The AOCJY series of *Oven Controlled Crystal Oscillators* are designed to facilitate reference frequencies from 10.00MHz to 100MHz carrier.

These devices are suitable for ROHS compliant reflow and incorporate a Control Voltage (Vc) port; providing a means to set these devices on frequency, post reflow.

AOCJY devices also provide a Regulated DC output on pin # 2 (Vref). The value of this voltage is dependent upon the Supply Voltage bias. For instance, for Vdd = 5.0V; the Vref value will be +4.50V ±0.2V. Similarly for Vdd = 3.3V; the Vref value will be +2.80V ±0.2V.

Figure (1)
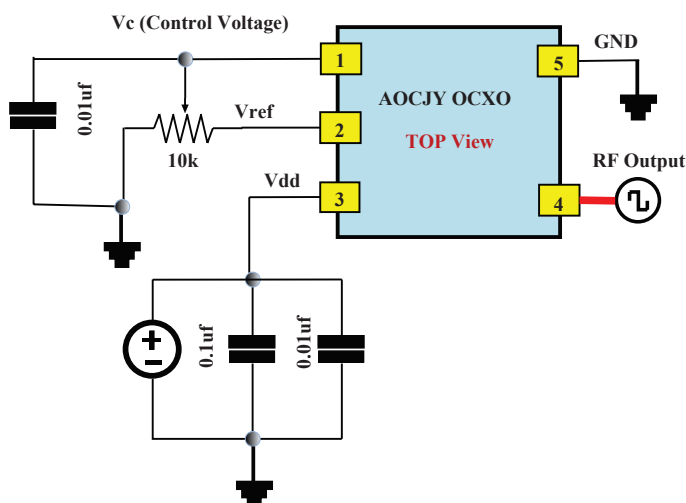
As depicted in figure (1), the simplest way to utilize the Vref output is to connect a potentiometer between Vref and Gnd. The *"wiper"* of the potentiometer should then be connected to the *Vc* (Control Voltage port) of the OCXO. This way, the DC Voltage value @ Vc port can be adjusted by varying the position of the wiper.

Another way to achieve a similar result is to use a two resistor – potential divider approach, as shown in figure (2) below.

Figure (2)
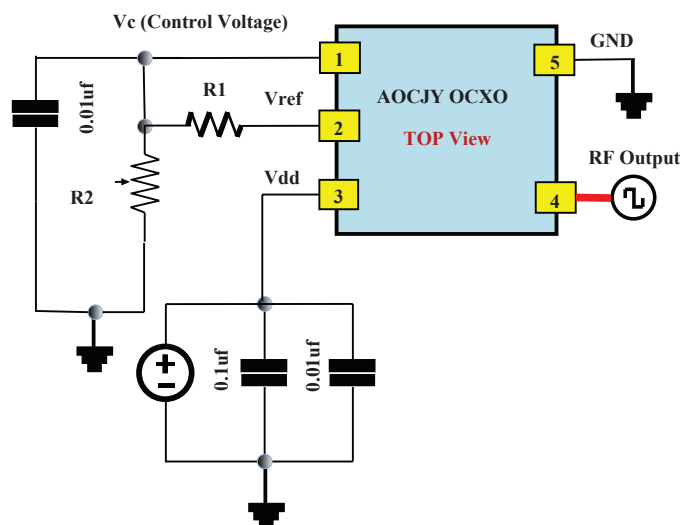
In this approach, the Vc Voltage will be given by:

$$Vc = (R2 / (R1+R2)) * Vref$$

As shown, R2 can either be fixed or a variable resistor. Good starting values for a 3.3V biased OCXO's could be R1= 6.98 kΩ and R2 = 10.00 kΩ

Similarly, for 5.0V biased OCXO's, R1 = 8.06 kΩ and R2 = 10.00 kΩ could yield the desired result. If a potentiometer is used in place of R2, the *"wiper"* should be connected to the Vc port to provide variable resistance.

Please take note that the by-pass capacitors on both the Vdd port, as well as the Vc port are merely suggested values to help improve noise suppression.

If you have specific questions, please contact us at **abinfo@abracon.com.**

NOTE: Abracon manufactured products are intended for general commercial and industrial use. For applications requiring high reliability and/or presenting extreme operating environment, written consent & authorization from Abracon is required.

ABRACON IS ISO9001:2008 CERTIFIED

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