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	REV	DESCRIPTION	DATE	APPROVED
	A	INITIAL RELEASE, RFS.13407, JB	04/15/08	HM

PRELIMINARY



FEATURES

- UNIVERSAL INPUT WITH ACTIVE POWER FACTOR CORRECTION
- MEDICAL AND ITE GRADE VERSIONS
- EN55022 CLASS B COMPLIANT
- EN55011 CLASS B COMPLIANT
- EN61000-4-2, -3, -4, -5, -6, -11 COMPLIANT
- BUILT-IN EMI FILTER
- REMOTE OUTPUT SENSING OPTION
- OVERVOLTAGE PROTECTION
- OVERLOAD PROTECTION
- THERMAL OVERLOAD PROTECTION
- CONFIGURABLE OUTPUT FROM 12V TO 55V IN 0.1V INCREMENTS
- SINGLE OUTPUT PLUS 12V FAN OUTPUT VOLTAGE

1. ELECTRICAL SPECIFICATIONS:

INPUT

INPUT RANGE	90-264 VAC
INPUT LINE FREQUENCY	47-63Hz
INPUT CURRENT	LESS THAN 4A RMS @ 90VAC
INRUSH CURRENT	40A TYPICAL, COLD START @ 25°C, 115VAC INPUT
EFFICIENCY	85% TYPICAL AT FULL LOAD, 230Vac INPUT
POWER FACTOR	0.99 TYPICAL AT FULL LOAD, 230Vac INPUT
TURN-ON DELAY	2 SECOND TYPICAL @ 115VAC INPUT
INPUT LINE PROTECTION	MOV TRANSIENT PROTECTED. INPUT LINE FUSE PROVIDED ON-BOARD
SOFT START	STANDARD ON ALL MODELS

OUTPUT

MAXIMUM POWER	200 WATTS
LOAD REGULATION	± 2% MEASURED AT THE CONNECTOR SIDE
LINE REGULATON	± 0.5% MEASURED AT THE CONNECTOR SIDE
OUTPUT RIPPLE VOLTAGE (PEAK TO PEAK):	+/-1% MAXIMUM OF NOMINAL OUTPUT VOLTAGE. MEASURED AT 20 MHz BANDWIDTH WITH 0.1µf CERAMIC CAPACITOR IN PARALLEL WITH 10 µf ELECTROLYTIC CAPACITOR CONNECTED AT THE END OF THE OUTPUT CONNECTOR.
TURN ON/OFF OVERSHOOT	5% MAXIMUM, 1mS RECOVERY TIME
HOLD-UP TIME	16 mS @ 200W LOAD, 115VAC INPUT
TRANSIENT RESPONSE	2% MAXIMUM DEVIATION, RETURNS TO INITIAL CONDITION IN 3 ms MAX. FOR 25% STEP LOAD FROM 10% TO 100% OF RATED LOAD.
OVERLOAD PROTECTION	PROTECTED BETWEEN 130-160% OF FULL LOAD RATING CONSTANT CURRENT PROTECTION
SHORT CIRCUIT	PROTECTED. AUTORECOVER UPON REMOVAL OF SHORT
OVERVOLTAGE	PROTECTED. 10- 50% ABOVE NOMINAL OUTPUT, UNIT WILL AUTORECOVER UPON REMOVAL OF OVER VOLTAGE

Foot Note: Globtek Inc. will not be liable for the safety and performance of these power supplies if unauthorized access and repair occurs. End user should consult applicable UL, CSA or EN standards for proper installation instructions	DASH NO.	PART NO	REV.	DESCRIPTION	NOTES	
	TABULATION BLOCK					
Limitation of Use: Globtek product are not authorized for use as mission critical components in life support, hazardous environment, nuclear or aircraft applications without prior written approval from the CEO of Globtek Inc.	TOLERANCES: DECIMALS ANGULAR .xx +/- 0.1 +/- 1° .xxx +/- .005		GlobTek, Inc. 186 Veterans Dr. Northvale, NJ 07647 www.globtek.com Tel. 201-784-1000 Fax 201.784.0111			
	INIT.BY: FB	DATE: 03/29/05				MILLIMETERS ANGULAR .xx +/- 0.3 +/- 1° .xxx +/- .013
Contents of this document are subject to change without prior notice	DRAWN: NF	DATE: 03/29/05	FSCN No.: G, Y	SIZE A	MODEL NO: GT(M)91110P200	REV. A
	APRVD : DMR	DATE: 03/29/05	SCALE: NONE		PART NO: GT(M)91110P200 - FAMILY	SHEET 1 OF 8

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REMOTE SENSE(OPTIONAL):
INDICATOR

COMPENSATE FOR UP TO 0.5V LEAD VOLTAGE DROP. POWER SUPPLY WILL OPERATE WITHOUT REMOTE SENSE CONNECTION. GREEN LED FOR OUTPUT PRESENCE

ENVIRONMENTAL

OPERATING TEMPERATURE:

0° TO 70°C . DERATE OUTPUT POWER FROM 40°C TO 70°C PER GRAPH ON PAGE 8.

