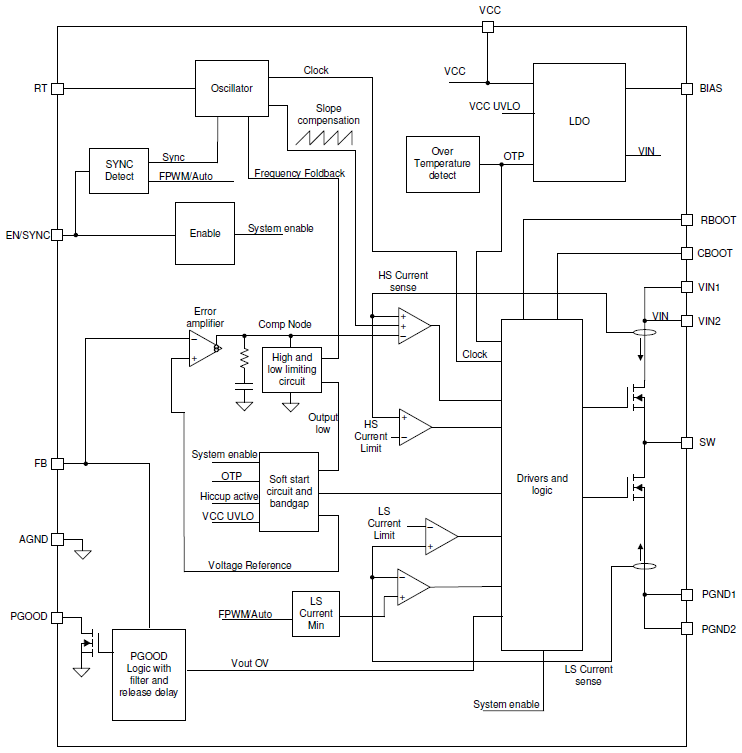
FIT Rate, Failure Mode Distribution
LM61435-Q1

Automotive 3-V to 36-V, 3.5-A, Low-Noise Synchronous Step-Down Converter

Functional Block Diagram



Failure Rate Mission Profile (1)	Per 10^9 Hours (FIT)
Total FIT Rate	**13**
Die FIT Rate	**6**
Package FIT Rate	**7**

Failure Modes	Failure Mode Distribution (%)
SW No output	**45%**
SW output not in specification – voltage or timing	**40%**
SW power FET stuck on	**5%**
PGOOD false trip, fails to trip	**5%**
Short circuit any two pins	**5%**

(1)Failure Rate, Mission Profile and Failure Modes Distribution

The failure rate and mission profile information comes from the Reliability data handbook IEC TR 62380 using the reliability modeling for Integrated circuits with automotive motor control mission profiles
Mission Profile: Automotive Motor Control from Table 11
Power dissipation 400mW
Climate type: World-wide Table 8
Package factor lambda 3 Table 17b
Substrate Material: FR4
EOS FIT rate assumed = 0

The failure mode distribution estimation comes from the combination of common failure modes listed in standards such as IEC 61508 and ISO 26262, the ratio of sub-circuit function size and complexity and from best engineering judgment. The failure rates listed reflect random failure events and do not include failures due to misuse or over stress.

LM61435-Q1 are catalog product and not compliant to ISO-26262 standards.

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