Hyperkit Analysis Solution

User Documentation

1 Parameters

The software allows to adjust parameters, which apply to all files loaded and all visualizations calculated from the measurements.

Name	Symbol	Value
Steps	S	User-defined

2 Files

The software allows to load files from your file system containing voltage and current measurements associated with timestamps.

Name	Symbol	Value
Measurement length	L	Number of measurements in the file
Timestamp measurement	T_i with $0 < i < L$	Timestamp of the i^{th} measurement
Voltage measurement	V_i with $0 < i < L$	Voltage of the i^{th} measurement
Current measurement	C_i with $0 < i < L$	Current of the i^{th} measurement

3 Properties

The software defines a range of numeric properties per file. You can distinguish between measured and displayed properties.

Name	Symbol	Value
Minimum timestamp measured	T^m_{min}	$T^m_{min} = min(\{\mathrm{T_i} \mid 0 < \mathrm{i} < \mathrm{L}\})$
Maximum timestamp measured	T^m_{max}	$T^m_{max} = max(\{\mathrm{T_i} \mid 0 < \mathrm{i} < \mathrm{L}\})$
Minimum voltage measured	V^m_{min}	$V^m_{min} = min(\{\mathrm{V_i} \mid 0 < \mathrm{i} < \mathrm{L}\})$
Maximum voltage measured	V^m_{max}	$V^m_{max} = max(\{\mathrm{V_i} \mid 0 < \mathrm{i} < \mathrm{L}\})$
Minimum current measured	C^m_{min}	$C^m_{min} = min(\{\mathrm{C_i} \mid 0 < \mathrm{i} < \mathrm{L}\})$
Maximum current measured	C^m_{max}	$C^m_{max} = max(\{\mathrm{C_i} \mid 0 < \mathrm{i} < \mathrm{L}\})$
Minimum timestamp displayed	T^d_{min}	User-defined in $[T^m_{min}, T^d_{max}]$
Maximum timestamp displayed	T^d_{max}	User-defined in $[T^d_{min}, T^m_{max}]$
Minimum voltage displayed	V^d_{min}	User-defined in $[V^m_{min}, V^d_{max}]$
Maximum voltage displayed	V^d_{max}	User-defined in $[V^d_{min}, V^m_{max}]$
Minimum current displayed	C^d_{min}	User-defined in $[C^m_{min}, C^d_{max}]$
Maximum current displayed	C^d_{max}	User-defined in $[C^d_{min}, C^m_{max}]$

4 Voltage timeseries

The software displays a voltage timeseries per file, which can be adjusted according to the parameters and the display properties.

5 Current timeseries

6 Voltage probability density function

7 Current probability density function