COOLING:

20 CFM AIRFLOW REQUIRED. AIRFLOW MUST BE IN THE DIRECTION FACING THE POWER TRANSFORMER SIDE. NO SEMICONDUCTOR TO EXCEED 110°C IN CASE TEMPERATURE.

STORAGE TEMPERATURE:

-40° TO 85°C

RELATIVE HUMIDITY:

OPERATING; 0-90% NON-CONDENSING

ALTITUDE:

UP TO 10000 FEET

RANDOM VIBRATION/
TRANSIENT DROP:

MIL-STD 810E

MTBF:

200,000 HOURS @ 25° AMBIENT TEMPERATURE, NOMINAL LINE, FULL LOAD. MIL-217 STD.

SAFETY

HIPOT (PRI-SEC):

4242 VDC FOR ITE VERSION

EARTH LEAKAGE:

5656 VDC FOR MEDICAL VERSION
< 150mA @ 50/60Hz, 264 VAC INPUT

APPROVALS(PENDING)

ITE VERSION:

UL60950-1 (3RD EDITION), CUL TO 22.2 NO. 60950-1,
CB REPORT, DEMKO TO EN60950-1

MEDICAL VERSION:

UL60601-1, CUL TO 22.2 NO. 60601-1,
CB REPORT, DEMKO TO EN60601-1

EMI ('CE' MARK):

EN55011 AND EN55022 CLASS B AND FCC PART 15, TESTED WITH RESISTIVE LOAD. EN61000-3-2, EN61000-3-3 AND EN50082-1 INCLUDING EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-11

ROHS:

COMPLIES WITH EU 2002/95/EC AND CHINA SJ/T 11363-2006



186 Veterans Dr. Northvale, NJ 07647
Tel. 201-784-1000 Fax 201.784.0111

DWG TITLE: SWITCHER , 200 WATT, FAMILY, SINGLE OUTPUT,
UNIVERSAL INPUT, MEDICAL AND ITE, CLASS I

MODEL NO: GT(M)91110P200

REV.
A

PART NO: GT(M)91110P200 - FAMILY

SHEET 2 OF 8

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Model Number	Output Voltage	Maximum Load
GT(M)91110P20012-FA-X.X-[S or HI0XX, H0XXX, HIXXX]	12 V	16.67 A
GT(M)91110P20015-FA-X.X-[S or HI0XX, H0XXX, HIXXX]	15 V	13.33 A
GT(M)91110P20018-FA-X.X-[S or HI0XX, H0XXX, HIXXX]	18 V	11.11 A
GT(M)91110P20024-FA-X.X-[S or HI0XX, H0XXX, HIXXX]	24 V	8.33 A
GT(M)91110P20036-FA-X.X-[S or HI0XX, H0XXX, HIXXX]	36 V	5.6 A
GT(M)91110P20048-FA-X.X-[S or HI0XX, H0XXX, HIXXX]	48 V	4.17 A
GT(M)91110P20055-FA-X.X-[S or HI0XX, H0XXX, HIXXX]	55 V	3.64 A

MODEL DESCRIPTION:

