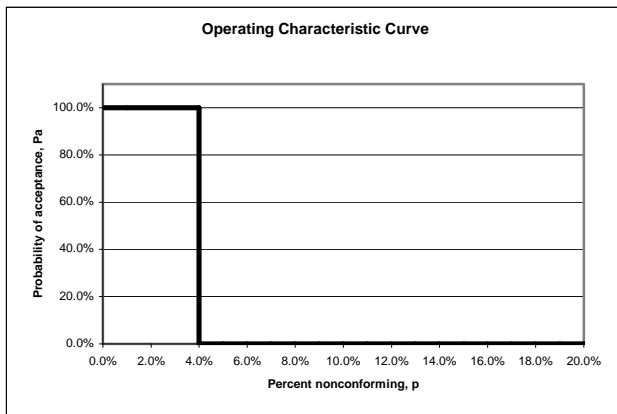


Three Views of the Operating Characteristic Curve



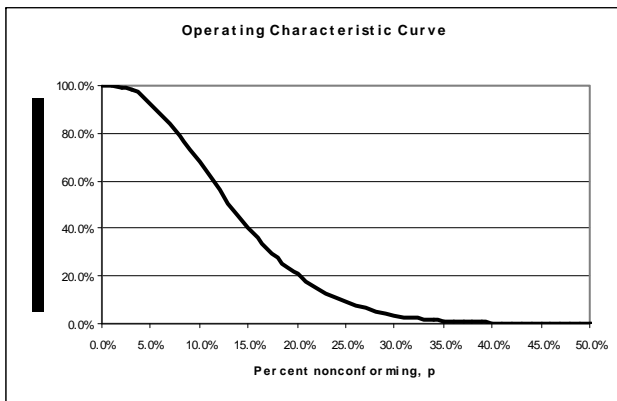
The Ideal Operating Characteristic (OC) Curve

Notice the square shape of the OC “curve”. The vertical line, in this example, is at 4%.

The vertical line provides one example of Acceptable Quality Level (AQL).

* Any lot with 4% or less nonconforming is accepted with 100% probability; it is **always** accepted.

* Any lot with more than 4% nonconforming is accepted with 0% probability; it is **never** accepted.

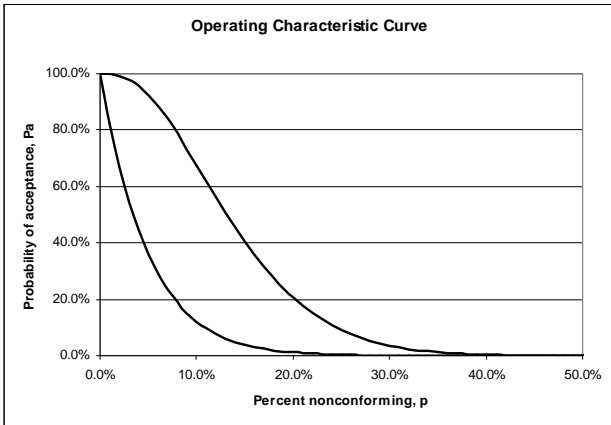


A Realized Operating Characteristic (OC) Curve

With sampling, we cannot achieve the ideal OC “curve”. The shape approximates the ideal curve.

Each lot’s percent nonconforming has its own probability of acceptance ranging from 0% to 100%.

In this case, we took a sample of 20 items. We accept the lot if there are 2 or fewer nonconforming items in the sample, $n = 20$, $c = 2$



A Comparison When $c = 0$

There is a special case of the OC Curve when the acceptance number is zero. Instead of a curve that starts to approximate the ideal, the curve has a special shape.

In the figure the “inner” curve is $n = 20, c = 0$. The “outer” curve is $n = 20, c = 2$.

Notice that for a give process quality, the inner curve has lower probability of acceptance compared to the outer curve.

