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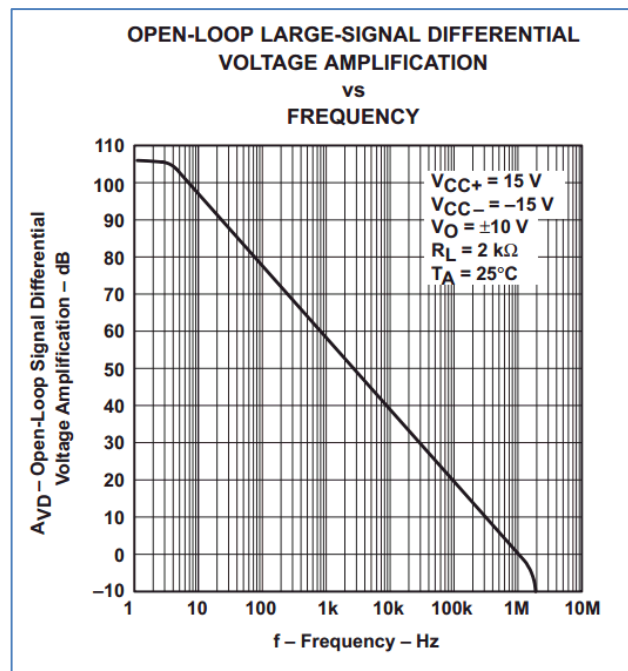
Introduction To Analog Electronics – Lesson 9: Op-Amp Amplifiers

FORMULAS

The following formulas and information are meant to go with the online lesson found here:
http://www.pyroelectro.com/edu/analog/opamp_amplifier/

LIMITATIONS OF THE 741 OPAMP

All operational amplifiers are limited in what AC frequencies they can amplify. The 741 opamp has a fairly linear curve for how much it can amplify frequencies from 10Hz to 1 MHz. The graph below shows how much power (amplification in decibels) you can amplify to given different input frequencies:



The graph makes it pretty obvious that right around 1 MHz we cross the 0 decibel power level which means no power gain from the input signal. This is called 'unity gain' and all opamps have this attribute which defines the upper frequency limit of input signals that they are able to amplify.

ADDITIONAL INFORMATION

If you have any questions about the formulas or information found in this document, please feel free to head on over to the forums and ask us some questions!

<http://www.pyroelectro.com/forums/>