GT(M)91110P20012-FA-X.X TO GT(M)91110P20055-F(W)-X.X

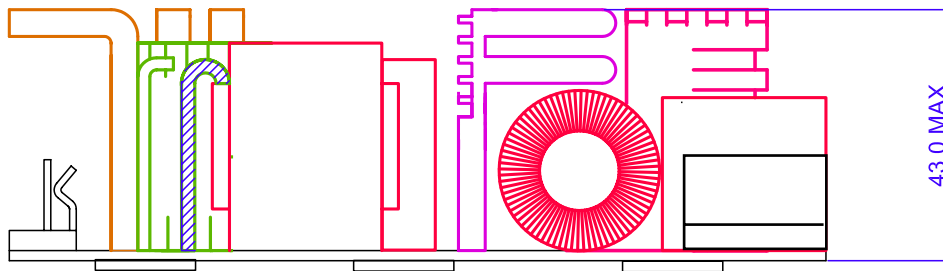
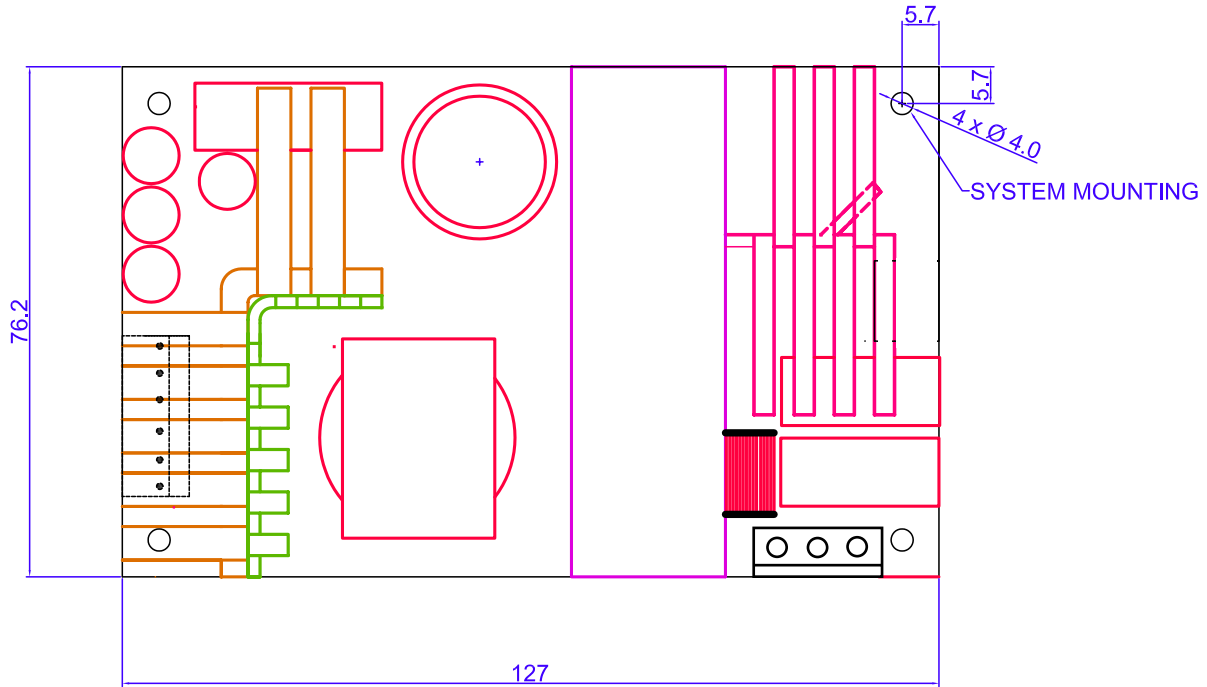
- GT: GLOBTEK SERIES
- M: MEDICAL GRADE. REPLACE "M" WITH "-" (DASH) FOR ITE GRADE
- 91110P: FAMILY DESIGNATOR
- 20012 TO 20055: 200W 12V TO 200W 55V OUTPUT POWER OUTPUT VOLTAGE
- FA(W) : 'F' FOR OPEN FRAME, 'A' FOR AIRFLOW AND 'W' FOR CLASS II UNITS.
NO 'W' FOR CLASS I UNITS.
- X.X: OUTPUT VOLTAGE DEVIATION FROM STANDARD MODEL BY SUBTRACTING X.X VOLT FROM STANDARD OUTPUT VOLTAGE.
- S: INPUT HEADER AND OUTPUT HEADER ON BOARD.
- HIOXXX: INPUT AND OUTPUT WIRE HARNESS. WHERE XXX CAN BE FROM 000 TO 999 (MAXIMUM LENGHT FOR INPUT AND OUTPUT HARNESS IS 500 mm).
- HOXXX: INPUT HEADER CONNECTOR ON BOARD AND OUTPUT WIRE HARNESS. WHERE XXX CAN BE FROM 000 TO 999 (MAXIMUM WIRE LENGTH FOR OUTPUT IS 500 mm).
- HIXXXV INPUT WIRE HARNESS. OUTPUT HEADER ON BOARD. WHERE XXX CAN BE FROM 000 TO 999 (MAXIMUM WIRE LENGTH FOR INPUT IS 500 mm).


