

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

# DATASHEET

Standard:           **T936-E411-100.00MHz**          

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

| Plot             |         |          | The Label              |
|------------------|---------|----------|------------------------|
| Drew             | Audited | Approved | Stamp, please! Thanks! |
|                  |         |          |                        |
| Date: 2018.01.08 |         |          |                        |

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## 1. Electrical Parameters

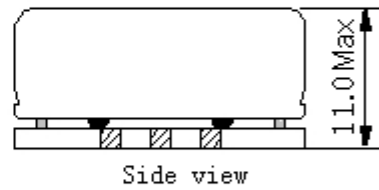
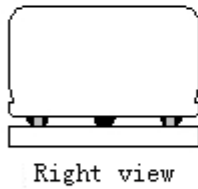
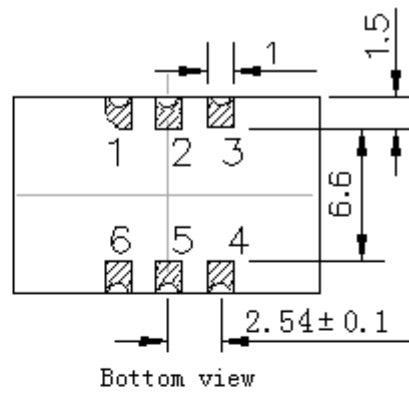
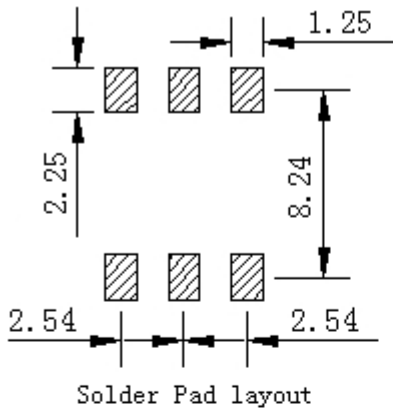
| MODEL: T936-E411-100.00MHz |   |            |      |       |                  |   |
|----------------------------|---|------------|------|-------|------------------|---|
| Item                       | Description   | Parameters |      |       | Unit             | Test Condition  |
|                            |   | Min.       | Typ. | Max.  |                  |   |
| Output                     | Frequency   | 100.00     |      |       | MHz              |   |
|                            | Output Waveform                                     | Sine Wave  |      |       |                  |   |
|                            | Level   | 5          |      |       | dBm              |   |
|                            | Harmonics Suppression                               |            |      | -30   | dBc              |   |
|                            | Spurious Suppression                                |            |      | -60   | dBc              |   |
|                            | Load  | 50         |      |       | $\Omega$         |   |
| Frequency Stabilities      | Frequency Tolerance vs. Operating Temperature Range | -1.0       |      | +1.0  | $\times 10^{-6}$ | $T_A$ varied from $-20^{\circ}\text{C}$ to $70^{\circ}\text{C}$ , measurement referenced to frequency observed with $f_{\text{ref}} = (f_{\text{max}} + f_{\text{min}})/2$ , $V_{\text{cc}} = 3.3\text{V}$ , $V_c = 1.65\text{V}$ , $O_{\text{load}} = 50\Omega$ , temperature variable speed less than $2^{\circ}\text{C}$ per minute. |
|                            | Initial Frequency Tolerance                         | -1.0       |      | +1.0  | $\times 10^{-6}$ | Measurement referenced to frequency observed with $T_A = 25^{\circ}\text{C}$ , $V_{\text{cc}} = 3.3\text{V}$ , $V_c = 1.65\text{V}$ , and after 15 minutes of operation, within 30 days after ex-works.   |
|                            | Frequency Tolerance vs. Supply Voltage              | -0.2       |      | +0.2  | $\times 10^{-6}$ | measurement referenced to frequency observed $T_A = 25^{\circ}\text{C}$ , $V_{\text{cc}}$ varied from 3.13V to 3.47V, $V_c = 1.65\text{V}$ , and $O_{\text{Load}} = 50\Omega$ .   |
|                            | Frequency Tolerance vs. Load                        | -0.2       |      | +0.2  | $\times 10^{-6}$ | 5% load change measurement referenced to frequency observed with $T_A = 25^{\circ}\text{C}$ , $V_{\text{cc}} = 3.3\text{V}$ , $V_c = 1.65\text{V}$ , $O_{\text{Load}} = 50\Omega$ .   |
|                            | Aging Tolerance Per Day                             | -0.02      |      | +0.02 | $\times 10^{-6}$ | $T_A = 25^{\circ}\text{C}$ , $V_{\text{cc}} = 5.0\text{V}$ , $V_c = 2.5\text{V}$ and after 1h of operation.   |
|                            | Aging Tolerance 1 Year                              | -1         |      | +1    | $\times 10^{-6}$ |   |
| Power Supply               | Current Consumption                                 |            |      | 30    | mA               | @ $25^{\circ}\text{C}$ , $V_{\text{cc}} = 3.3\text{V}$ , $O_{\text{load}} = 50\Omega$ .   |
|                            | Supply Voltage                                      | 3.13       | 3.3  | 3.47  | V                | @ $25^{\circ}\text{C}$  |



