$$\gamma_{a} = \left\{ |\omega| \cdot e^{ii\varphi} | \varphi \in [0, \pi] \right\}$$

$$\omega = |\omega| \cdot e^{ii\varphi}$$

$$|\omega| \to \infty$$

$$\mathbf{x}$$

$$g_{A} : \omega_{0a} = \omega(k) + ii\delta$$

$$\mathbf{g}_{R} : \omega_{0b} = \omega(k) - i\delta$$

$$\gamma_{b} = \left\{ |\omega| \cdot e^{-ii\varphi} | \varphi \in [0, \pi] \right\}$$