

HOW DO YOU SELECT THE BEST ANTENNA FOR YOUR UWB SYSTEM?

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In addition to impedance matching of the antenna, the stability of the radiation pattern in the operating frequency band is crucial to achieve good performance from a UWB system. How do you know your antenna pattern is stable enough for your UWB application? How do you pick the antenna that has the most stable pattern? To address these and several other related issues, we first define a new figure of merit – the pattern stability factor (PSF)- to quantify pattern stability of a wideband antenna. Then several practical UWB antennas are assessed from the stability point of view to demonstrate the use and advantages of the PSF in UWB system design.