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## The Inertia of Hermitian Tridiagonal Block Matrices

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**Abstract:** Let  $H$  be a partitioned tridiagonal Hermitian matrix. We characterized the possible inertias of  $H$  by a system of linear inequalities involving the orders of the blocks, the inertia of the diagonal blocks and the ranks the lower and upper subdiagonal blocks. From the main result can be derived some propositions on inertia sets of some symmetric sign pattern matrices.



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