

EXPECTED LOSS PLOT

PURPOSE

Generates a subsample expected loss versus subsample index plot.

DESCRIPTION

The subsample expected loss index is the expected loss of the data in the subsample. The expected loss computes the number of defectives for a variable (i.e., the number of values that fall outside of some user specified tolerance limits) and multiplies that by some user specified cost. The expected loss plot is used to answer the question: "Does the subsample expected loss index change over different subsamples?" The plot consists of:

Vertical axis = subsample expected loss index;
Horizontal axis = subsample index.

In addition, a horizontal line is drawn representing the full sample expected loss value. As usual, the appearance of the 2 traces is controlled by the first 2 settings of the LINES, CHARACTERS, SPIKES, BARS, and similar attributes.

SYNTAX

EXPECTED LOSS PLOT <y> <x> <SUBSET/EXCEPT/FOR qualification>

where <y> is the response (= dependent) variable;

<x> is the subsample identifier variable (this variable appears on the horizontal axis);

and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES

EXPECTED LOSS PLOT Y X

EXPECTED LOSS PLOT Y X SUBSET X = 4 TO 10

NOTE

The upper and lower specification limits must be specified by the user as follows:

LET USL = <value>

LET LSL = <value>

The cost value must be specified as follows:

LET USLCOST = <value>

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

CHARACTERS	=	Sets the type for plot characters.
LINES	=	Sets the type for plot lines.
CP PLOT	=	Generates a C_p plot.
CPK PLOT	=	Generates a C_{pk} plot.
PERCENT DEFECTIVE PLOT	=	Generates a percent defective plot.
CAPABILITY ANALYSIS	=	Performs a process capability analysis.
BOX PLOT	=	Generates a box plot.
XBAR CHART	=	Generates a mean control chart.
PLOT	=	Generates a data or function plot.

APPLICATIONS

Quality Control

IMPLEMENTATION DATE

93/10

PROGRAM

```

SKIP 25
READ GEAR.DAT DIAMETER BATCH
.
TITLE CASE ASIS
LABEL CASE ASIS
TITLE Gear Diameter Analysis
YILABEL EXPECTED LOSS
XILABEL Batch
LEGEND 1 Process Capability
LEGEND 2 EXPECTED LOSS Plot
XTIC OFFSET 0.5 0.5
CHARACTER X BLANK
LINE BLANK SOLID
.
LET LSL = 0.98
LET USL = 1.02
LET USLCOST = 15
.
EXPECTED LOSS PLOT Diameter Batch
    
```

