

# NAG Library Routine Document

## X02ALF

**Note:** before using this routine, please read the Users' Note for your implementation to check the interpretation of *bold italicised* terms and other implementation-dependent details.

### 1 Purpose

X02ALF returns the largest positive floating-point number.

### 2 Specification

```
FUNCTION X02ALF (  
REAL (KIND=nag_wp) X02ALF
```

### 3 Description

X02ALF returns the largest positive number in the model of floating-point arithmetic described in the X02 Chapter Introduction. The returned value is equal to  $(1 - b^{-p}) \times b^{e_{\max}}$ , where  $b$  is the arithmetic base (see X02BHF) and  $e_{\max}$  is the maximum exponent (see X02BLF) in the model.

### 4 References

None.

### 5 Parameters

None.

### 6 Error Indicators and Warnings

None.

### 7 Accuracy

None.

### 8 Parallelism and Performance

Not applicable.

### 9 Further Comments

None.

### 10 Example

See Section 10 in X02AJF.

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