|                                 |   |   |      |      |                  |   |
|---------------------------------|---|---|------|------|------------------|---|
| Voltage Control Characteristics | Frequency Tuning Range  |   |      | -5.0 | $\times 10^{-6}$ | $V_c=0V$ . measurement referenced to $V_c=1.65V$          |
|                                 |   | -1  |      | +1   | $\times 10^{-6}$ | $V_c=1.65V$ . measurement referenced to exactly 100.00MHz |
|                                 |   | +5.0  |      |      | $\times 10^{-6}$ | $V_c=3.3V$ . measurement referenced to $V_c=1.65$         |
|                                 | Linearity   |   |      | 10   | %                |   |
|                                 | Slope   | Positive  |      |      |                  |   |
|                                 | Input Impedance   | 100   |      |      |                  | K $\Omega$  |
| Phase Noise                     | Phase Noise   |   | -75  | -70  | dBc/Hz           | 10Hz  |
|                                 |   |   | -105 | -100 |                  | 100Hz   |
|                                 |   |   | -135 | -130 |                  | 1KHz  |
|                                 |   |   | -150 | -145 |                  | 10KHz   |
|                                 |   |   | -155 | -150 |                  | 100KHz  |
|                                 |   |   | -158 | -153 |                  | 1MHz  |
| Environmental Conditions        | Operable Temperature  | -40   |      | +85  | $^{\circ}C$      |   |
|                                 | Storage Temperature   | -55   |      | +105 | $^{\circ}C$      |   |
|                                 | 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~2000Hz, one cycle per 30 min, test 2 hour. (3 times for each 3 directions X ,Y , Z) .IEC 68-2-06 Test Fc. |      |      |                  |   |
| Shock                           | 100g; 6ms; half sine wave (3 times for each 3 directions X ,Y , Z ),IEC 68-2-27 Test Ea/Severity 50A. |   |      |      |                  |   |

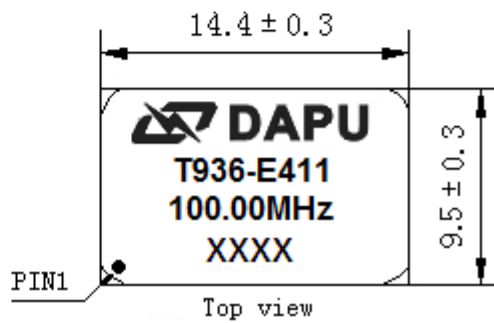


## 2. Mechanical Structure(mm)



### PIN FUNCTION

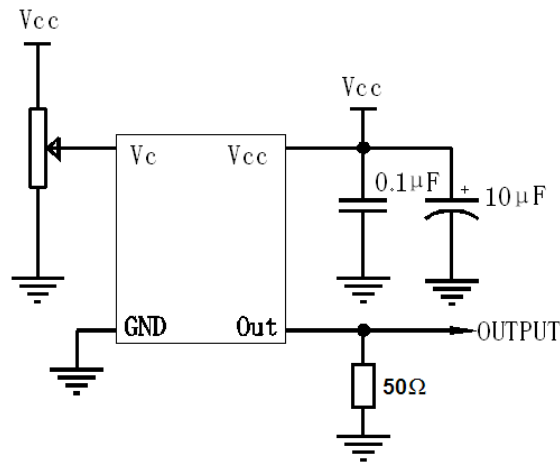
| PIN | NOTATION | FUNCTION        |
|-----|----------|-----------------|
| 1   | VC       | Control Voltage |
| 2,5 | NC       | Not Connect     |
| 3   | GND      | GND             |
| 4   | OUTPUT   | RF Output       |
| 6   | VCC      | Supply Voltage  |



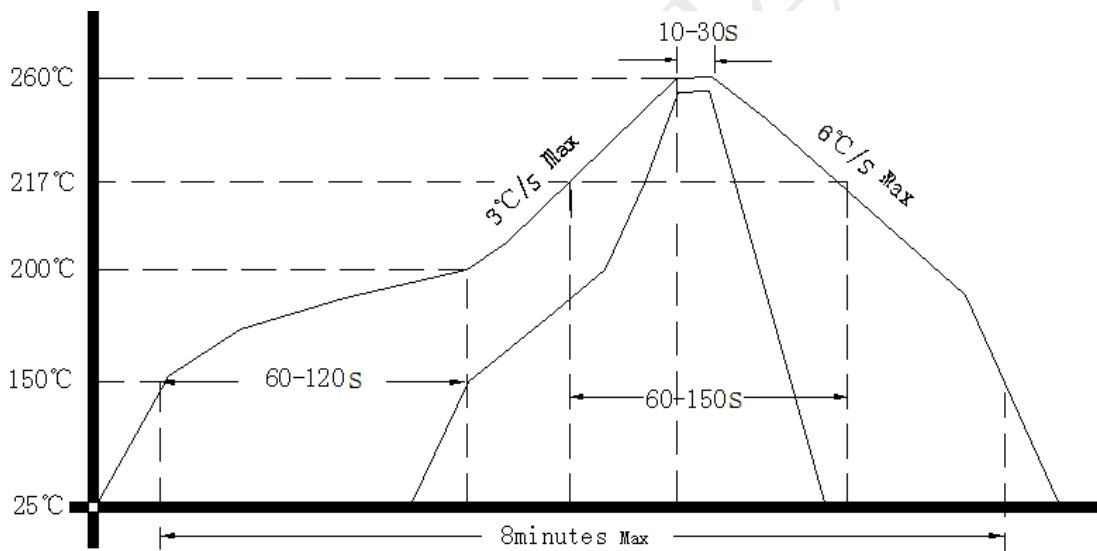
- Note1:** Tolerance  $\pm 0.2\text{mm}$  without mark
- Note2:** Referential weight 2.2g
- Note3:** NC is not connect
- Note4:** The first two xx representative: week  
After two xx representative: year



### 3. Test circuit



### 4. Reflow Soldering Curve (RoHS)



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

