

 GlobTek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTNR:PJ1410391]

RFP Document Number:			
Model No.	GTM91099-6024-P2		
P/N:	PR9SI2500A00CIMRVB		
Customer:	[PROJEKTNR:PJ1410391]		
Test Start Date:	25 Aug 2014	Test Completion Date:	25 Aug 2014
Report Completion Date:	25 Aug 2015		
Test Performed by:	Lorenzo R. Madariaga II		
Sales Engineer:	Rudi		
Revision History:	Rev 01	Initial Release	
Objective:	1) Perform MTBF at 25°C and 40°C 2) Identify and mark the hotspot on the unit at 25°C 3) Derating and graph (Ambient Temperature vs. %Load)		
Serial Numbers:	ROHS000158101/07		
Activity	MTBF (Mean Time Between Failure):		
	MTBF (Hours)	120Vac	230Vac
	25°C	855,006	1,208,641
	40°C	497,987	692,911
	See MTBF Summary:		

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
Reviewed by: Elias Abisaleh	Date: 25 Aug 2014

 GlobTek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTNR:PJ1410391]

MTBF Summary:

120Vac

Model:	GTM91099
Calculation Model:	Bellcore 6
Calculation Method:	Method 1, Case 3
Input:	120Vac
Output:	24V/2.5A
Environment:	Ground Benign Controlled
Operating Temperature:	25°C

Data:

Component Type	Failure Rate
Capacitors	658.2751765
Resistors	44.34060096
Diodes	83.746395
IC's	104.5887402
FET's	67.5262679
Optical Devices	57.79799722
Fuse	10
Coils	139.0775134
Zener	4.22879823

Overall FR	1,169.581
MTBF	855,006.692

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
Reviewed by: Elias Abisaleh	Date: 25 Aug 2014

 GlobTek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTNR:PJ1410391]

Capacitor

Ckt Code	Description	Failure Rate
CX1	CAP-F 0.33UF 250V X2 HQX UTX	1.62466341
CY1	Y1 Y-CAP 2200PF/250V P=7.5mm 20% SE SUCCESS	1.383303321
CY2	Y1 Y-CAP 2200PF/250V P=7.5mm 20% SE SUCCESS	1.383303321
C1	CAP-E 120uf/400V Φ18X35mm 105°C KM SAMXON	126.6019992
C6	CAP-E 10uF/50V 105°C Φ5×11 ±20% GT SAMXON/CD288 JFD	86.56122496
C2	CAP-E 1000uF/35V 105C 10*20mm GF SAMXON	144.1981067
C3	CAP-E 1000uF/35V 105C 10*20mm GF SAMXON	144.1981067
C4	CAP-E 470uF/35v 105°C 8X16mm GF SAMXON/CD288 JF	144.1981067
C7	CAP-C 1000pF/1KV(102) P=5mm ±10% Y5P SEC	1.191596361
CS1	CAP-CER 1206 1N 1KV ±10% X7R	1.185810145
CS3	SMD 0805 0.1UF/50V(104) ±10% X7R	1.40959941
CS8	SMD 0805 0.1UF/50V(104) ±10% X7R	1.40959941
CS6	SMD 0.01uF ±10% 50V X7R 0805	1.40959941
CS4	SMD 0805 1000PF 50V/(102) ±5% NPO	1.520157539

Overall	
FR	658.2752

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
Reviewed by: Elias Abisaleh	Date: 25 Aug 2014

 GlobTek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTNR:PJ1410391]

