

Customer Code : \_\_\_\_\_

# DATASHEET

DAPU P/N:           **T936-F413-50.00MHz**          

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

| DAPU             |         |          | Customer Approval      |
|------------------|---------|----------|------------------------|
| Drew             | Audited | Approved | Stamp, please! Thanks! |
|                  |         |          |                        |
| Date: 2016.04.25 |         |          |                        |

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### Table of amendment

| Version | Revision contents | Prepared by  | Revised date |
|---------|-------------------|--------------|--------------|
| 1.0     | The first issued  | <i>Amway</i> | 2016.04.25   |
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## 1. Electrical Parameters

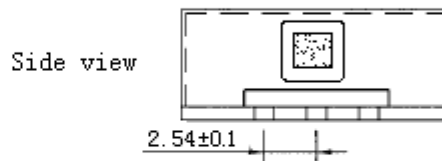
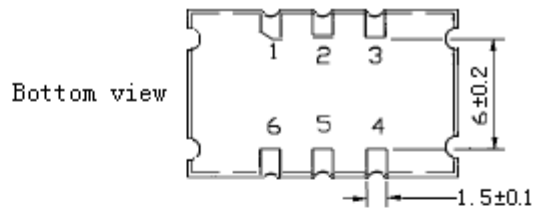
| MODEL: T936-F413-50.00MHz |   |            |      |       |                  |   |
|---------------------------|---|------------|------|-------|------------------|---|
| Item                      | Description   | Parameters |      |       | Unit             | Test Condition  |
|                           |   | Min.       | Typ. | Max.  |                  |   |
| Output                    | Frequency   | 50.00      |      |       | 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 | -0.5       |      | +0.5  | $\times 10^{-6}$ | $T_A$ varied from $-40^{\circ}\text{C}$ to $85^{\circ}\text{C}$ , measurement referenced to frequency observed with $T_A = 25^{\circ}\text{C}$ , $V_{cc}=3.3\text{V}$ , $V_c=1.65\text{V}$ , $O_{load}=50\Omega$ , temperature variable speed less than $2^{\circ}\text{C}$ per minute. |
|                           | Initial Frequency Tolerance                         | -1         |      | +1    | $\times 10^{-6}$ | Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$ , $V_{cc}=3.3\text{V}$ , $V_c=1.65\text{V}$ within 30 days after ex-works.   |
|                           | Frequency Tolerance vs. Supply Voltage              | -0.1       |      | +0.1  | $\times 10^{-6}$ | measurement referenced to frequency observed $T_A=25^{\circ}\text{C}$ , $V_{cc}$ varied from 3.13V to 3.47V, $V_c=1.65\text{V}$ and $O_{Load}=50\Omega$ .   |
|                           | Frequency Tolerance vs. Load                        | -0.1       |      | +0.1  | $\times 10^{-6}$ | 5% load change measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$ , $V_{cc}=3.3\text{V}$ , $V_c=1.65\text{V}$ , $O_{Load}=50\Omega$ .   |
|                           | Aging Tolerance Per Day                             | -0.02      |      | +0.02 | $\times 10^{-6}$ | $T_A=25^{\circ}\text{C}$ , $V_{cc}=3.3\text{V}$ , $V_c=1.65\text{V}$ and after 1h of operation.   |
|                           | Aging Tolerance 1 Year                              | -1         |      | +1    | $\times 10^{-6}$ |   |
| Power Supply              | Current Consumption                                 |            |      | 10    | mA               | @ $25^{\circ}\text{C}$ , $V_{cc}=3.3\text{V}$ , $V_c=1.65\text{V}$ , $O_{load}=50\Omega$ .  |
|                           | Supply Voltage                                      | 3.13       | 3.3  | 3.47  | V                |   |



|                                 |  |   |      |      |                  |  |
|---------------------------------|--|---|------|------|------------------|--|
| Voltage Control Characteristics | Frequency Tuning Range   | -15   |      | -10  | $\times 10^{-6}$ | $V_c=0V$ . measurement referenced to $V_c=1.65V$         |
|                                 |  | -1  |      | +1   | $\times 10^{-6}$ | $V_c=1.65V$ . measurement referenced to exactly 50.00MHz |
|                                 |  | +10   |      | +15  | $\times 10^{-6}$ | $V_c=3.3V$ . measurement referenced to $V_c=1.65V$       |
|                                 | Linearity  |   |      | 10   | %                |  |
|                                 | Slope  | Positive  |      |      |                  |  |
|                                 | Input Impedance  | 100   |      |      |                  | K $\Omega$   |
| Phase Noise                     | Phase Noise @25°C  |   | -125 | -120 | dBc/Hz           | 1KHz   |
| 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~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. |   |      |      |                  |  |
| Full Package Storage            | Relative humidity (%)  | 20%~70%   |      |      |                  |  |
|                                 | Temperature (°C)   | -10~35°C  |      |      |                  |  |

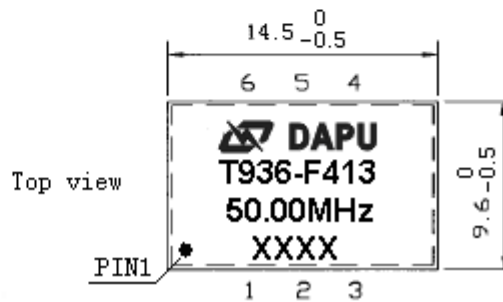


## 2. Mechanical Structure(mm)



### PIN FUNCTION

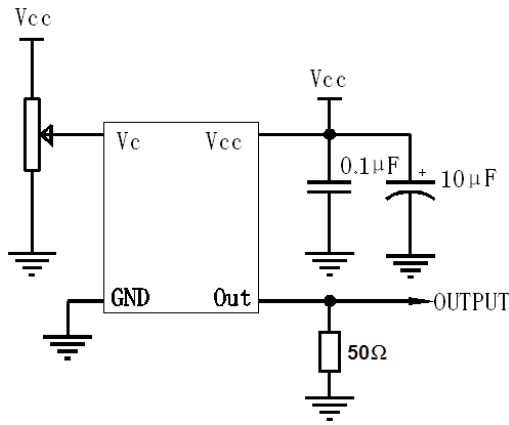
| PIN | NOTATION | FUNCTION        |
|-----|----------|-----------------|
| 1   | VC       | Control Voltage |
| 2,5 | NC       | Not Connect     |
| 3   | GND      | GND             |
| 4   | OUTPUT   | RF Output       |
| 6   | VCC      | Supply Voltage  |



- Note1:** Tolerance  $\pm 0.20\text{mm}$  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)

