

Equal Superposition

$$\text{Prob}\{+1\} = \frac{1}{2} \text{ (state } |0\rangle)$$

$$\text{Prob}\{-1\} = \frac{1}{2} \text{ (state } |1\rangle)$$

Maximally Mixed State

$$\text{Prob}\{+1\} = \frac{1}{2} \text{ (state } |0\rangle)$$

$$\text{Prob}\{-1\} = \frac{1}{2} \text{ (state } |1\rangle)$$