

Globtek Reliability Prediction Report

Model Name	GT-21097-3005	Failure Rate	9.212099
Description	Top-level assembly	Reliability	0.999079
Calculation Model	MIL-217F N2	MTBF (Hrs)	108,553
Environment	GB, GC - Ground Benign,	Remarks	5V/6A
Temperature	25.00	Date	November 23, 2005

Assembly Name	Total Qty.	Failure Rate	MTBF (Hrs)
Top-level assembly	85.00	9.212099	108,553
Capacitor	21.00	6.755534	148,027
Resistor	40.00	0.020514	48,746,270
Diode	9.00	0.059823	16,715,954
Zener	2.00	0.058806	17,005,051
Transistor	3.00	0.001142	875,617,888
FET	1.00	1.753317	570,347
IC	3.00	0.102622	9,744,509
Inductor	4.00	0.384666	2,599,655
Optocoupler	2.00	0.075673	13,214,684

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Assembly Name	Capacitor	Failure Rate	6.755534
Environment	GB, GC - Ground Benign,	MTBF (Hrs)	148,027
Temperature	25.00	Method	Method I Case 3

Category	Circuit Code	Description	Failure Rate
Capacitor	C16	CER 104PF 50V X7R 0805	0.466785
Capacitor	C21	CER 104PF 50V X7R 0805	0.466785
Capacitor	C26	CER 104PF 50V X7R 0805	0.466785
Capacitor	C9	AL 1000UF M 10V KZE	0.447918
Capacitor	C2	AL 1000UF M 10V KZE	0.415323
Capacitor	CY3	CER 222PF M 250V	0.407320
Capacitor	CY1	CER 222PF M 250V	0.407320
Capacitor	CY2	CER 222PF M 250V	0.407320
Capacitor	C3	CER 103PF 50V X7R 0805	0.379417
Capacitor	C11	CER 332PF M 1KV Z5U	0.343387
Capacitor	C6	CER 222PF 50V X7R 0805	0.331082
Capacitor	C12	AL 1000UF M 10V KZE	0.307908
Capacitor	C8	CER 331PF 50V X7R 0805	0.279115
Capacitor	C5	CER 151PF 50V X7R 0805	0.259995
Capacitor	C14	CER 101PF 50V NPO 0805	0.250679
Capacitor	C27	CER 101PF 50V NPO 0805	0.250679
Capacitor	C10	AL 100UF M 25V	0.198275
Capacitor	C22	AL 68UF M 400V RK	0.194334
Capacitor	C25	CER 105PF 25V X7R 1206	0.165622
Capacitor	C24	F 474PF M 275V PCX2 335M	0.154741
Capacitor	C18	CER 474PF 16V X7R 0805	0.154741

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Assembly Name	Resistor	Failure Rate	0.020514
Environment	GB, GC - Ground Benign,	MTBF (Hrs)	48,746,270
Temperature	25.00	Method	Method I Case 3

Category	Circuit Code	Description	Failure Rate
Resistor	D4	CF 13 OHM J 1/4W	0.003180
Resistor	R10	MOF R43 OHM J 2W	0.001996
Resistor	R12	SMD 27 OHM J 0805	0.001737
Resistor	R15	SMD 10 OHM J 1206	0.001671
Resistor	R18	SMD 10 OHM J 1206	0.001671
Resistor	R28	SMD 750 OHM J 1206	0.001377
Resistor	R29	SMD 750 OHM J 1206	0.001377
Resistor	R24	SMD 1K OHM J 0805	0.000778
Resistor	R34	SMD 330K OHM J 0805	0.000657
Resistor	R3	SMD 330K OHM J 0805	0.000655
Resistor	R11	SMD 470K OHM J 1206	0.000630
Resistor	R16	SMD 470K OHM J 1206	0.000620
Resistor	R5	SMD 1M8 OHM J 0805	0.000576
Resistor	R13	SMD 5K6 OHM J 0805	0.000473
Resistor	R36	SMD 2K2 OHM J 0805	0.000462
Resistor	R37	SMD 2K74 OHM F 0805	0.000422
Resistor	R35	SMD 2K49 OHM F 0805	0.000418
Resistor	R31	SMD 3K09 OHM F 0805	0.000363
Resistor	R7	SMD 1K OHM J 0805	0.000269
Resistor	R4	SMD 15K OHM J 0805	0.000213
Resistor	R8	SMD 7K5 OHM J 0805	0.000186
Resistor	R21	SMD 200 OHM J 0805	0.000166
Resistor	R6	SMD 10K OHM J 0805	0.000138
Resistor	F2	SCK-053 THERMISTOR	0.000125
Resistor	R42	SMD 200 OHM J 0805	0.000124
Resistor	R14	SMD 20K OHM J 0805	0.000064
Resistor	R9	SMD 680 OHM J 0805	0.000055
Resistor	R39	SMD 470K OHM J 1206	0.000053
Resistor	R40	SMD 470K OHM J 1206	0.000053
Resistor	R51	SMD 100 OHM J 0805	0.000003
Resistor	R20	SMD 750 OHM J 0805	0.000001
Resistor	R25	SMD 1K5 OHM F 0805	0.000001
Resistor	R2	SMD 1M OHM J 0805	9.124279e-007
Resistor	R33	SMD 5K1 OHM J 0805	6.909461e-007
Resistor	R38	SMD 47K OHM J 0805	2.905897e-007
Resistor	R43	SMD 0 OHM 0805	0.000000
Resistor	R44	SMD 0 OHM 0805	0.000000

