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Mounting Techniques

All devices should be properly mounted in order to reduce mechanical and thermal stresses, which can degrade the MTBF of the devices. The devices must be mounted on a flat surface ($\pm .002''$) in order to produce the maximum heat transfer. (The following is a guideline outlining the proper techniques for mounting RF Techniques power component.

Flanged Parts

Flange Packages should be mounted on a flat surface ($\pm .002''$) in order to produce the maximum heat transfer. Also, avoid twisting or bending the flanges before installation. High quality silicone grease should be used sparingly on the flange of the device. The idea is to fill in the micro irregularities of the surfaces rather than creating a continuous layer of silicone grease. The best way to apply the grease is with a flat razor blade. The mounting bolts should be torqued to insure a solid contact with heat sink. Over torquing can cause the flange to bow in the middle. The devices should be mounted such that they have sufficient stress relief with the circuit board. The package should be as close as possible to the circuit board to reduce parasitic inductance caused by excessive lead length. For more information, contact one of our engineers.

Flangeless Parts

There are two basic ways of mounting un-flanged devices. One way is to solder the devices to a heat sink using tin/lead solder. This method assures a continuous ground plane and produces good thermal contact between the devices and the heat sink. This technique requires tin/lead plated heat sink (or other metal that will wet with the gold or nickel plating of the device to produce a good solder connection).

The alternate method is to clamp the device to the heat sink with some type of clamping mechanism. It is recommended that Indium foil be used rather than heat sink compound to ensure a good thermal and electrical contact. This method requires a good clamping mechanism that will work correctly.

Either of the methods described above will work for most applications. The solder technique is used by majority of customers. RFT brazed devices will be able to withstand low or high temperature soldering.