Resistor

Ckt Code	Description	Operating (W)	Resistance	Failure Rate
THR1	NTC Resistor MF71-10D-8 10Ω±20% D=9.5 P=5.0	0.1	10	22.87281354
RS1	SMD 1206 470K 1/4W ±5%	0.25	470000	0.833710918
RS2	SMD 1206 470K 1/4W ±5%	0.25	470000	0.833710918
RS4	SMD 1206 100K 1/4W ±5%	0.25	100000	0.833710918
RS5	SMD 1206 100K 1/4W ±5%	0.25	100000	0.833710918
RS8	SMD 1206 100K 1/4W ±5%	0.25	100000	0.833710918
RS9	SMD 1206 100K 1/4W ±5%	0.25	100000	0.833710918
RS7	SMD 1206 100K 1/4W ±5%	0.25	100000	0.833710918
RS25	SMD 1206 100K 1/4W ±5%	0.25	100000	0.760078769
RS6	SMD 1206 47R 1/4W ±5%	0.25	47	0.833710918
RS14	SMD 1206 47R 1/4W ±5%	0.25	47	0.833710918
RS10	SMD 1206 0R 1/4W ±1%	0.25	0	0.760078769
RS11	SMD 0805 10Ω 1/8W ±1%	0.125	10	0.760078769
RS12	SMD 0805 150Ω 1/8W ±1%	0.125	150	0.760078769
RS15	SMD 0805 1K 1/8W ±1%	0.125	1000	0.760078769
RS20	SMD 0805 1K 1/8W ±1%	0.125	1000	0.760078769
RS16	SMD 10K ±1% 1/8W 0805	0.125	10000	0.83127107
RS17	RES 1/4W 20Ω ±5% 1206	0.25	20	0.83127107
RS18	RES 1/4W 20Ω ±5% 1206	0.25	20	0.83127107
RS21	SMD 0805 18.7K 1/8W ±1%	0.125	18700	0.704799705
RS23	SMD 4.7K ±1% W125 0805	0.125	4700	0.704799705
RS22	SMD 0805 2.4K 1/8W ±1%	0.125	2400	0.704799705
RS29	SMD 0805 2.4K 1/8W ±1%	0.125	2400	0.704799705
RS19	SMD-RES 0805 240R 1/8W ±5%	0.125	240	0.704799705
RJ1	SMD 0R0 ±1% W125 0805	0.125	0	0.760078769
R1	RES-MOF 0.15R 5% 2W MINITYPE	2	0.15	0.985335691
R2	SMD 1206 0R 1/4W ±1%	0.25	0	0.820345177
DZ1	SMD 1206 0R 1/4W ±1%	0.25	0	0.820345177

Overall	
FR	44.3406

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
Reviewed by: Elias Abisaleh	Date: 25 Aug 2014

 Globtek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTNR:PJ1410391]

Diodes

Ckt code	Description	Failure Rate
BD1	DIODE-BR 4A/600V KBL06 HY/KBL406 LH	7.243470153
D5	FAST-DIODE 1A/1000V 1N4007 DO-41 PANJIT	15.93613741
D1	FAST FR157 1.5A/1000V DO-41 SP/LIHUI	14.53559458
D2	FAST-DIODE 1A/200V FR103 DO-41 PANJIT	14.53559458
D3	DIODE-SK SB20100CT 20A/100V TO-220AB PANJIT	12.97536523
D4	DIODE-SK SB20100CT 20A/100V TO-220AB PANJIT	12.97536523
DS1	DIODE-C A15 100V LL4148 SOD-80 FAIRCHILD	5.544867821

Overall
FR 83.7464

IC

Ckt Code	Description	Failure Rate
US1	IC-PWM SMD FAN6754AMRMY 8-Pin SOP FAIRCHILD	86.52835205
U2	IC-REF AZ431AN-ATRE1 SOT-23-3 0.4% 36V BCD	18.06038819

Overall
FR 104.5887

FET

Ckt Code	Description	Failure Rate
Q1	MOSFET SSF10N60F TO220F SILIKRON	67.5262679

Overall
FR 67.52627

Optical

Ckt Code	Description	Failure Rate
U1	IC-OPTC LTV817CN DIP-4P LITEON	57.7979972

Overall
FR 57.798

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
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 GlobTek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTNR:PJ1410391]

Fuse

Ckt Code	Description	Failure Rate
FS1	UL/SEMKO MST 3.15A/250V	5
FS2	UL/SEMKO MST 3.15A/250V	5

Overall
FR 10

Coils

Ckt Code	Trated	Failure Rate
L1	Jumper Wire 镀锡 ϕ 1.0mm	31.17311674
LF1	CHOKE 环形共模电感 T9*7*3 200uH GT91120	34.34377477
LF2	滤波器(Filter) T16*10*9C LF2 22mH MIN GT-91099	36.52667112
T1	变压器(Transformer) XF00694 720uH PQ2620 GTM91099-6012	37.03395079

