Homogeneous Finsler spaces with quartic metrics admitting (α, β)-types

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In this paper, we study geodesic vectors for a homogeneous Finsler space with quartic metric admitting (α, β)-types. We prove the necessary and sufficient condition for a non-zero vector of the quartic metric to be a geodesic vector. Next, we find the set of all geodesic vectors of 3-dimensional Heisenberg group. Further, we show that under a mild condition, a homogeneous Finsler space with quartic metric is naturally reductive if and only if it is naturally reductive underling Riemannian metric. Finally, we derive an explicit formula for the flag curvature of a homogeneous Finsler space with quartic metric.