Abstract

LPI is the property of radar that, because of its low power, wide bandwidth, frequency variability, or other design attributes makes it difficult for it to be detected by means of a passive intercept receiver. Desirable properties of LPI based on periodic autocorrelation, ambiguity function, peak and integrated side lobes. LPI modulation techniques include frequency modulation, phase modulations. In phase modulation Barker, Frank, P4 simulations are studied. The best code is opted for target detection based on desirable properties, Doppler tolerance and reduction in side lobes. When the transmitted and received signals are correlated a peak is generated as the indication of target detection. These correlated peaks are added non coherently to achieve target detection.

References

- Bassem R. Mahafza Atef Z. Elsherbeni, "Simulations for Radar System"
Pulse Compression Techniques for Target Detection

Design"Chapter 05, July 2003.

Index Terms

Computer Science Information Sciences

Keywords
Pulse compression correlation polyphase codes polytime codes side lobe weighting windows