Introduction

X2206 monolithic integration function generator generates high quality, high stability, high precision sine wave, square wave and triangular wave, can realize frequency modulation and amplitude modulation, suitable for circuits such as waveform generation, Scan production, AM/FM generation, FSK generation, and a phase-locked loop.

Feature

- It can generate 3 stable waveforms including sine wave, square wave, and triangular wave
- Frequency adjustable from 1Hz~1MHz with fine tune and coarse tune
- Amplitude tunable
Components soldering guide

<table>
<thead>
<tr>
<th>Label</th>
<th>Type</th>
<th>Value</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>resistor</td>
<td>1K</td>
<td>Regardless of the polarity</td>
</tr>
<tr>
<td>R2</td>
<td>Potentiometer</td>
<td>BS03=50K</td>
<td>(by screen printing layer)</td>
</tr>
<tr>
<td>R3, R5, R6</td>
<td>resistor</td>
<td>5.1K</td>
<td>Regardless of the polarity</td>
</tr>
<tr>
<td>R4</td>
<td>resistor</td>
<td>330</td>
<td>Regardless of the polarity</td>
</tr>
<tr>
<td>R7</td>
<td>Potentiometer</td>
<td>BS03=50k</td>
<td>(by screen printing layer)</td>
</tr>
<tr>
<td>R8</td>
<td>Potentiometer</td>
<td>B104=100k</td>
<td>(by screen printing layer)</td>
</tr>
<tr>
<td>C1</td>
<td>Electrolytic capacitor</td>
<td>100UF</td>
<td>The positive long feet</td>
</tr>
<tr>
<td>C2</td>
<td>Ceramic capacitor</td>
<td>104</td>
<td>Regardless of the polarity</td>
</tr>
<tr>
<td>C3, C4</td>
<td>Electrolytic capacitor</td>
<td>10UF</td>
<td>The positive long feet</td>
</tr>
<tr>
<td>C5</td>
<td>Ceramic capacitor</td>
<td>105</td>
<td>Regardless of the polarity</td>
</tr>
<tr>
<td>C6</td>
<td>Ceramic capacitor</td>
<td>473</td>
<td>Regardless of the polarity</td>
</tr>
<tr>
<td>C7</td>
<td>Ceramic capacitor</td>
<td>222</td>
<td>Regardless of the polarity</td>
</tr>
<tr>
<td>C8</td>
<td>Ceramic capacitor</td>
<td>101</td>
<td>Regardless of the polarity</td>
</tr>
<tr>
<td>U1</td>
<td>IC(XR2206)</td>
<td></td>
<td>(by screen printing layer)</td>
</tr>
<tr>
<td>J1</td>
<td>2PIN Jumper cap(XM2.54)</td>
<td></td>
<td>(by screen printing layer)</td>
</tr>
<tr>
<td>J2</td>
<td>2PIN Jumper cap(XM2.54)</td>
<td></td>
<td>Regardless of the polarity</td>
</tr>
<tr>
<td>P1</td>
<td>Signal wire terminal</td>
<td></td>
<td>(by screen printing layer)</td>
</tr>
<tr>
<td>J3</td>
<td>2*5P Jumper cap</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Soldering steps
1. The components on top of the board, from low to high principles, namely the first low soldering components, such as a capacitor, resistor, diode, etc.
2. Soldering IC socket, terminal blocks, finally power socket, an adjustable potentiometer.
3. The back with diagonal cutting pliers to cut short the pins as far as possible.

Wiring Diagram

Speciﬁcation
Voltage Supply: 9-12V DC Input
Waveforms: Square, Sine & Triangle
Impedance: 600 Ohm + 10%
Frequency: 1Hz-1MHz
screwdriver length: 100MM

- **SINE WAVE**
  - Amplitude: 0-3V at 9V DC Input
  - Distortion: Less than 1% (at 1KHz)
  - Flatness: +0.05dB 1Hz - 100kHz
  - Linearity: Less than 1% (up to 100KHz) 10mA

- **SQUARE WAVE**
  - Amplitude: 8V (without load) at 9V DC Input
  - Rise Time: Less than 50ns (at 1KHz)
  - Fall Time: Less than 30ns (at 1KHz)
  - Symmetry: Less than 5% (at 1KHz)

- **TRIANGLE WAVE**
  - Amplitude: 0-3V at 9V DC Input
  - Linearity: Less than 1% (up to 100KHz) 10mA

Quick Start Guide
Here we introduce how to generate sine wave in a simple way:
- Step1: Short J1 Jumper.
- Step2: Short 1 of the 5 jumper caps on frequency range selection area.
- Step3: Power on, then SIN/TRI port generates sine wave
- Step4: Spin Potentiometer Amp, you can tune amplitude
- Step5: Spin Potentiometer Fine, you can fine tune signal frequency
- Step6: Spin Potentiometer Coarse, you can coarse tune signal frequency

Note
- The board takes 9-12V DC power supply, cannot exceed 12V!
- After completion of soldering on IC, XR2206, pay attention to the direction of IC, insert in reverse might damage the chip!
- Soldering IC socket, terminal blocks, finally power socket, an adjustable potentiometer.
- Trim the components legs as short as possible to avoid short circuit.

Contact us
If any problem, feel free to contact us.
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