Supporting information

FIT reports - CTRR

Failure in time (FIT) - Chip technology reliability reports (CTRR)

CTRRs are reliability FIT reports on technology level that are provided for Infineon products. The FIT reports are created according to JEDEC standard JESD85A, which defines FIT (failure in time) as:
The number of failures per 10^9 device-hours. Typically used to express the failure rate. Similarly, it can be defined as 1 PPM per 1000 hours of operation or one failure per 1000 devices run for one million hours of operation.
Please note that the direct conversion of FIT to ppm is not possible as FIT is a time-dependent value. FIT to ppm conversion requires the actual operating hours of the respective product in the field, e.g. based on a mission profile.

Infineon uses product qualification and product monitoring data for FIT calculation. Typical stress tests for acquiring such data are HTOL (high temperature operating life) or HTRB (high temperature reverse bias). Infineon FIT rate calculation according to JESD85A uses a standardized activation energy of 0.7 eV and a mean ambient temperature of 55°C as an average. Arrhenius equation is used for acceleration factor calculation.

Key features

- Product reliability data
- Provided on product pages
- Available for download

Figure 1: Example CTRR with explanation of its content

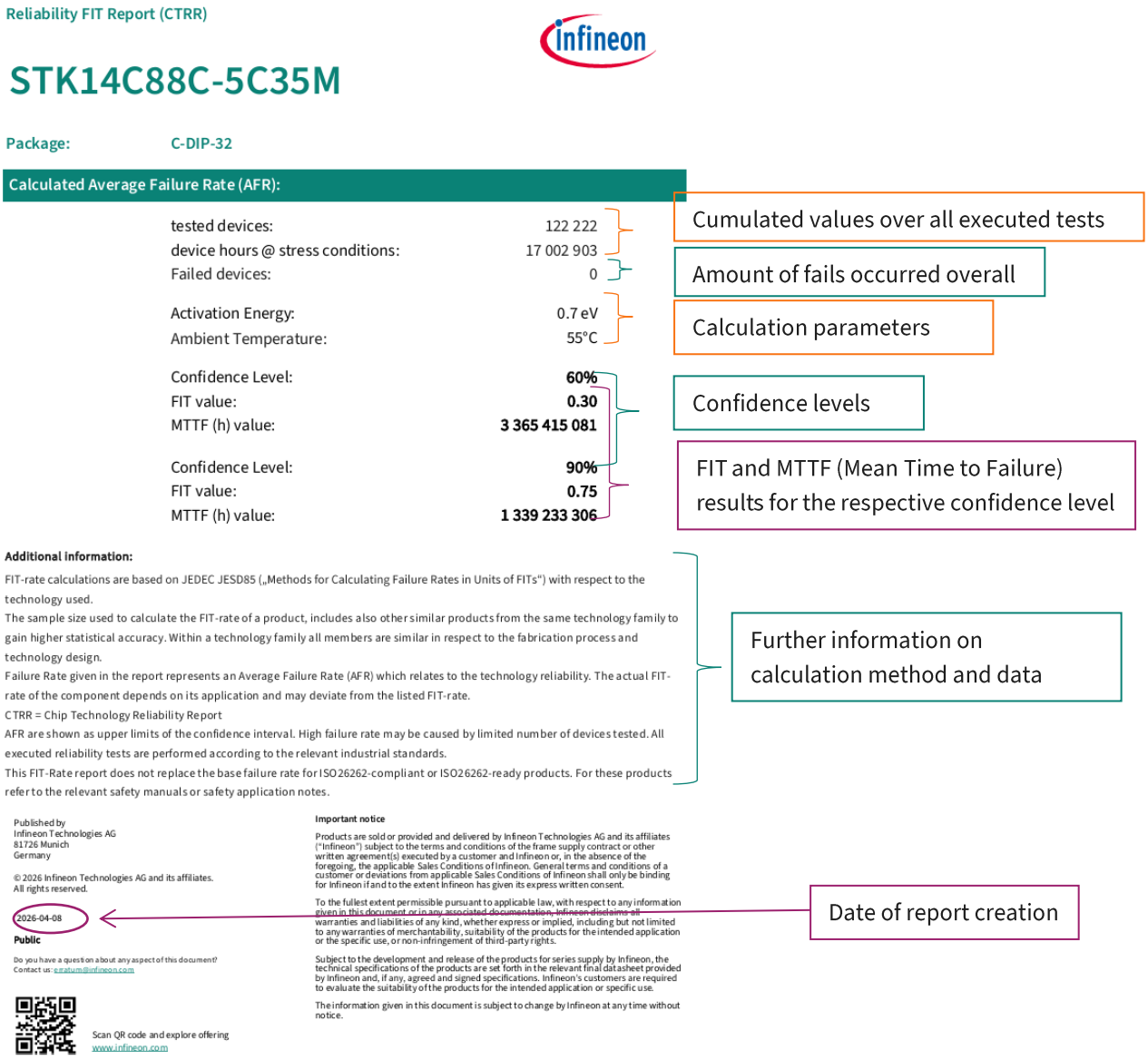
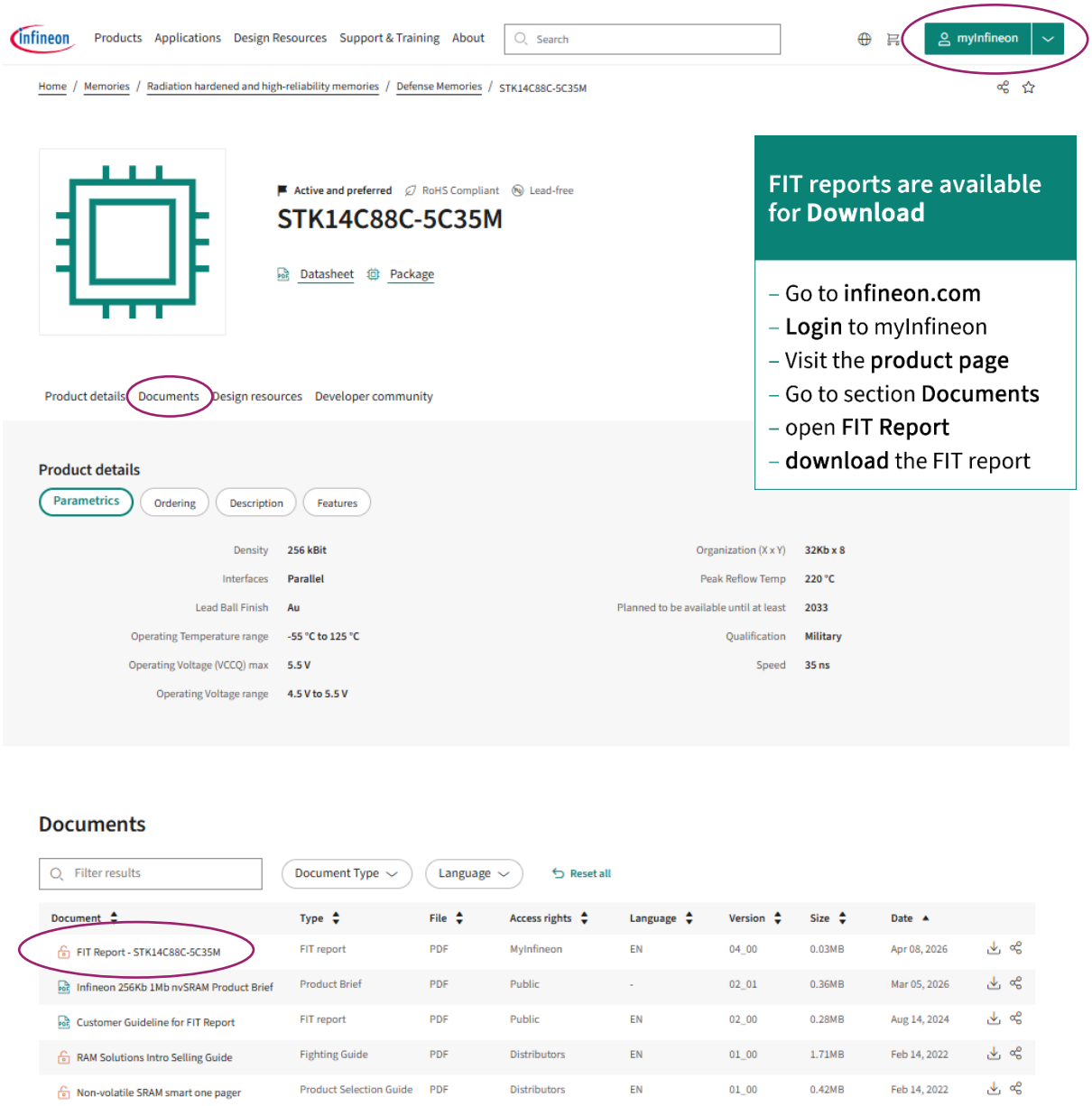


Figure 2: Example product homepage with FIT report



If you have any further questions, please contact us via the technical assistance center. Your inquiry will be sent to the appropriate specialist.

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