# Voltage Controlled Oscillator Terms

## TECHNICAL TERMS

**Voltage Controlled Oscillator (Vco)** :
This is an oscillator designed so the output frequency is changed by applying a voltage to its control port, which changes the capacitance of a varactor diode in the oscillator's tank circuit.

**Frequency Tuning Range: (Fc ± ½Bw)**
A range of frequencies for a given voltage change. It is usually called the VCO's tuning bandwidth.

**Frequency Tuning Voltage: (V1 to V2)**
The voltage potential needed to tune a VCO's Frequency to its full tuning bandwidth.

**Frequency Tuning Linearity: (Ratio or MHz / V)**
This is the amount of frequency deviation from a best-fit straight line for frequency vs. tuning voltage.

**Frequency Tuning Sensitivity: (MHz / V)**
This is the slope of the tuning characteristic and is expressed as frequency change per unit voltage change.

**Frequency Pulling: (±MHz into 12dB return loss@ all Phases)**
This is the maximum range of the frequencies associated with a change in the output load.

**Frequency Pushing: (±MHz / V)**
This is the slope of power supply voltage change vs. frequency change.

**Output power: (dBm @ 50Ω)**
This is the amount of power that is delivered to a load.

**Output power Flatness: (dBm @ 50Ω)**
This is the flatness of the output power that is delivered to a load, over the tuning bandwidth and over the operating temperature.

**Harmonic Content or Suppression: (-dBc).**
Harmonics levels are measured relative to the fundamental signal referenced to the carrier.

**Spurious Content or Suppression: (-dBc).**
Spurious frequencies are unwanted and non-harmonically related signals present at the oscillator output
Referenced to the carrier.

**Temperature Drift or Stability: (KHz / C° or ppm).**
This is the slope of the frequency change vs. operating temperature change.

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