isdiagonal() — Whether matrix is diagonal

**Description**

isdiagonal(A) returns 1 if A has only zeros off the principal diagonal and returns 0 otherwise. isdiagonal() may be used with either real or complex matrices.

**Syntax**

```plaintext
real scalar isdiagonal(numeric matrix A)
```

**Remarks and examples**

See [M-5] diag() for making diagonal matrices out of vectors or out of nondiagonal matrices; see [M-5] diagonal() for extracting the diagonal of a matrix into a vector.

**Conformability**

isdiagonal(A):

- $A: r \times c$
- $result: 1 \times 1$

**Diagnostics**

isdiagonal(A) returns 1 if A is void.

**Also see**

- [M-5] diag() — Create diagonal matrix
- [M-5] diagonal() — Extract diagonal into column vector
- [M-4] Utility — Matrix utility functions