

**MTBF Prediction Report**

<b>Model No.</b>	<b>SS210-25</b>
<b>Part No.</b>	<b>80.D0EU4.BT4B2BF</b>
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**A. Scope**

This document describes product's mean time between failure (MTBF).

**B. Purpose**

Provide a life time prediction value for product.

**C. Method Description**

- 1) This MTBF prediction report adopts “*Telcordia Technologies Special Report, SR-332, Issue2*” prediction method (method 1, black box).
- 2) Assume device failure rate could use sum every component failure rate to calculate its value.
- 3) The steady-state failure rate can express by below equation:

$$\lambda_{ss} = \pi_E \sum_{i=1}^m (N_i \lambda_{SSi})$$

m: number of different type component

$\lambda_{SS}$ : device failure rate at steady-state

$N_i$ : i type component quantity in device

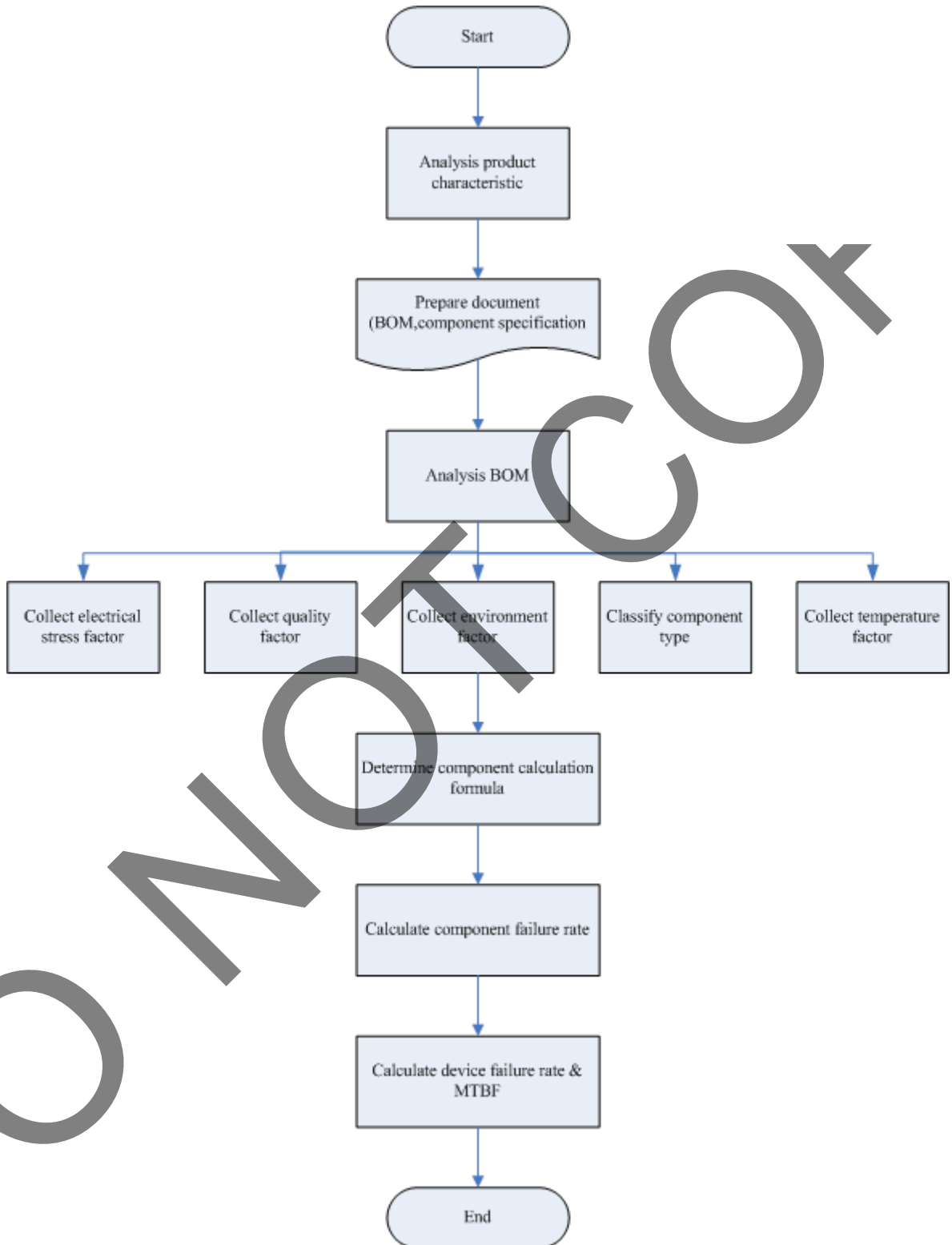
$\lambda_{SSi}$ : failure rate for i type component at steady-state

$\pi_E$ : device environment factor

**D. Procedure Description**

- 1) Collect characteristic data for product.
- 2) Document preparation:
  - (1) Bill of material (BOM)
  - (2) Component specification
  - (3) Analysis BOM & collect component parameter
  - (4) Determine calculation equation for every component
  - (5) Calculate failure rate for every component
  - (6) Get device failure rate and mean time between failure

E. Implementation Procedure Flow Chart



**F. MTBF Prediction Value**

Based on above method to calculate the device that its mean time between failure(MTBF) and failure rate are :

Temperature(°C)	MTBF(unit : hour)	F.R(unit : 1/hour)
30	$3.80 \times 10^6$	263.11

※ The environment condition : Ground, Benign, Controlled.