Overall
FR 139.0775

Zener

Ckt code	Description	Failure Rate
DZ3	DIODE, ZENER, 28V, 500mW	4.22879823

Overall
FR 4.228798

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
Reviewed by: Elias Abisaleh	Date: 25 Aug 2014

 GlobTek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTNR:PJ1410391]

Model:	GTM91099
Calculation Model:	Bellcore 6
Calculation Method:	Method 1, Case 3
Input:	120Vac
Output:	24V/2.5A
Environment:	Ground Benign Controlled
Operating Temperature:	40°C

Data:	
Component Type	Failure Rate
Capacitors	1139.153609
Resistors	68.08898979
Diodes	113.0654042
IC's	247.9099776
FET's	88.61316378
Optical Devices	164.8119976
Fuse	10
Coils	170.3557857
Zener	6.083445716

Overall FR	2,008.082
MTBF	497,987.539

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
Reviewed by: Elias Abisaleh	Date: 25 Aug 2014

 GlobTek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTNR:PJ1410391]

Capacitor

Ckt Code	Description	Failure Rate
CX1	CAP-F 0.33UF 250V X2 HQX UTX	1.990468741
CY1	Y1 Y-CAP 2200PF/250V P=7.5mm 20% SE SUCCESS	1.734143955
CY2	Y1 Y-CAP 2200PF/250V P=7.5mm 20% SE SUCCESS	1.734143955
C1	CAP-E 120uf/400V Φ18X35mm 105°C KM SAMXON	214.1362145
C6	CAP-E 10uF/50V 105°C Φ5×11 ±20% GT SAMXON/CD288 JFD	148.7654086
C2	CAP-E 1000uF/35V 105C 10*20mm GF SAMXON	253.6866291
C3	CAP-E 1000uF/35V 105C 10*20mm GF SAMXON	253.6866291
C4	CAP-E 470uF/35v 105°C 8X16mm GF SAMXON/CD288 JF	253.6866291
C7	CAP-C 1000pF/1KV(102) P=5mm ±10% Y5P SEC	1.277711101
CS1	CAP-CER 1206 1N 1KV ±10% X7R	1.27201158
CS3	SMD 0805 0.1UF/50V(104) ±10% X7R	1.764304751
CS8	SMD 0805 0.1UF/50V(104) ±10% X7R	1.764304751
CS6	SMD 0.01uF ±10% 50V X7R 0805	1.764304751
CS4	SMD 0805 1000PF 50V/(102) ±5% NPO	1.8907052

Overall	
FR	1139.154

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
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 Globtek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTR: PJ1410391]

Resistor

Ckt Code	Description	Operating (W)	Resistance	Failure Rate
THR1	NTC Resistor MF71-10D-8 10Ω±20% D=9.5 P=5.0	0.1	10	41.92689555
RS1	SMD 1206 470K 1/4W ±5%	0.25	470000	1.029065927
RS2	SMD 1206 470K 1/4W ±5%	0.25	470000	1.029065927
RS4	SMD 1206 100K 1/4W ±5%	0.25	100000	1.029065927
RS5	SMD 1206 100K 1/4W ±5%	0.25	100000	1.029065927
RS8	SMD 1206 100K 1/4W ±5%	0.25	100000	1.029065927
RS9	SMD 1206 100K 1/4W ±5%	0.25	100000	1.029065927
RS7	SMD 1206 100K 1/4W ±5%	0.25	100000	1.029065927
RS25	SMD 1206 100K 1/4W ±5%	0.25	100000	0.9453526
RS6	SMD 1206 47R 1/4W ±5%	0.25	47	1.029065927
RS14	SMD 1206 47R 1/4W ±5%	0.25	47	1.029065927
RS10	SMD 1206 0R 1/4W ±1%	0.25	0	0.9453526
RS11	SMD 0805 10Ω 1/8W ±1%	0.125	10	0.9453526
RS12	SMD 0805 150Ω 1/8W ±1%	0.125	150	0.9453526
RS15	SMD 0805 1K 1/8W ±1%	0.125	1000	0.9453526
RS20	SMD 0805 1K 1/8W ±1%	0.125	1000	0.9453526
RS16	SMD 10K ±1% 1/8W 0805	0.125	10000	1.026300046
RS17	RES 1/4W 20Ω ±5% 1206	0.25	20	1.026300046
RS18	RES 1/4W 20Ω ±5% 1206	0.25	20	1.026300046
RS21	SMD 0805 18.7K 1/8W ±1%	0.125	18700	0.882152375
RS23	SMD 4.7K ±1% W125 0805	0.125	4700	0.882152375
RS22	SMD 0805 2.4K 1/8W ±1%	0.125	2400	0.882152375

