

Technology Report for P6 Cumulative Since Feb 02 2019

(as used by the ISL32172EIBZ-T)

Summary

Test Name	Conditions	Duration	# of Lots	Sample Size	Rejects
AUTOCLAVE	121C, 100%RH	96	7	536	0
HAST BIASED	130C, 85%RH	96	3	515	0
HAST BIASED	130C, 85%RH	192	2	449	0
HAST UNBIAS	130C, 85%RH	96	69	11118	0
HAST UNBIAS	130C, 85%RH	192	4	992	0
HTOL	125C	96	1	80	0
HTOL	125C	500	1	80	0
HTOL	125C	1000	17	1355	0
HTOL	125C	2000	1	79	0
HTOL	126C	1000	1	79	0
HTOL	135C	24	3	141	0
HTOL	135C	400	1	47	0
HTOL	135C	800	44	2028	0
STORAGE	150C	500	5	1162	0
STORAGE	150C	1000	79	6956	0
TEMP CYCLE	-40C to 125C	1000	1	59	0
TEMP CYCLE	-55C to 125C	1000	1	45	0
TEMP CYCLE	-65C to 150C	100	23	345	0
TEMP CYCLE	-65C to 150C	500	71	6763	0
TEMP CYCLE	-65C to 150C	700	8	652	0
THER SHOCK	0C to 125C	0	23	345	0

Failure Rate Calculations

High Temperature Operating Life Failure Rates Derated to 55°C

Rejects	Sample Size	FITS at 60% UCL	MTTF at 60% UCL
0	3889	2.97	3.37E8

Notes:

An activation energy of 0.7 eV is assumed when calculating failure rates for samples with 0 rejects.

Failure Rate given in FITs where 1 FIT = 1 failure in 10⁹ device hours.

MTTF = (1 / Failure Rate) in hours.