NORMAL PLOT

PURPOSE
Generates a normal plot.

DESCRIPTION
A normal plot is a normal probability plot, but with the data on the horizontal axis and neat probability values on the vertical axis. The plot consists of the following 4 components:

1. The raw data;
2. A fitted line to the raw data;
3. A horizontal 50% line;
4. A vertical 50% line.

The characteristics of these components are controlled through the LINE and CHARACTER commands.

SYNTAX 1
NORMAL PLOT <y> <SUBSET/EXCEPT/FOR qualification>
where <y> is a response variable;
and where the <SUBSET/EXCEPT/FOR qualification> is optional.

SYNTAX 2
NORMAL PLOT <y> <tag> <SUBSET/EXCEPT/FOR qualification>
where <y> is a response variable;
<tag> is a censoring variable (values equal to 0 are omitted from the plot);
and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES
NORMAL PLOT Y1

NOTE
The following internal parameters are saved after a NORMAL PLOT. These parameters can be used like any user created parameter by the analyst.

SIGMA - the slope of the fitted line
MU - the intercept of the fitted line
SDSIGMA - the standard deviation of SIGMA
SDETA - the standard deviation of MU
BPT1 - the 0.1% point of the best fit distribution
BPT5 - the 0.5% point of the best fit distribution
BP1 - the 1% point of the best fit distribution
BP5 - the 5% point of the best fit distribution
BP10 - the 10% point of the best fit distribution
BP20 - the 20% point of the best fit distribution
BP50 - the 50% point of the best fit distribution
BP80 - the 80% point of the best fit distribution
BP90 - the 90% point of the best fit distribution
BP95 - the 95% point of the best fit distribution
BP99 - the 99% point of the best fit distribution
BP995 - the 99.5% point of the best fit distribution
BP999 - the 99.9% point of the best fit distribution

DEFAULT
None

SYNONYMS
None
RELATED COMMANDS

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<th>Command</th>
<th>Description</th>
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<td>LINES</td>
<td>Sets the type for plot lines.</td>
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<tr>
<td>NORMAL PROBABILITY PLOT</td>
<td>Generates a normal probability plot.</td>
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<tr>
<td>HISTOGRAM</td>
<td>Generates a histogram.</td>
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<tr>
<td>QUANTILE-QUANTILE PLOT</td>
<td>Generates a quantile-quantile plot</td>
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<td>BOX PLOT</td>
<td>Generates a box plot.</td>
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<tr>
<td>PLOT</td>
<td>Generates a data or function plot.</td>
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APPLICATIONS

Exploratory Data Analysis

IMPLEMENTATION DATE

90/5

PROGRAM

LET Y1 = NORMAL RANDOM NUMBERS FOR I = 1 1 100
LINE SOLID DASH DOT DOT
TITLE AUTOMATIC
NORMAL PLOT Y1