Overall FR 68.08899

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Reviewed by: Elias Abisaleh	Date: 25 Aug 2014

 GlobTek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTNR:PJ1410391]

RS29	SMD 0805 2.4K 1/8W ±1%	0.125	2400	0.882152375
RS19	SMD-RES 0805 240R 1/8W ±5%	0.125	240	0.882152375
RJ1	SMD 0R0 ±1% W125 0805	0.125	0	0.9453526
R1	RES-MOF 0.15R 5% 2W MINITYPE	2	0.15	1.029065927
R2	SMD 1206 0R 1/4W ±1%	0.25	0	0.882152375
DZ1	SMD 1206 0R 1/4W ±1%	0.25	0	0.882152375

Diodes

Ckt code	Description	Failure Rate
BD1	DIODE-BR 4A/600V KBL06 HY/KBL406 LH	9.688274872
D5	FAST-DIODE 1A/1000V 1N4007 DO-41 PANJIT	21.308049
D1	FAST FR157 1.5A/1000V DO-41 SP/LIHUI	19.578572
D2	FAST-DIODE 1A/200V FR103 DO-41 PANJIT	19.578572
D3	DIODE-SK SB20100CT 20A/100V TO-220AB PANJIT	17.63822952
D4	DIODE-SK SB20100CT 20A/100V TO-220AB PANJIT	17.63822952
DS1	DIODE-C A15 100V LL4148 SOD-80 FAIRCHILD	7.635477269

Overall
FR 113.0654

IC

Ckt Code	Description	Failure Rate
US1	IC-PWM SMD FAN6754AMRMY 8-Pin SOP FAIRCHILD	191.081943
U2	IC-REF AZ431AN-ATRE1 SOT-23-3 0.4% 36V BCD	56.82803462

Overall
FR 247.91

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
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 Globtek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTNR:PJ1410391]

FET

Ckt Code	Description	Failure Rate
Q1	MOSFET SSF10N60F TO220F SILIKRON	88.6131638

Overall
FR 88.61316

Optical

Ckt Code	Description	Failure Rate
U1	IC-OPTC LTV817CN DIP-4P LITEON	164.811998

Overall
FR 164.812

Fuse

Ckt Code	Description	Failure Rate
FS1	UL/SEMKO MST 3.15A/250V	5
FS2	UL/SEMKO MST 3.15A/250V	5

Overall
FR 10

Coils

Ckt Code	Trated	Failure Rate
L1	Jumper Wire 镀锡 ϕ 1.0mm	38.52848953
LF1	CHOKE 环形共模电感 T9*7*3 200uH GT91120	42.11482285
LF2	滤波器(Filter) T16*10*9C LF2 22mH MIN GT-91099	44.57146356
T1	变压器(Transformer) XF00694 720uH PQ2620 GTM91099-6012	45.14100976

Overall
FR 170.3558

Zener

Ckt code	Description	Failure Rate
DZ3	DIODE, ZENER, 28V, 500mW	6.08344572

Overall
FR 6.083446

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
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 GlobTek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTNR:PJ1410391]

Model:	GTM91099
Calculation Model:	Bellcore 6
Calculation Method:	Method 1, Case 3
Input:	230Vac
Output:	24V/2.5A
Environment:	Ground Benign Controlled
Operating Temperature:	25°C

Data:	
Component Type	Failure Rate
Capacitors	442.4419325
Resistors	29.75844704
Diodes	65.19409318
IC's	77.4851133
FET's	42.4257274
Optical Devices	44.46621781
Fuse	10
Coils	110.1035094
Zener	5.499925864

