

$$\mathcal{U} \approx \frac{1}{4} \text{Re} \left[\frac{\text{d}(\varepsilon \omega)}{\text{d}\omega} \underline{\tilde{\mathbf{E}}} \cdot \underline{\tilde{\mathbf{E}}}^* + \frac{\mu^*}{\mu} \frac{\text{d}(\mu \omega)}{\text{d}\omega} \underline{\tilde{\mathbf{H}}} \cdot \underline{\tilde{\mathbf{H}}}^* \right]$$