

Distinguish, differentiate, compare and explain what is the Difference between QPSK and QASK modulation techniques. Comparison and Differences.

Differences between QPSK and QASK Modulation Techniques

S.No.	Parameter	QPSK Modulation	QASK Modulation
1	Modulation Type	Quadrature phase modulation	Quadrature amplitude and phase modulation
2	Location of Signal Points	On the circumference of the circle	Equally spaces and placed symmetrically about region
3	Noise Immunity	Better than QASK	Poorer than QPSK
4	Probability of Error	Less than QASK	More than QPSK
5	System Complexity	Less complex	More complex
6	Distance between the signal points	$d = 2 \sqrt{E_b}$ for $N = 2$	$d = 2 \sqrt{0.4 * E_b}$ for $N = 2$ or $M = 16$