 GlobTek, Inc. www.globtek.com	186 Veterans Dr. Northvale, NJ 07647 Tel. 201-784-1000 Fax 201.784.0111
DWG TITLE: SWITCHER, 200 WATT, FAMILY, SINGLE OUTPUT, UNIVERSAL INPUT, MEDICAL AND ITE, CLASS I	
MODEL NO: GT(M)91110P200	REV. A
PART NO: GT(M)91110P200 - FAMILY	SHEET 3 OF 8

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2. MECHANICAL SPECIFICATION

SIZE: 127.0 x 76.2 x 43.0 mm



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MODEL NO: GT(M)91110P200	REV. A	
PART NO: GT(M)91110P200 - FAMILY	SHEET 4 OF 8	

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3. INPUT AND OUTPUT CONNECTORS

For S Version

CON 1 AC Input

Molex 3 Pin friction lock header with center pin removed.

Molex PN: 26-60-4030, mates with 09-50-30-31

Pin 1: AC Line, Pin 3: AC Neutral

Vertical Quick Fit terminal (Lug), 0.250" (6.35mm) tab size for ground connection for Class I version (-F).

No Quick Fit terminal (Lug) installed for class II (-FW) version.

CON 2 DC Output

Molex 6 Pin friction lock header.

Molex PN: 26-60-4060, mates with 09-50-3061

Pins 1,2,3: Common, Pins 4,5,6: V+

CON 3 Fan Voltage

Fan output, 12Vdc, 80mA maximum load.

Molex PN: 22-28-0020, mates with 22-01-2021

Pin 1: 12Vdc, Pin 2: Common

CON 4 Optional Remote Sense

Remote Sense connection

Molex PN: 22-28-0020, mates with 22-01-2021

Pin 1: V+, Pin 2: Common

For HOXXX Version

CON 1 AC Input

Molex 3 Pin friction lock header with center pin removed.

Molex PN: 26-60-4030, mates with 09-50-30-31

Pin 1: AC Line, Pin 3: AC Neutral

Vertical Quick Fit terminal (Lug), 0.250" (6.35mm) tab size for ground connection for Class I version (-F).

No Quick Fit terminal (Lug) installed for class II (-FW) version.

CON 2 DC Output

Wire harness with Molex header, PN: 09-50-3061 with 6 AWG 18 stranded wires, red for V+ and black for common.

Maximum harness length is 500mm. Header mates with 26-60-4060.

CON 3 Fan Voltage

Fan output, 12Vdc, 80mA maximum load.

Molex PN: 22-28-0020, mates with 22-01-2021


Pin 1: 12Vdc, Pin 2: Common

CON 4 Optional Remote Sense

Remote Sense connection

Molex PN: 22-28-0020, mates with 22-01-2021

Pin 1: V+, Pin 2: Common

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UNIVERSAL INPUT, MEDICAL AND ITE, CLASS I

MODEL NO: GT(M)91110P200	REV. A
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PART NO: GT(M)91110P200 - FAMILY	SHEET 5 OF 8
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For HIXXX Version

CON 1 AC Input

Wire harness with Molex header, PN: 09-50-3031 with 2 AWG 18 stranded wires, black or brown for Line and white or blue for Neutral. Maximum harness length is 500mm. Header mates with 26-60-4030.

Vertical Quick Fit terminal (Lug), 0.250" (6.35mm) tab size for ground connection for Class I version (-F). No Quick Fit terminal (Lug) installed for class II (-FW) version.

CON 2 DC Output

Molex 6 Pin friction lock header.

Molex PN: 26-60-4060, mates with 09-50-3061

Pins 1,2,3: Common, Pins 4,5,6: V+

CON 3 Fan Voltage

Fan output, 12Vdc, 80mA maximum load.

Molex PN: 22-28-0020, mates with 22-01-2021

Pin 1: 12Vdc, Pin 2: Common

CON 4 Optional Remote Sense

Remote Sense connection

Molex PN: 22-28-0020, mates with 22-01-2021

Pin 1: V+, Pin 2: Common

For HIOXXX Version

CON 1 AC Input

Wire harness with Molex header, PN: 09-50-3031 with 2 AWG 18 stranded wires, black or brown for Line and white or blue for Neutral. Maximum harness length is 500mm. Header mates with 26-60-4030.

Vertical Quick Fit terminal (Lug), 0.250" (6.35mm) tab size for ground connection for Class I version (-F). No Quick Fit terminal (Lug) installed for class II (-FW) version.

CON 2 DC Output

Wire harness with Molex header, PN: 09-50-3061 with 6 AWG 18 stranded wires, red for V+ and black for common. Maximum harness length is 500mm. Header mates with 26-60-4060.

CON 3 Fan Voltage

Fan output, 12Vdc, 80mA maximum load.

