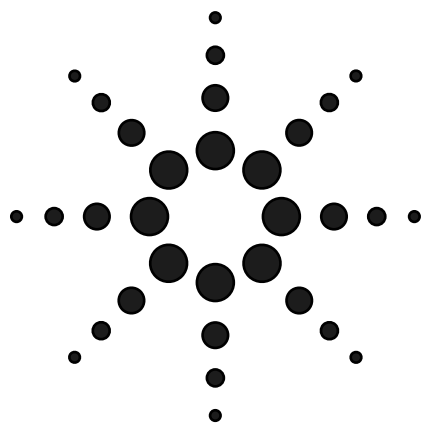




Agilent LC Small Form Factor Pin Through Hole Reliability Data Sheet

Parts covered by this data sheet:

HFCT-5911ATL
HFCT-5914ATL
HFCT-5921TL
HFCT-5941xxx Series
HFCT-5942xxx Series
HFCT-5943xxx Series
HFCT-5944xxx Series
HFCT-5951xxx Series
HFCT-5952xxx Series
HFCT-5953xxx Series
HFCT-5954xxx Series
HFCT-5961xxx Series
HFCT-5962xxx Series
HFCT-5963xxx Series
HFCT-5964xxx Series
HFCT-5981ATL
HFCT-59L1ATL

Summary

This reliability data sheet describes a single mode 1300 nm Small Form Factor pin through hole product with an LC style connector. The family of devices covers MAN, GbE and Fibre Channel applications among others.

Life Tests

Table 1 summarizes the life tests performed on the LC platform.

Definition Of Failure

Product failure has occurred when the unit fails to respond properly to a dc/ac functional test condition. The functional test condition shall not exceed the absolute maximum data sheet limits for the product.

Table 1. Life Tests

Test Name	Stress Test Conditions	Units	Device Hours	No. of Failed Units	Demonstrated MTBF (hrs) @T _A = 85 °C	Demonstrated FITS @ T _A = 85 °C
High Temperature Operating Life	V _{CC} = 3.3 V T _A = +85 °C	25 x HFCT-5942ATL	150000	0	1131500	884
		155 x HFCT-5942AL	456000	0		
		25 x HFCT-5952NL	187500	0		
		19 x HFCT-5952ATL	38000	0		
		25 x HFCT-5962ATL	125000	0		
		25 x HFCT-5964ATL	125000	0		
		25 x HFCT-5914ATL	50000	0		
Total		299	1131500	0		



Table 2. Failure Rate Prediction

Ambient Temp (°C)	Point Typical Performance MTBF (yrs)	Point Typical Performance FITS	60% Confidence MTBF (yrs)	90% Confidence MTBF (yrs)	60% Confidence FITS	90% Confidence FITS
85	129.1	884.0	140.8	56.1	810.0	2035.0
80	151.6	752.0	165.6	65.8	689.0	1733.0
75	178.9	638.0	195.3	77.7	584.0	1468.0
70	212.0	538.0	231.4	92.1	493.0	1239.0
65	252.6	452.0	275.5	109.7	414.0	1040.0
60	302.6	377.0	330.7	131.4	345.0	868.0
55	364.4	313.0	397.5	158.2	287.0	721.0
50	441.4	258.0	481.3	191.7	237.0	595.0
45	537.9	212.0	588.0	233.8	194.0	488.0
40	659.6	173.0	722.0	286.6	158.0	398.0
35	814.2	140.0	891.2	353.2	128.0	323.0
30	1012.2	113.0	1107.5	438.8	103.0	260.0
25	1267.4	90.0	1391.2	551.1	82.0	207.0

Note:

The Bellcore recommended activation energy of 0.35 eV has been used in these calculations as it is the most pessimistic value available in the literature.

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Data subject to change.

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Obsoletes: 5988-7685EN

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