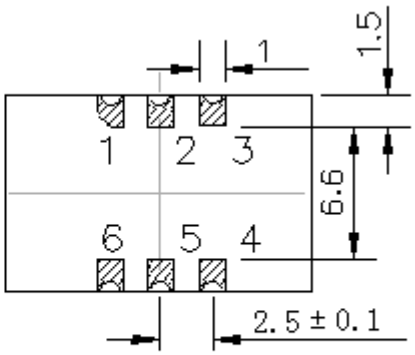
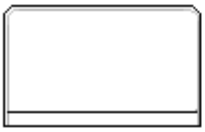
## 2. Mechanical Structure (mm)



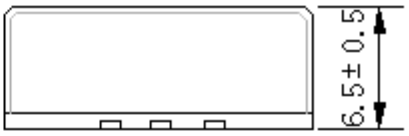

Solder Pad layout




Bottom view



Right view




Side view

PIN FUNCTION

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


Top view

**Note1:** Tolerance ±0.2mm without mark

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

**Note3:** Referential weight 2.2g

**Note4:** NC is not connect

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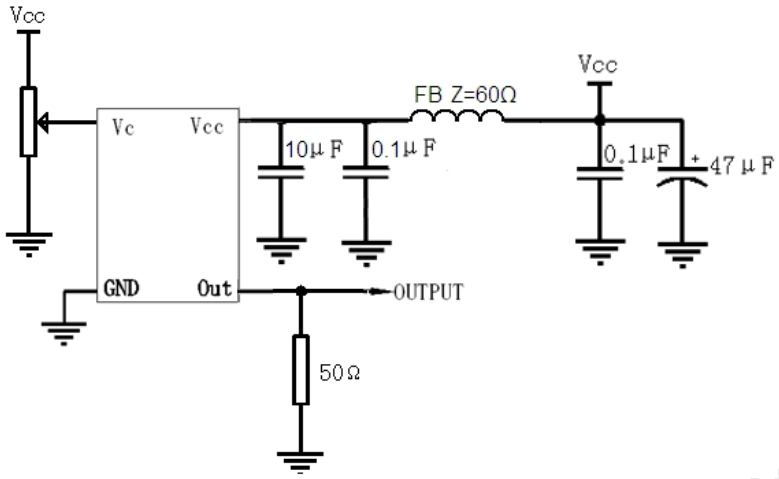
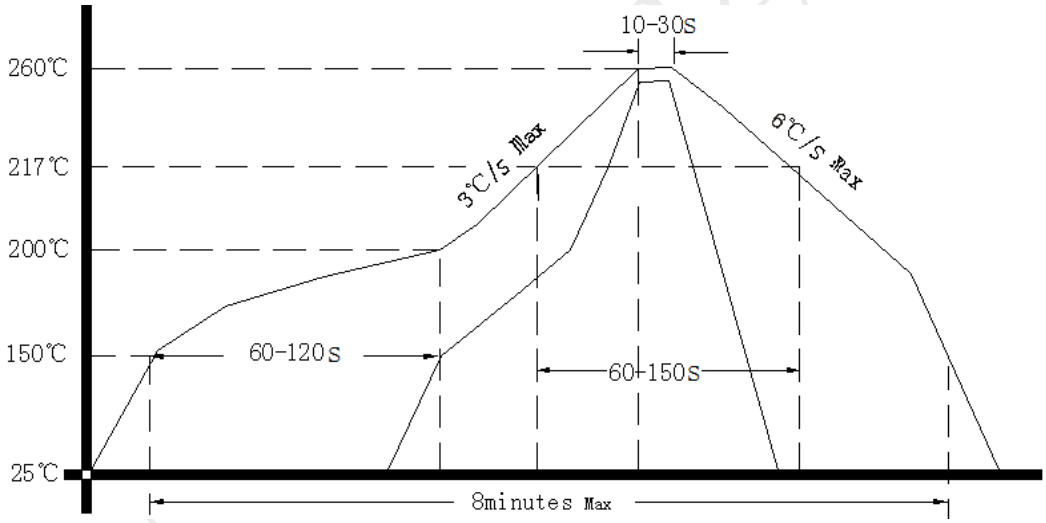
## 3. Test Circuit




## 4. Reflow Soldering Curve (RoHS)




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