Overall FR	827.375
MTBF	1,208,641.838

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
Reviewed by: Elias Abisaleh	Date: 25 Aug 2014

 GlobTek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTNR:PJ1410391]

Capacitor

Ckt Code	Description	Failure Rate
CX1	CAP-F 0.33UF 250V X2 HQX UTX	1.200506164
CY1	Y1 Y-CAP 2200PF/250V P=7.5mm 20% SE SUCCESS	1.205738202
CY2	Y1 Y-CAP 2200PF/250V P=7.5mm 20% SE SUCCESS	1.115936094
C1	CAP-E 120uf/400V Φ18X35mm 105°C KM SAMXON	55.13565591
C6	CAP-E 10uF/50V 105°C Φ5×11 ±20% GT SAMXON/CD288 JFD	53.78892607
C2	CAP-E 1000uF/35V 105C 10*20mm GF SAMXON	107.5584339
C3	CAP-E 1000uF/35V 105C 10*20mm GF SAMXON	107.5584339
C4	CAP-E 470uF/35v 105°C 8X16mm GF SAMXON/CD288 JF	107.5584339
C7	CAP-C 1000pF/1KV(102) P=5mm ±10% Y5P SEC	1.14399599
CS1	CAP-CER 1206 1N 1KV ±10% X7R	1.106615892
CS3	SMD 0805 0.1UF/50V(104) ±10% X7R	1.254337407
CS8	SMD 0805 0.1UF/50V(104) ±10% X7R	1.254337407
CS6	SMD 0.01uF ±10% 50V X7R 0805	1.254337407
CS4	SMD 0805 1000PF 50V/(102) ±5% NPO	1.306244206

Overall	
FR	442.4419

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
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 Globtek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTNR:PJ1410391]

Resistor

Ckt Code	Description	Operating (W)	Resistance	Failure Rate
THR1	NTC Resistor MF71-10D-8 10Ω±20% D=9.5 P=5.0	0.1	10	11.56494792
RS1	SMD 1206 470K 1/4W ±5%	0.25	470000	0.67758021
RS2	SMD 1206 470K 1/4W ±5%	0.25	470000	0.67758021
RS4	SMD 1206 100K 1/4W ±5%	0.25	100000	0.67758021
RS5	SMD 1206 100K 1/4W ±5%	0.25	100000	0.67758021
RS8	SMD 1206 100K 1/4W ±5%	0.25	100000	0.67758021
RS9	SMD 1206 100K 1/4W ±5%	0.25	100000	0.67758021
RS7	SMD 1206 100K 1/4W ±5%	0.25	100000	0.67758021
RS25	SMD 1206 100K 1/4W ±5%	0.25	100000	0.653122103
RS6	SMD 1206 47R 1/4W ±5%	0.25	47	0.67758021
RS14	SMD 1206 47R 1/4W ±5%	0.25	47	0.67758021
RS10	SMD 1206 0R 1/4W ±1%	0.25	0	0.653122103
RS11	SMD 0805 10Ω 1/8W ±1%	0.125	10	0.653122103
RS12	SMD 0805 150Ω 1/8W ±1%	0.125	150	0.653122103
RS15	SMD 0805 1K 1/8W ±1%	0.125	1000	0.653122103
RS20	SMD 0805 1K 1/8W ±1%	0.125	1000	0.653122103
RS16	SMD 10K ±1% 1/8W 0805	0.125	10000	0.752024778
RS17	RES 1/4W 20Ω ±5% 1206	0.25	20	0.752024778
RS18	RES 1/4W 20Ω ±5% 1206	0.25	20	0.752024778
RS21	SMD 0805 18.7K 1/8W ±1%	0.125	18700	0.627168703
RS23	SMD 4.7K ±1% W125 0805	0.125	4700	0.627168703
RS22	SMD 0805 2.4K 1/8W ±1%	0.125	2400	0.627168703
RS29	SMD 0805 2.4K 1/8W ±1%	0.125	2400	0.627168703
RS19	SMD-RES 0805 240R 1/8W ±5%	0.125	240	0.627168703
RJ1	SMD 0R0 ±1% W125 0805	0.125	0	0.653122103
R1	RES-MOF 0.15R 5% 2W MINITYPE	2	0.15	0.776344245
R2	SMD 1206 0R 1/4W ±1%	0.25	0	0.67758021
DZ1	SMD 1206 0R 1/4W ±1%	0.25	0	0.67758021

