

	TECHNICAL SPECIFICATION	
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INCOMING INSPECTION FOR SPOT MARKET SUPPLIED ELECTRONIC MATERIAL

Revision #	Date	Changes	Responsible(s)
02	14/09/2017	English translation and new ZAPI GROUP template	

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1. PURPOSE

Purpose of this specification is to:

- Assure the originality of the material purchased on Spot Market.
- Exclude, prior to use, possible risks/malfunction due to counterfeit or deteriorated components.

In special and extreme cases, electronic components may be supplied by not controlled/usual purchasing sources (the so-called "Spot Market").

Although this practice is to be avoided as most as possible, it cannot be totally excluded. It is therefore necessary to regulate the use of the material supplied in this mode.

The present procedure specifies additional incoming inspection to be implemented in such cases.

2. APPLICABILITY

This specification applies to all contractors of ZAPI GROUP (hereinafter called ZAPI) that receive from ZAPI or purchase independently electronic components (in the following referred to as "Material").

In case the contractor has in place its own equivalent procedure, this can be submitted to ZAPI and, if approved by ZAPI (by written statement), used as an equivalent alternative to the present one.

In the case of Material purchased by ZAPI, this Specification must be implemented when explicitly required on the delivery note of the Material, with the statement "MATERIAL PURCHASED BY SPOT MARKET, APPLY RELATED SPECIFICATION FOR INCOMING INSPECTION".

In case of material provided directly by the contractor, this Specification applies only to Material purchased on Spot Market.

3. SPECIFIC REQUIREMENTS

Whenever a material is purchased on Spot Market, the following step shall be followed:

- Segregate the Material purchased on Spot Market. The material must be clearly identified as belonging to a lot to be inspected and segregated in a separate area.
- Carry out the checks listed below.
- Communicate ZAPI (att. Quality dept.) the results of the inspections and wait for confirmation e-mail for use in production (Material OK) or return/scrap (Material NOK). Keep the material segregated until ZAPI decision.

A guideline, indicative and not exhaustive, is provided below to summarize the checks applicable/necessary in order to reduce the risk of use of counterfeit/malfunctioning components (e.g. due to surface finish oxidized after long storage).

In order to assure effectiveness of the controls described, it would be useful to have a reliable sample (hereinafter "Master Sample"), gathered from authorized distributors or certified as original by the manufacturer. If the Master Sample is available, the inspections can proceed by direct comparison, otherwise it must rely onto the component datasheet.

The "Sample batch" to be inspected must be selected according to the following criteria:

1. Random sampling
2. Adequate sample size ($\geq 0,1\%$ of the total quantity, at least 5 pieces)

TEST TO BE CARRIED OUT

PASSIVE COMPONENTS

- Visual comparison vs. Master Sample (if available)
- Verify the absence of scratches/discoloration of the package or bent contacts/pin
- Verify dimensions/geometry of package and contacts/pin vs. Master Sample/datasheet
- Verify the absence of rust/deterioration of finishing of contacts/pin
- Measure electrical characteristics and compare vs datasheet

ACTIVE COMPONENTS / ICs

- Visual comparison vs. Master Sample (if available)
- Verify the absence of scratches/discoloration of the package or bent contacts/pin
- Verify dimensions/geometry of package and contacts/pin vs. Master Sample/datasheet
- Verify the absence of rust/deterioration of finishing of contacts/pin
- Check labeling of reel/box, in particular typefaces and barcode number/position vs. Master Sample/datasheet
- Compare X-ray images vs. Master Sample (if available), regarding following characteristics:
 - -DIE dimensions
 - -number/position of bonding wires
 - -form of internal metal frame
- Soldering test where necessary (depending on the date code)
- Measure electrical characteristics and compare vs datasheet (where possible)

It is recommended also to carry out all the additional inspections that the contractor believe applicable, based on the normal due diligence and in accordance with his experience/technical knowledge.