

Understanding Basic Concept of Electrical and Electronic Systems

Asadullah Shah



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UNDERSTANDING BASIC CONCEPT OF ELECTRICAL AND ELECTRONIC SYSTEMS

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Asadullah Shah



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29. ACTIVE HIGH PASS FILTER

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29.0 Abstract:

A high pass filter is a circuit that stops low frequency signals and allow high frequency signals to pass through it. A high pass active filter is called active because of the usage of active components with operational amplifiers. Active components are transistors diodes, Field Effect Transistors (FETs) and many others. The basic operations of High pass active filter and high pass passive filters is same, but the role of capacitor and resistor are reversed in the RC circuits. Otherwise, the basic parameters are the same as for the low pass filter.

29.1 Description:

The basic operation of an Active High Pass Filter (HPF) is exactly the same as that for its equivalent RC passive filter circuit, except that this type of circuit has an operational amplifier or op-amp included within its design for amplification and gain control. Like the active Low Pass filter circuit, the simplest form of an active high pass filter is to connect a standard inverting or non-inverting operational amplifier to the basic RC high pass passive filter circuit.

However, unlike Passive High Pass Filters which have an "infinite" frequency response, the maximum pass band frequency response of an