Overall
FR

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
Reviewed by: Elias Abisaleh	Date: 25 Aug 2014

 Globtek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTNR:PJ1410391]

Diodes

Ckt code	Description	Failure Rate
BD1	DIODE-BR 4A/600V KBL06 HY/KBL406 LH	4.949219929
D5	FAST-DIODE 1A/1000V 1N4007 DO-41 PANJIT	9.813809341
D1	FAST FR157 1.5A/1000V DO-41 SP/LIHUI	11.18886452
D2	FAST-DIODE 1A/200V FR103 DO-41 PANJIT	11.18886452
D3	DIODE-SK SB20100CT 20A/100V TO-220AB PANJIT	10.84473788
D4	DIODE-SK SB20100CT 20A/100V TO-220AB PANJIT	10.84473788
DS1	DIODE-C A15 100V LL4148 SOD-80 FAIRCHILD	6.36385911

Overall
FR 65.19409

IC

Ckt Code	Description	Failure Rate
US1	IC-PWM SMD FAN6754AMRMY 8-Pin SOP FAIRCHILD	52.90153121
U2	IC-REF AZ431AN-ATRE1 SOT-23-3 0.4% 36V BCD	24.58358209

Overall
FR 77.48511

FET

Ckt Code	Description	Failure Rate
Q1	MOSFET SSF10N60F TO220F SILIKRON	42.4257274

Overall
FR 42.42573

Optical

Ckt Code	Description	Failure Rate
U1	IC-OPTC LTV817CN DIP-4P LITEON	44.4662178

Overall
FR 44.46622

Fuse

Ckt Code	Description	Failure Rate
FS1	UL/SEMKO MST 3.15A/250V	5
FS2	UL/SEMKO MST 3.15A/250V	5

Overall
FR 10

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
Reviewed by: Elias Abisaleh	Date: 25 Aug 2014

 GlobTek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTR: PJ1410391]

Coils

Ckt Code	Trated	Failure Rate
L1	Jumper Wire 镀锡 ϕ 1.0mm	27.92782201
LF1	CHOKE 环形共模电感 T9*7*3 200uH GT91120	25.66638735
LF2	滤波器(Filter) T16*10*9C LF2 22mH MIN GT-91099	25.74804798
T1	变压器(Transformer) XF00694 720uH PQ2620 GTM91099-6012	30.76125205

Overall
FR 110.1035

Zener

Ckt code	Description	Failure Rate
DZ3	DIODE, ZENER, 28V, 500mW	5.49992586

Overall
FR 5.499926

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
Reviewed by: Elias Abisaleh	Date: 25 Aug 2014

 GlobTek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTNR:PJ1410391]

Model:	GTM91099
Calculation Model:	Bellcore 6
Calculation Method:	Method 1, Case 3
Input:	230Vac
Output:	24V/2.5A
Environment:	Ground Benign Controlled
Operating Temperature:	40°C

Data:	
Component Type	Failure Rate
Capacitors	790.8041517
Resistors	45.34512382
Diodes	89.86012026
IC's	178.5195368
FET's	57.76265186
Optical Devices	127.9252853
Fuse	10
Coils	137.4691604
Zener	5.499925864

Overall FR	1,443.186
MTBF	692,911.399

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
Reviewed by: Elias Abisaleh	Date: 25 Aug 2014

 GlobTek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTNR:PJ1410391]

