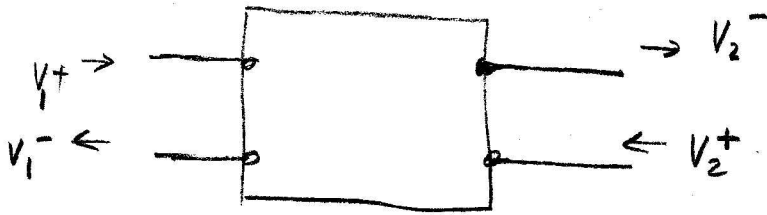


전라방송통신

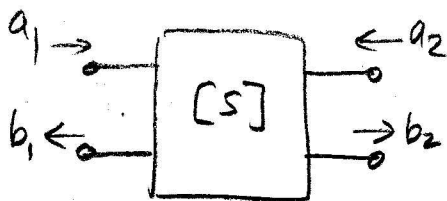
1. Two-port



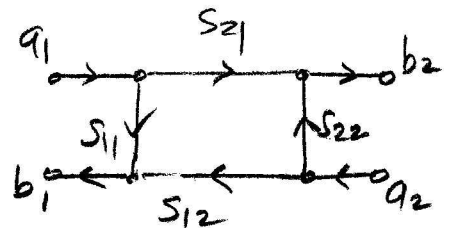
Reflection: $\Gamma = \frac{V_1^-}{V_1^+}$

Transmission: $T = \frac{V_2^-}{V_1^+}$

2. Two-port signal flow graph



$$\begin{bmatrix} b_1 \\ b_2 \end{bmatrix} = \begin{bmatrix} S_{11} & S_{12} \\ S_{21} & S_{22} \end{bmatrix} \begin{bmatrix} a_1 \\ a_2 \end{bmatrix}$$



3. Network analyzer calibration

To take into accounts the effects of reflections and couplings at internal parts of a VNA.

4. dB unit

$P(\text{dBm}) = 10 \log_{10} \frac{P(\text{mW})}{1 \text{ mW}}$: 1mW에 대한 상대전력은 데시벨로 표현

$E(\text{dB}_{\mu\text{V/m}}) = 20 \log_{10} \frac{E(\text{uV/m})}{1 \mu\text{V/m}}$: 1uV/m을 기준으로 한 전기장 세기를 데시벨로 표현