

Mil Handbook 217F MTBF Prediction for Model 503
 Brushless Motor PWM Servo Amplifier
 (Parts Count Method)



07/15/94

Item	Quantity	Fail Rate x 10 ⁻⁶	Q Factor	Tot. Fail Rate x 10 ⁻⁶
METAL FILM RESISTOR	51	0.001200	3	0.18
CARBON RESISTOR	0	0.000500	3	0.00
PRECISION METAL FILM RES.	0	0.001200	3	0.00
POTS	0	0.023000	3	0.00
PLASTIC CAPACITORS	3	0.004100	3	0.04
CERAMIC CAPACITORS	51	0.007800	3	1.19
TANTALUM CAPACITORS	3	0.001800	3	0.02
TRIM CAPACITORS	0	0.080000	3	0.00
ALUMINUM OXIDE CAPACITORS	1	0.024000	3	0.07
DIGITAL CMOS IC	1	0.011000	20	0.22
BIPOLAR LINEAR IC	9	0.009500	20	1.71
OPTO ISOLATOR	0	0.027000	1	0.00
REGULATOR IC	4	0.009500	20	0.76
SILICON FET	5	0.014000	10	0.70
SIGNAL DIODE	8	0.000940	10	0.08
ZENER DIODE	3	0.003300	10	0.10
CONNECTOR	5	0.005400	3	0.08
SWITCH	0	0.001000	20	0.00
SOLDERED CONNECTIONS	737	0.000007	1	0.01
TRANSISTORS	5	0.000150	10	0.01
POWER TRANSFORMERS	0	0.024000	3	0.00
LED	3	0.000230	10	0.01
INDUCTORS	1	0.001700	3	0.01
FUSE	0	0.010000	1	0.00
SHUNT	0	0.010000	1	0.00
INTERCONNECTION DEVICES	0	0.053000	10	0.00
FAN MOTOR	0	1.600000	3	0.00
CE16V8 PAL	2	0.039000	3	0.23

Total Failure Rate: 5.41 x 10⁻⁶