

Quality Information for Product Type TL431BQDBZR

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Quick reference

Information	Content
Device Type	TL431BQDBZR
Ordering Information (12NCs)	9352 880 25215
Qualification Grade	automotive
Package	SOT23 (TO-236AB)
Waferfab	Nexperia DHAM
Assembly	Nexperia ATGD
ESD HBM	> 4000 V, <= 8000 V
Calculated Failure Rate	2.41 FIT
MTBF/MTTF	4.15E+08 hours

Explanation

Automotive qualified products are in accordance with the AEC-Q101.

Electrostatic Discharge (ESD) tests are performed as described in the AEC-Q101 with each 3 positive and 3 negative pulses for each stress voltage level.

Test considered for FIT calculation: High Temperature Reverse Bias (HTRB, AEC-Q101 Test # 5). The parameters for calculation of FIT and MTBF/MTTF are as follows: Confidence level 60%, junction temperature derated to 55 °C, activation energy 0.7 eV, test time 168 - 1000 hrs.

For discrete semiconductor devices the Mean Time Between Failure (MTBF) is replaced by the Mean Time To Failure (MTTF) acronym. MTTF is calculated from the Intrinsic Failure Rate.