BPSK (Binary Phase Shift Keying) * How it works: BPSK is the simplest form of PSK.* BPSK: Offers better power efficiency (can work well in noisy environments) but sacrifices spectral efficiency.The Trade-off The main trade-off between QPSK and BPSK is between spectral efficiency and power efficiency: * QPSK: Offers better spectral efficiency (more bits per second per Hertz of bandwidth) but sacrifices some power efficiency.* Spectral Efficiency: QPSK is more spectrally efficient than BPSK.This means QPSK requires a higher SNR to achieve the same bit error rate (BER) as BPSK.* Spectral Efficiency: BPSK is not spectrally efficient.QPSK (Quadrature Phase Shift Keying) * How it works: QPSK uses four phases to represent data.It transmits 2 bits per symbol, doubling the data rate for a given bandwidth.* Power Efficiency: QPSK is less power-efficient than BPSK.While it's still reasonably power-efficient, the symbols are closer together in phase compared to BPSK.