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Assembly Name	Resistor	Failure Rate	0.020514
Environment	GB, GC - Ground Benign,	MTBF (Hrs)	48,746,270
Temperature	25.00	Method	Method I Case 3

Category	Circuit Code	Description	Failure Rate
Resistor	R45	SMD 0 OHM 0805	0.000000
Resistor	R46	SMD 0 OHM 0805	0.000000
Resistor	R48	SMD 0 OHM 0805	0.000000

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Assembly Name	Diode	Failure Rate	0.059823
Environment	GB, GC - Ground Benign,	MTBF (Hrs)	16,715,954
Temperature	25.00	Method	Method I Case 3

Category	Circuit Code	Description	Failure Rate
Semiconductor	D7	SCHOTTKY SB2060CT	0.014781
Semiconductor	BD1	BRIDGE DIODE KBP06	0.006735
Semiconductor	D1	LL4148 SOD-80	0.005472
Semiconductor	D2	LL4148 SOD-80	0.005472
Semiconductor	D3	LL4148 SOD-80	0.005472
Semiconductor	D4	FR104 D0-41	0.005472
Semiconductor	D8	LL4148 SOD-80	0.005472
Semiconductor	D9	LL4148 SOD-80	0.005472
Semiconductor	D28	UF4006G DO-41	0.005472

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Assembly Name	Zener	Failure Rate	0.058806
Environment	GB, GC - Ground Benign,	MTBF (Hrs)	17,005,051
Temperature	25.00	Method	Method I Case 3

Category	Circuit Code	Description	Failure Rate
Semiconductor	D6	P6KE180A DO-15	0.029403
Semiconductor	ZD2	ZMM6V2 SOD-80	0.029403

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Assembly Name	Transistor	Failure Rate	0.001142
Environment	GB, GC - Ground Benign,	MTBF (Hrs)	875,617,888
Temperature	25.00	Method	Method I Case 3

Category	Circuit Code	Description	Failure Rate
Semiconductor	Q1	KSP44TA TO-92	0.000631
Semiconductor	Q4	BT151-500R TO220	0.000302
Semiconductor	Q2	2SC1623-T1B SOT-23	0.000209

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Assembly Name	FET	Failure Rate	1.753317
Environment	GB, GC - Ground Benign,	MTBF (Hrs)	570,347
Temperature	25.00	Method	Method I Case 3

Category	Circuit Code	Description	Failure Rate
Semiconductor	Q3	2SK2761	1.753317

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Assembly Name	IC	Failure Rate	0.102622
Environment	GB, GC - Ground Benign,	MTBF (Hrs)	9,744,509
Temperature	25.00	Method	Method I Case 3

Category	Circuit Code	Description	Failure Rate
Integrated Circuit	U1	UC3842BD1 SOP-8	0.034207
Integrated Circuit	U3	AZ431BZ-A TO-92	0.034207
Integrated Circuit	U5	LM358 SOP-8	0.034207

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Assembly Name	Inductor	Failure Rate	0.384666
Environment	GB, GC - Ground Benign,	MTBF (Hrs)	2,599,655
Temperature	25.00	Method	Method I Case 3

Category	Circuit Code	Description	Failure Rate
Inductor	T1	MAIN TRANSFORMER RM-10	0.384011
Inductor	LF2	CHOKE T12.7X7.92X6.35-C	0.000220
Inductor	L2	CHOKE W5T	0.000220
Inductor	LF1	ET-24 LINE FILTER	0.000216

Globtek Reliability Prediction Report

Assembly Name	Optocoupler	Failure Rate	0.075673
Environment	GB, GC - Ground Benign,	MTBF (Hrs)	13,214,684
Temperature	25.00	Method	Method I Case 3

Category	Circuit Code	Description	Failure Rate
Semiconductor	U2	LVT817C DIP-4	0.037837
Semiconductor	LED	10103GDT HI-LIGHT	0.037837