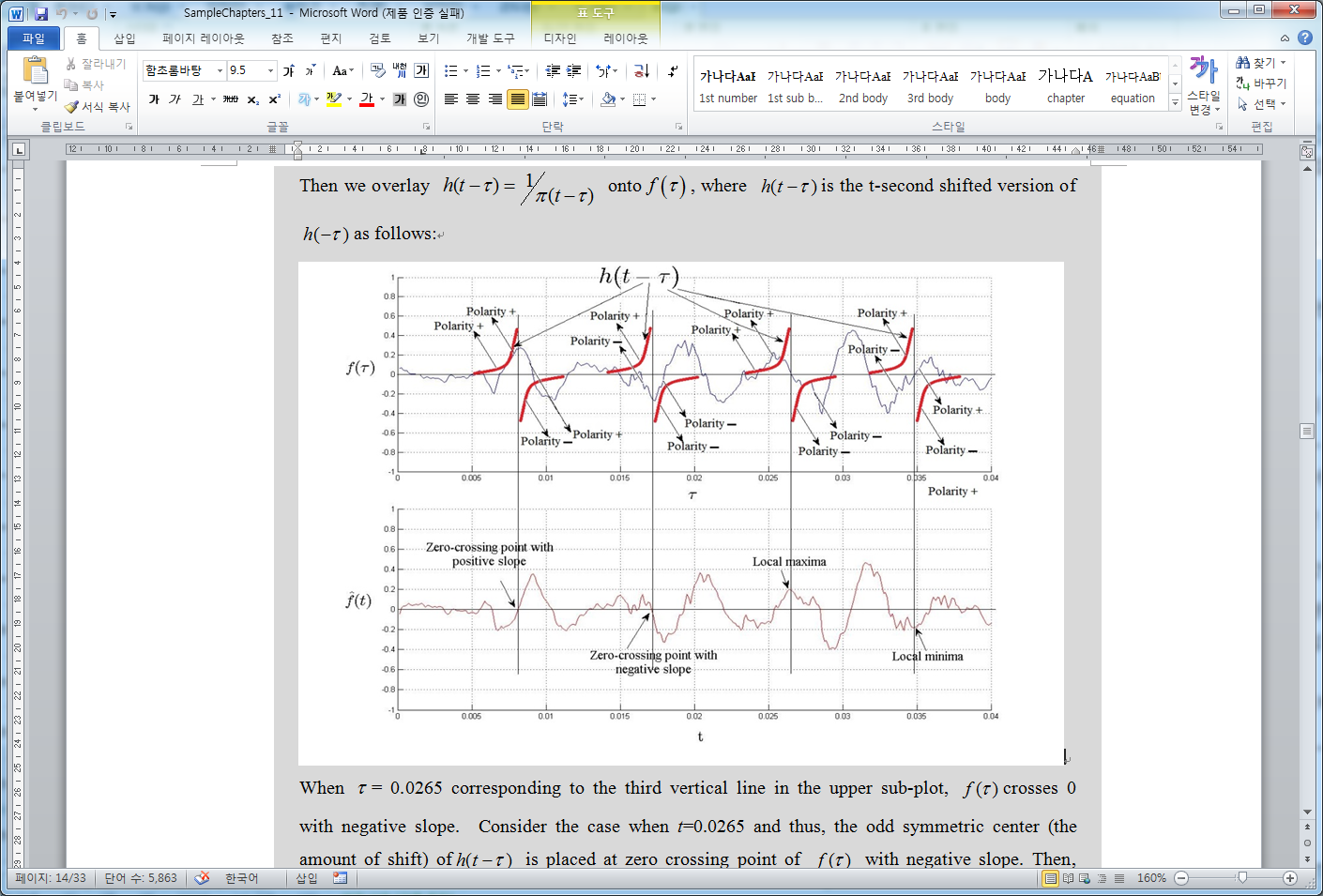
* **Correlation Function**
* **Parseval’s Theorem**
* **Energy Spectral Density (ESD)**
* **ESD = FT of Auto-Correlation Function (ACF)**
* **Properties of ACF and CCF**
* **Power Signal**

If Power is not 0, we call is power signal

* **ACF of Power Signal**
* **Power Spectral Density (PSD)**
* **ACF of Power Signal of Periodic Function**
* **Double Side-Band Suppressed Carrier (DSB-SC)**
* **DSB-SC Phase Error**
* **DSB-SC Phase Error with Noise**
* **PSD of**
* **Signal to Noise Power Ratio (SNR)**
* **DSB-SC Frequency Error**
* **Generating AM signal without Oscillator**

Modulate by Sampling and Demodulate by BPF

* **Quadrature Multiplexing (QM)**
* **QM Phase Error**
* **QM Frequency Error**
* **Frequency Division Multiplexing (FDM)**
* **Hilbert Transform (HT)**
* **HT in Time Domain**
* **HT is Phase Shifter**



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* **Analytic Signal**
* **Single-Side Band (SSB)**
  + **Upper SSB (USSB)**
  + **Lower SSB (LSSB)**
* **Demodulation of SSB**
* **Instantaneous Frequency**
* **Voltage Controlled Oscillator (VCO)**
* **Narrow Band FM (NBFM)**
* **Demodulation of NBFM**
* **Phase Detector (PD)**
* **Phase Locked Loop (PLL) with Frequency Error**
* **PLLL as an FM Demodulator**