

压焊点底下介质容抗对HBT高频性能影响

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摘要：

在对HBT高频特性实验测量数据分析比较的基础上，探讨了压焊点(Pad)底下介质容抗对HBT高频性能的影响，结论表明：Pad底下的介质容抗对HBT的高频性能影响比较明显，高频段[-20dB/decade]直线外推 f_t 、 f_{max} 的规律由于介质容抗的存在会造成较大的误差而不再有效，因而等效电路模型需作相应的修正。

关键词：HBT；压焊点；容抗；高频特性

Impact of capacitive dielectric material under the Pads on high-frequency characteristics in HBTs

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Abstract:

Based on the analysis to the measured data for the high-frequency characteristics of two structure HBTs, the influence of dielectric material under the Pads on the high-frequency characteristics in HBTs has been investigated. The conclusion is made that the dielectric material under Pads can have great impacts on the RF performance of HBTs, which should be taken into account to the HBT equivalent circuit modeling, and that the extrapolate rule for f_t , f_{max} of the -20dB/decade extending line may have enough erroneous because of the existing of the dielectric material under Pads.

Keywords: HBTs; Pads; Capacitive Reactance; High-frequency Performance

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