Max float value in pandas

In pandas, the data types float16, float32, float64, and float128 correspond to the floating-point data types provided by the NumPy library. These data types define the precision and size of floating-point numbers. The number of digits before and after the floating point, as well as the total number of bits used to represent the numbers, vary for each data type. Here's a breakdown:

1. **float16 (Half Precision):**
   - Total bits: 16
   - Sign bits: 1
   - Exponent bits: 5
   - Significant (mantissa) bits: 10
   - Digits before the floating point: Approximately 3
   - Digits after the floating point: Approximately 4
2. **float32 (Single Precision):**
   - Total bits: 32
   - Sign bits: 1
   - Exponent bits: 8
   - Significant (mantissa) bits: 23
   - Digits before the floating point: Approximately 7
   - Digits after the floating point: Approximately 15
3. **float64 (Double Precision):**
   - Total bits: 64
   - Sign bits: 1
   - Exponent bits: 11
   - Significant (mantissa) bits: 52
   - Digits before the floating point: Approximately 16
   - Digits after the floating point: Approximately 15
4. **float128 (Quadruple Precision):**
   - Total bits: 128
   - Sign bits: 1
   - Exponent bits: 15
   - Significant (mantissa) bits: 112
   - Digits before the floating point: Approximately 34
   - Digits after the floating point: Approximately 30