Capacitor

Ckt Code	Description	Failure Rate
CX1	CAP-F 0.33UF 250V X2 HQX UTX	1.50801187
CY1	Y1 Y-CAP 2200PF/250V P=7.5mm 20% SE SUCCESS	1.529409218
CY2	Y1 Y-CAP 2200PF/250V P=7.5mm 20% SE SUCCESS	1.425080062
C1	CAP-E 120uf/400V Φ18X35mm 105°C KM SAMXON	99.7932805
C6	CAP-E 10uF/50V 105°C Φ5×11 ±20% GT SAMXON/CD288 JFD	96.10295859
C2	CAP-E 1000uF/35V 105C 10*20mm GF SAMXON	193.8727513
C3	CAP-E 1000uF/35V 105C 10*20mm GF SAMXON	193.8727513
C4	CAP-E 470uF/35v 105°C 8X16mm GF SAMXON/CD288 JF	193.8727513
C7	CAP-C 1000pF/1KV(102) P=5mm ±10% Y5P SEC	1.230796703
CS1	CAP-CER 1206 1N 1KV ±10% X7R	1.193909342
CS3	SMD 0805 0.1UF/50V(104) ±10% X7R	1.585640131
CS8	SMD 0805 0.1UF/50V(104) ±10% X7R	1.585640131
CS6	SMD 0.01uF ±10% 50V X7R 0805	1.585640131
CS4	SMD 0805 1000PF 50V/(102) ±5% NPO	1.645531203

Overall	
FR	790.8042

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
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 Globtek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTNR:PJ1410391]

Resistor

Ckt Code	Description	Operating (W)	Resistance	Failure Rate
THR1	NTC Resistor MF71-10D-8 10Ω±20% D=9.5 P=5.0	0.1	10	22.48926301
RS1	SMD 1206 470K 1/4W ±5%	0.25	470000	0.850910839
RS2	SMD 1206 470K 1/4W ±5%	0.25	470000	0.850910839
RS4	SMD 1206 100K 1/4W ±5%	0.25	100000	0.850910839
RS5	SMD 1206 100K 1/4W ±5%	0.25	100000	0.850910839
RS8	SMD 1206 100K 1/4W ±5%	0.25	100000	0.850910839
RS9	SMD 1206 100K 1/4W ±5%	0.25	100000	0.850910839
RS7	SMD 1206 100K 1/4W ±5%	0.25	100000	0.850910839
RS25	SMD 1206 100K 1/4W ±5%	0.25	100000	0.822765602
RS6	SMD 1206 47R 1/4W ±5%	0.25	47	0.850910839
RS14	SMD 1206 47R 1/4W ±5%	0.25	47	0.850910839
RS10	SMD 1206 0R 1/4W ±1%	0.25	0	0.822765602
RS11	SMD 0805 10Ω 1/8W ±1%	0.125	10	0.822765602
RS12	SMD 0805 150Ω 1/8W ±1%	0.125	150	0.822765602
RS15	SMD 0805 1K 1/8W ±1%	0.125	1000	0.822765602
RS20	SMD 0805 1K 1/8W ±1%	0.125	1000	0.822765602
RS16	SMD 10K ±1% 1/8W 0805	0.125	10000	0.936164225
RS17	RES 1/4W 20Ω ±5% 1206	0.25	20	0.936164225
RS18	RES 1/4W 20Ω ±5% 1206	0.25	20	0.936164225
RS21	SMD 0805 18.7K 1/8W ±1%	0.125	18700	0.792820065
RS23	SMD 4.7K ±1% W125 0805	0.125	4700	0.792820065
RS22	SMD 0805 2.4K 1/8W ±1%	0.125	2400	0.792820065
RS29	SMD 0805 2.4K 1/8W ±1%	0.125	2400	0.792820065
RS19	SMD-RES 0805 240R 1/8W ±5%	0.125	240	0.792820065
RJ1	SMD 0R0 ±1% W125 0805	0.125	0	0.822765602
R1	RES-MOF 0.15R 5% 2W MINITYPE	2	0.15	0.963889365
R2	SMD 1206 0R 1/4W ±1%	0.25	0	0.850910839
DZ1	SMD 1206 0R 1/4W ±1%	0.25	0	0.850910839

Overall
FR

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
Reviewed by: Elias Abisaleh	Date: 25 Aug 2014

 Globtek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTNR:PJ1410391]

