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Abstract**A DPSK Demodulator and Method**

There is provided a method and apparatus for demodulating a received hard limited DPSK signal, which may be an intermediate frequency (IF) signal. The apparatus comprises: a digital down converter for generating an in-phase component I and a quadrature component Q of a received signal; at least one decimator for reducing sampling frequency of the received signal; at least one filter for reducing noise outside a required bandwidth; and a differential decoder for performing differential detection of I and Q over a given symbol span. The method comprises the steps of: generating an in-phase component I and a quadrature component Q from a received signal; reducing sampling frequency of the received signal; reducing noise outside a required bandwidth; and performing differential detection of I and Q over a given symbol span.

Figure for publication – Figure 1