



MTBF Test Report

Tested Model	9.7" cMT X Series models
Quantity of Tested Samples	10 units
Test Duration	1,000 hours
Test Date	2024.03.1~2024.04.16
Test Condition	temperature : 50°C, humidity : 90%
MTBF	182,000 hours
Included Models	cMT3092X

1. The MTBF formula is :
$$MTBF = \frac{1}{\lambda} = \frac{2 * tp * AF}{X^2(\alpha, \beta)}$$

2. Parameter Description :

λ	Steady State Failure Rate
tp	Total Test Time
AF	Acceleration Factor
$X^2(\alpha, \beta)$	Non-Central Chi-Squared Distribution Function

3. Calculated Parameter Value :

Confidence Level	90%
AF	42.02
tp	10,000 hours
$X^2(\alpha, \beta)$	4.605

4. Test Result :

$$MTBF = 2 * 10,000 * 42.02 / 4.605 \approx 182,497 \text{ hours}$$

$$\approx 182,000 \text{ hours}$$

Test Dept.	PM Dept.	Test Engineer	Smile	Approved By	Alan
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