Diodes

Ckt code	Description	Failure Rate
BD1	DIODE-BR 4A/600V KBL06 HY/KBL406 LH	6.827925451
D5	FAST-DIODE 1A/1000V 1N4007 DO-41 PANJIT	13.65291727
D1	FAST FR157 1.5A/1000V DO-41 SP/LIHUI	15.39607974
D2	FAST-DIODE 1A/200V FR103 DO-41 PANJIT	15.39607974
D3	DIODE-SK SB20100CT 20A/100V TO-220AB PANJIT	14.96136014
D4	DIODE-SK SB20100CT 20A/100V TO-220AB PANJIT	14.96136014
DS1	DIODE-C A15 100V LL4148 SOD-80 FAIRCHILD	8.66439778

Overall
FR 89.86012

IC

Ckt Code	Description	Failure Rate
US1	IC-PWM SMD FAN6754AMRM 8-Pin SOP FAIRCHILD	121.6915022
U2	IC-REF AZ431AN-ATRE1 SOT-23-3 0.4% 36V BCD	56.82803462

Overall
FR 178.5195

FET

Ckt Code	Description	Failure Rate
Q1	MOSFET SSF10N60F TO220F SILIKRON	57.7626519

Overall
FR 57.76265

Optical

Ckt Code	Description	Failure Rate
U1	IC-OPTC LTV817CN DIP-4P LITEON	127.925285

Overall
FR 127.9253

Fuse

Ckt Code	Description	Failure Rate
FS1	UL/SEMCO MST 3.15A/250V	5
FS2	UL/SEMCO MST 3.15A/250V	5

Overall
FR 10

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
Reviewed by: Elias Abisaleh	Date: 25 Aug 2014

 GlobTek, Inc.	RFP No.	
	Model No.	GTM91099-6024-P2
	Customer	[PROJEKTR: PJ1410391]

Coils

Ckt Code	Trated	Failure Rate
L1	Jumper Wire 镀锡 ϕ 1.0mm	34.8328638
LF1	CHOKE 环形共模电感 T9*7*3 200uH GT91120	32.24074804
LF2	滤波器(Filter) T16*10*9C LF2 22mH MIN GT-91099	32.33461189
T1	变压器(Transformer) XF00694 720uH PQ2620 GTM91099-6012	38.06093669

Overall
FR 137.4692

Zener

Ckt code	Description	Failure Rate
DZ3	DIODE, ZENER, 28V, 500mW	5.49992586

Overall
FR 5.499926

Tested by: Lorenzo R. Madariaga II	Date: 25 Aug 2014
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GlobTek, Inc.

RFP No.

Model No.

GTM91099-6024-P2

Customer

[PROJEKTNR:PJ1410391]

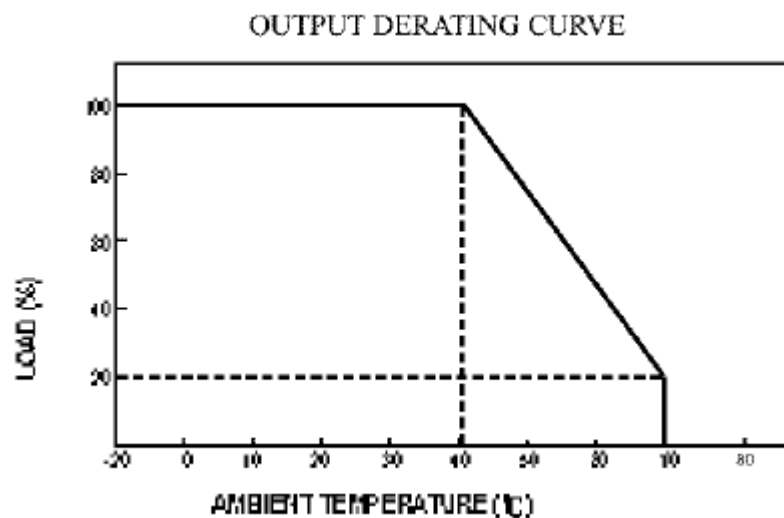
Activity

Hotspot Temperature Location:



Measured case temperature is at 61.4°C at room temp of 26.3°C

Derating Graph (Temperature vs. Load)



Remarks/Shipment:

- 1) MTBF is only done at 25°and 40°C.
- 2) Thermal results used for the MTBF are based on Nemko's test report (un-potted unit).

Tested by: Lorenzo R. Madariaga II

Date: 25 Aug 2014

Reviewed by: Elias Abisaleh

Date: 25 Aug 2014