

$$gn_{21}(t) = fn_{21}(|m(t)|) \quad (1-21)$$

Where :

$fn_{21}(|m|)$ = memory-less component of $S_{21}(t)$.

$fn_{21}(|m|)$ can be directly evaluated from $S_{21}(t)$ by the following :

$$fn_{21}(x) = \frac{1}{L * 2bw * pdf(x)} \int_{t=0}^L f(t, x) dt \quad (1-22)$$

where :

x = Instantaneous $|s_{21}|$ quantity.

bw = Probability bin width. Evaluate expression as this quantity approaches 0.

L = Length of $m(t)$ in seconds. Evaluate as quantity approaches infinity.

pdf(x) = Statistics of $|m(t)|$ function over its entire length L : i.e. probability density

that $|m(t)| = x$.

$f(t, x)$ is defined as follows :

$$f(t, x) = \begin{cases} S_{21}(t) & \text{if } ||m(t)| - x| < bw \\ 0 & \text{otherwise} \end{cases} \quad (1-23)$$