# FrameType: xTFD

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**Website**: www.eecs.umich.edu/~ghw/ for available software and relevant pointers
**For use with:** MDRx - Modal TFD software

**For each xTFD frame there are two data matrices.**

**ITFD: The Information Matrix**
**InfoMatrixTypeID** = 'ITFD';
**InfoMatrixDataType** = 4;
   %float32 32-bit big-endian IEEE 754 float 4
**InfoRowCount** = 1;
**InfoColumnCount** = 8;

The data for ITFD appear as a single column vector containing, in sequence, the following variables:
   **SamplingRate** [Hz]
        standard sampling frequency
   **AliasingFreq** [Hz]
        this value is typically either SamplingRate or SamplingRate/2, depending on whether the signal is lowpass filtered to 1/4 the SamplingRate or 1/2 SamplingRate if analytic extensions have been applied to the original signal
   **NFrequencySamples**
        the number of frequency number of frequency samples along the TF surface
   **TransformCode**
        one from among the following
                100   Wigner-Ville
                200   Margenau-Hill
                300   Kirkwood/Rihaczek
                400   Born-Jordan
                500   Page
                600   Choi-Williams
                700   Spectrogram
                800   Zhao-Atlas-Marks
                900   Positive
                1000  Modal/Pielemeier-Wakefield
   **Transform Specific Parameters**
        for TransformCode = 1000 (Modal)
           **CrossTermWindowType**
                310 denotes doubly-convolved Hamming - must be added to the 1WIN convention
           **CrossTermWindowLength**

length of the CT Window in the discrete-sample domain

**AutocorrelationWindowType**

310 denotes doubly-convolved Hamming - must be added to the 1WIN convention

**AutocorrelationWindowLength**

length of the AutocorrelationWindow

## xTFD: The Data Matrix

**MatrixTypeID** = 'xTFD';

**MatrixDataType** = 4;

float32 32-bit big-endian IEEE 754 float 4

**RowCount**

number of frequency samples

**ColumnCount** = 1;

single row only