

協禧 壽命試驗報告

ADDA CORPORATION

THE TEST REPORT OF MTTF

試驗機種 Sample P/N	AD3505HB-K73(S)	試驗條件 Test Condition	文件編號 Document No.	QAP-MT BS-173 B
取樣數量 Tested Sample	100 PCS.	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> 溫度 TEMP. : 70 °C <input type="checkbox"/> ON : SEC. <input type="checkbox"/> OFF : SEC. <input type="checkbox"/> 其他 OTHER : 	試驗時間 開始 START	2007/11/22 _11:00
試驗時間 Test Time	2000 HRS		TEST PERIOD	結束 FINISHED
總試驗時間 Total Test Time	200000 HRS			2008/02/13 _11:40

故障定義 Product Specification & Faiure Definiton	試驗結果：包含故障時間、數據、統計、．．．等 Test Result：Including Time Of Failure、Datum、Statistics、... ect.																														
1.風扇不轉 (Fan Not Work) 2.轉速超出規格30% (Speed Over 30% Origin) 3.電流超出規格30% (Current Over 30% Origin)	<div>• 溫度加速因子 $TEMP\ A.F = e^{(\Delta H / K) \times (\frac{1}{273+Tl} - \frac{1}{273+Th})}$</div> <div>• 總試驗時間 Total Test Time = 200000 HRS.</div> <div>• 查表得 (MTTF By GEM Table) MTTF = 86858 HRS.</div> <div>• 溫度 / TEMP. / MTTF / L10</div> <table><tr><th>溫度 TEMP.</th><th>信賴水準90% CONFIDENCE LEVEL</th><th>L10</th></tr><tr><td>30 °C</td><td>1201625</td><td>126487</td></tr><tr><td>40 °C</td><td>585046</td><td>61584</td></tr><tr><td>45 °C</td><td>415215</td><td>43707</td></tr><tr><td>60 °C</td><td>157890</td><td>16620</td></tr><tr><td>70 °C</td><td>86858</td><td>9143</td></tr></table>			溫度 TEMP.	信賴水準90% CONFIDENCE LEVEL	L10	30 °C	1201625	126487	40 °C	585046	61584	45 °C	415215	43707	60 °C	157890	16620	70 °C	86858	9143										
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Description： 1.性能測試時點 The Time Of Check Point Start：0Hr, 500Hrs, 1000Hrs And Finished $70^{\circ}C\ MTTF = \frac{Total\ test\ time\ (T)}{Total\ failure\ (r)}$ GEM TABLE Generalized Exponential Model (for Time-Terminated Test) <table><tr><td>r</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr><tr><td>M</td><td>2.3026</td><td>3.8897</td><td>5.3223</td><td>6.6808</td><td>7.99364</td><td>9.2747</td></tr><tr><td>r</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td></td></tr><tr><td>M</td><td>10.5321</td><td>11.7709</td><td>12.9947</td><td>14.2060</td><td>15.4066</td><td></td></tr></table>	r	0	1	2	3	4	5	M	2.3026	3.8897	5.3223	6.6808	7.99364	9.2747	r	6	7	8	9	10		M	10.5321	11.7709	12.9947	14.2060	15.4066				
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3. Herewith, we could assume as right on the basis of above test result. Besides, if the actual test time exceed the required, it comes out that those fans' L ₁₀ expectancy and MTTF are greater than the warrant. MTTF: Mean Time To Failures. It should be used in a non-repairable system setting. Now we show the MTTF in our life report, that's because we will not repair the failed fans during life experiment. MTBF: Mean Time Between Failures. It should be used in a repairable system setting. Basically, MTBF is equal to MTTF, they use same formula to work out a life data.																															

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AD3505HB-K73(S)--MTTF & L10 Curve

