**IMPORTANT DIODE PARAMETERS**

1. **V­­­F** is the **forward voltage**. It refers to minimum voltage that diode needs to allow current flow
2. **VR** is **reverse breakdown voltage**. It shows the maximum reverse voltage that the diode can hold. This parameter mostly depends on the doping and semiconductor characteristics. There is also another term called non repetitive peak reverse voltage VRSM. It also refers to the maximum reverse voltage provided that it is not repetitive.
3. **trr** is the **reverse recovery time**. If a diode working in forward direction and suddenly changed to reverse direction it needs a time (trr) for becoming totally of. This is because free carriers inside the diode. (Electrons get back to n-side). In this time interval there exists a reverse current on diode.
4. **tfr**is the **forward recovery time.** It is time required for diode to turn on when a forward voltage is applied. Same logic with reverse recovery time.
5. **IF(AV)** is the **average forward current**(maximum forward current). It shows the maximum amount of forward current allowed by diode. It is a repetitive value, that is, this amount of current does not harm diode for indefinite period.
6. **Tj** is the **maximum operating junction temperature**. This parameter refers to maximum operating temperature that diode can work without any deformation. This parameter is also related to total power dissipation.
7. **IR** is the **reverse leakage current**. For an ideal diode, when a reverse voltage is applied to the diode it is not supposed to allow any current flow. However, for practical case there is a small amount of leakage current that flow through the diode when it is reverse biased. This current called reverse leakage current.
8. **IRM** is the **reverse recovery current**. As it is stated in reverse recovery time, if condition of a diode changes from forward to reverse, for a small-time interval there is a reverse current flow due to carriers. This current is called reverse recovery current.
9. **Vfr** is the **forward recovery voltage**. When a forward bias is applied to the diode before it gets in steady state, forward voltage is first increase and then becomes its forward voltage. Forward recovery time refers to maximum voltage reached during this interval.
10. **IFSM** is the **non-repetitive forward current.** Like IF, it also shows the maximum forward current of the diode. However, while there is no time limitation in IF(Diode can flow IF for indefinite time period), in IFSM there are time and magnitude limitation. That is diode can flow IFSM for limited time interval without any deformation. Also this amount of current should not flow through the diode repetitively.