nexperia

Reliability Monitoring Results

Quarters: Q1/2021 to Q4/2021

Based on structural similarity

Suppli	ier	User Part Number							
Nexperia B.V.		74CBTLV3126PW	74CBTLV3126PW						
Part D	Description: Quad bus switc	h							
Pro	nction Family: CBTLV(D) ocess family: C075 okage family: TSSOP								
JESD4	7 Test	Test Conditions	Duration	# Lots	# Quantity	# Rejects			
	TEST				-	see			
# 1	Pre- and Post-Stress Electrical Test	Tamb = 25 °C	N/A	see below	all parts	below			
# 2	PC Preconditioning	JESD22-A113 MSL 1	N/A	863	73980	0			
# 5a	HTOL EFR High Temperature Operating Life Extrinsic	JESD22-A108 Tj = 150°C $V_{CCMAX} \le V \le 1.2*V_{CCMAX}$	48 hours or 168 hours	219	38230	0			
# 5b	HTOL IFR High Temperature Operating Life Intrinsic	JESD22-A108 Tj = 150°C $V_{CCMAX} \le V \le 1.2*V_{CCMAX}$	≥500 hours	84	6277	0			
# 7	TC Temperature Cycling	JESD22-A104 -65 °C to 150°C	≥500 cycles	478	37734	0			
# 9	uHAST / HAST unbiased or biased High Accelerated Stress Test	JESD22-A101 Tamb = 130 °C, RH = 85%, V = V _{CCMAX}	96 hours	462	36246	0			

Calculation of PPM, FIT and MTTF

Test considered for PPM calculation: High Temperature Operating LifeTest Extrinsic (HTOL EFR, Test # 5a above) Test considered for FIT and MTTF calculations: High Temperature Operating LifeTest Intrinsic(HTOL IFR, Test # 5b above)

Confidence level 60%, derated to 55 °C, activation energy 0.7 eV, test time 168 to 1000 hours

Product Family	Package Family	Quantity	Rejects	Extrinsic Failure Rate (PPM)	Intrinsic Failure Rate (FIT)	MTTF (hrs)
CBTLV(D)	TSSOP	6277	0	24	0.7	1.5 E+09

All information hereunder is per Nexperia's best knowledge. This document does not provide for any representation or warranty express or implied by Nexperia. In case Nexperia has tested the product, this documentation reflects the outcome of the analysis of the actually tested parts only.