



# MTBF Test Report

Tested Model	7" cMT X Series models
Quantity of Tested Samples	10 units
Test Duration	1,000 hours
Test Date	2022.12.16~2023.02.13
Test Condition	temperature : 55°C, humidity : 90%
MTBF	100,000 hours
Included Models	cMT2078X, cMT3072X2, cMT3072XH2, cMT3072XHT

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

2. Parameter Description :

$\lambda$	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	63.36
tp	8,371 hours
$X^2(\alpha, \beta)$	10.645

4. Test Result :

$$MTBF = 2 * 8371 * 63.36 / 10.645 \doteq 99,650 \text{ hours}$$

$$\doteq 100,000 \text{ hours}$$

Test Dept.	QA Dept.	Test Engineer	Smile	Approved By	Tachi
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