

MTBF Report

KMS15-xx

Referring to MIL-HDBK-217f, Notice 1, APPENDIX A : PARTS
COUNT RELIABILITY PREDICTION ,PREDICT the MTBF.

Testing Conditions : According to applicant's specifications

Environmental factor (πE) : Ground Benign (Gb)

λ_g :Generic failure rate (failures/106 hours)

πQ :Quality factor , πL :Learning factor, N :Quantity

λ_{eq} :Total failure rate (failures/106 hours)

No.	Part Type	λ_g	πQ	πL	N	λ_{eq}
1	Resistor (Film), RN	0.0014	10	--	12	0.168
2	Capacitor (Aluminum Dry),CE	0.029	10	--	4	1.16
3	Capacitor (Ceramic,Gen. Purpose),CK	0.0036	10	--	5	0.18
4	Capacitor (Metalized plastic/plastic)	0.0029	10	--	2	0.058
5	Trandient Suppresor/Varistor	0.0029	10	--	1	0.029
6	Thermistor	0.065	10	--	1	0.65
7	Diode (Fast Recovery Pwr. Rectifier)	0.065	5.5	--	2	0.715
8	Diode (General Purpose analog)	0.0036	5.5	--	1	0.0198
9	Diode (Power Rectifier/Schottky Pwr.)	0.0028	5.5	--	1	0.0154
10	Diode (Voltage Ref./Reg ; Avalanche and Zener)	0.0033	5.5	--	4	0.0726
11	Transistor (NPN/PNP,f<200MHz)	0.00015	5.5	--	0	0
12	Transistor (Power ,f<200MHz)	0.0057	5.5	--	0	0
13	Diode (Thyristor/SCR)	0.0025	5.5	--	0	0
14	Microcircuit (Bipolar technology, Gate /logic Arrays, Linear,1-100 Transistors)	0.0095	10	--	2	0.19
15	Inductive Device (Low power Pulse XFMR)	0.0035	10	--	3	0.105
16	Electronic Filter (Ceramic-Ferrite)	0.022	2.9	--	2	0.1276
17	FUSE	0.01	1	--	1	0.01
18	Rotating Device(Motor)	1.6	1	--	0	0
19	Switch (Toggle or Push-button)	0.001	20	--	0	0
20	Connector(General)	0.011	2	--	0	0
21	Hand Solder(Wrapping)	0.00014	1	--	2	0.00028
22	Single Connections (Clip Termination)	0.00012	1	--	0	0
23	Single Connections (Refow Solder)	0.000069	1	--	4	0.00028
Total Equipment Failure rate (Failures/10 ⁶ hours)						3.50096
MTBF = 285636 HOURS 25°C						