

## **Service : Test Specification**

### **Purpose**

The test specification is an important document with multiple tasks

- agreement of test flow, test conditions and limits
- requirement specification for test development
- means of communication between design and test engineer

An example to illustrate the relevance of clear communication. The test engineer finds out during development of test program that the device is not behaving the expected way. It is easy to tell the designer "test X on page Y of test spec Z violates the upper limit". The reply might be : " Yes, the test condition is wrong and should be corrected. I will update the test specification and send you the new version".

### **Benefits**

You can avoid predictable differences at the milestone when the test program should be complete by a cleanly defined test specification.

It is a reference for technical and organizational requirements and arrangements. It serves the traceability and thereby the quality of your product.

### **Bluetest Expertise**

We cannot take the product responsibilities out of your hands but we can either offer support or complete creation of the test specification with regard to your standards.

With Know-how and experience we will design test specifications to serve as intelligible interface between designers, test engineers, product and quality managers.

### **Activities**

#### **Participants**

Design, application and test engineer

#### **Requirements, Input**

Preliminary device specification, test concept, design data

## Performance

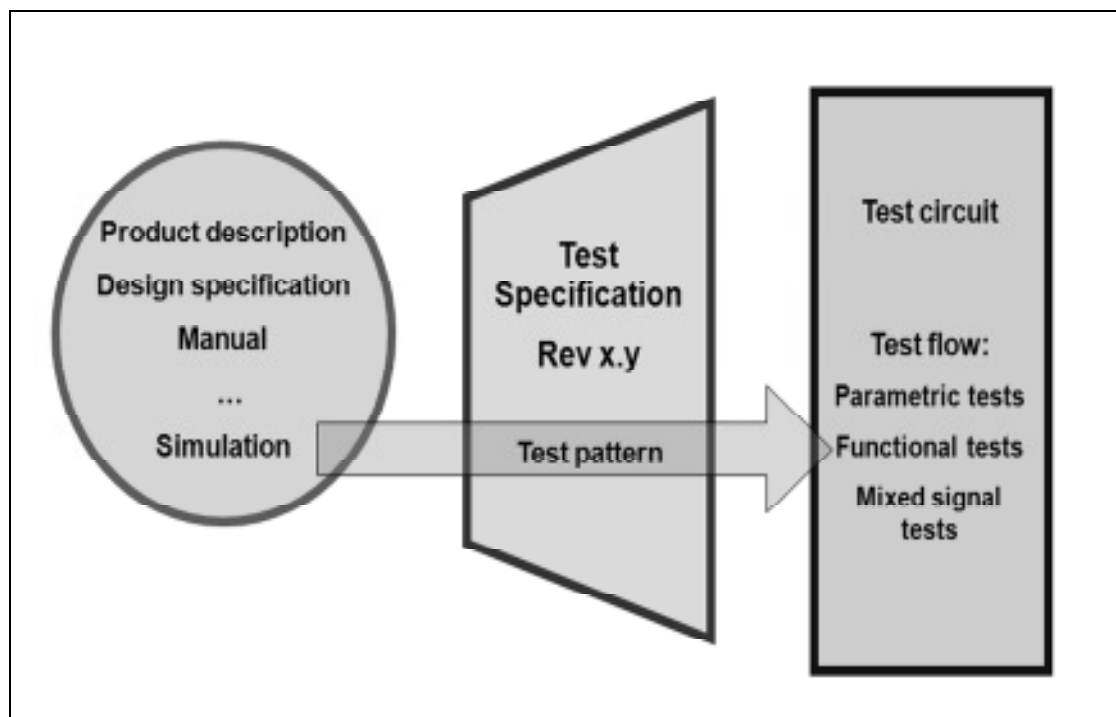
All available specifications, data and concepts are collected and incorporated into a structured document. Each test step defines:

- purpose of test
- test conditions
- limits
- expected results

It considers the constraints of the measurement equipment and could be treated as an image of the test program itself.

Additional data as test vectors have to be identified at the right place.

Principle drawing:



## Result, Output

Although the test specification will change several times during development it is an official document, approved and signed by the customer.

It is basis for test program development and test program acceptance and therefore has to be referenced in the test program code.

test specification detail:

### 3.9. SIN/COS Amplification test

This test determines the gain of the SIN and COS amplifier with VSEL=low and VSEL=High

1. Set pins ZIP,ZIN ,DHSEL, ISEL1,ISEL2 and ISEL3 to 0V
2. Apply differential DC signals to SIN and COS pins (Ampl=20mV, Vcom=2.75V)
3. Measure differential output voltages at SOUT and COUT.
4. Calculate DC Gains,  $V_{sout}/20mV$  and  $V_{cout}/20mV$

Test-number	Tested Parameter	Conditions	<u>Min.Limit</u>	<u>Typical Value</u>	<u>Max.Limit</u>
61006 61007	DC Amplification SIN DC Amplification COS	VDDA=5.50V VDDE=5.50V VDDI=5.50V  VSEL=0V	15	25	35
62004 62005	DC Amplification SIN DC Amplification COS	VSEL=5.5V	45	60	75

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