Molex PN: 22-28-0020, mates with 22-01-2021


Pin 1: 12Vdc, Pin 2: Common

CON 4 Optional Remote Sense

Remote Sense connection

Molex PN: 22-28-0020, mates with 22-01-2021

Pin 1: V+, Pin 2: Common

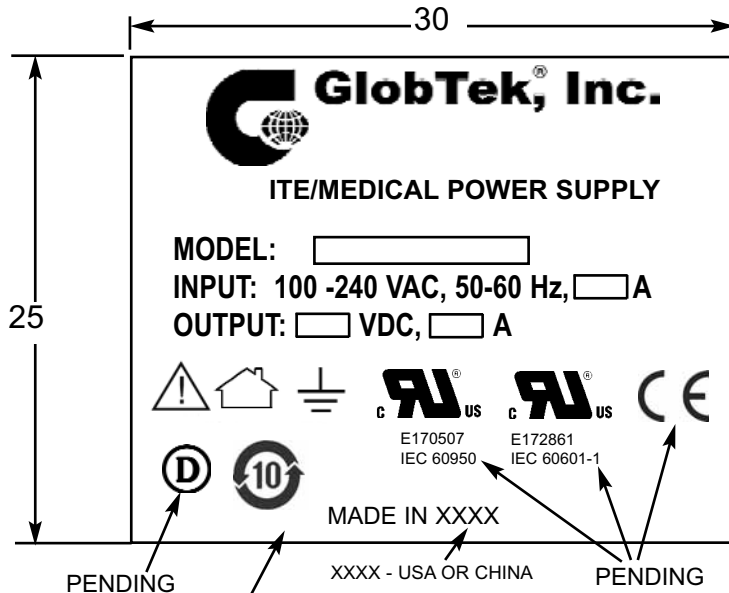
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MODEL NO:	GT(M)91110P200	REV. A
PART NO:	GT(M)91110P200 - FAMILY	SHEET 6 OF 8

PROPRIETARY INFORMATION:

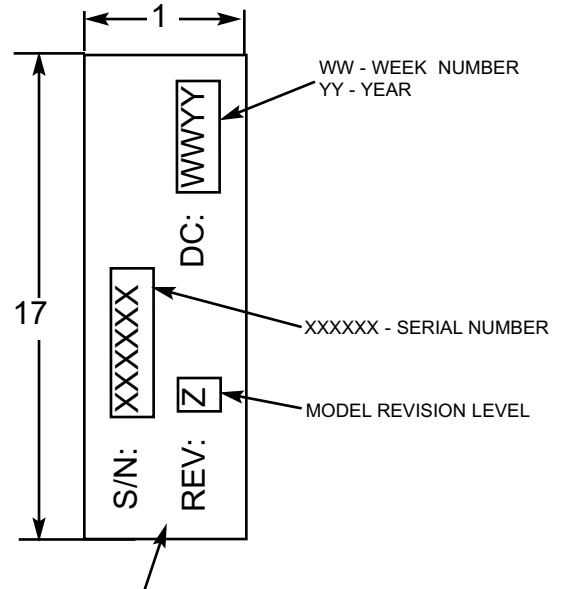
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4. LABEL:

MATERIAL: .007 (0.18) THICK FLAT THERMAL TRANSFER, IMPRINTABLE, WHITE OR GRAY POLYESTER SHEET WITH BLACK NOMENCLATURE.
 MANUFACTURER: STEVEN LABEL, MATERIAL I.D. NO.3302-33, UL FILE NO. MH12821(N), UL MATERIAL DESIGNATION FILE NO. GHW332RL. OPTIONAL LABEL MATERIAL CAN BE SUBSTITUTED PROVIDING MATERIAL IS UL LISTED AND COMPLIES WITH APPLICABLE SAFETY REQUIREMENTS.



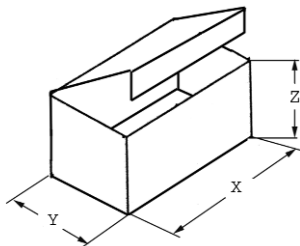
POSITION THIS LABEL ON TOP OF TRANSFORMER



POSITION THIS LABEL ON TOP OF CX1

5. INDIVIDUAL PACKING BOX:

MATERIAL: CORRUGATED FIBERBOARD, F-FLUTE 0.8 (3.0) THICK, DOUBLE WALL CONSTRUCTION.
 EXTERNAL FINISH: WHITE, COATED WITH GLOSS FINISH (AQUEOUS OR VARNISH) STYLE: TUCK SIDES WITH LOCKING TABS ON BOTH SIDES OF BOX. NO PRINTING ON THE OUTSIDE OF BOX.



X= TBA
 Y= TBA
 Z= TBA

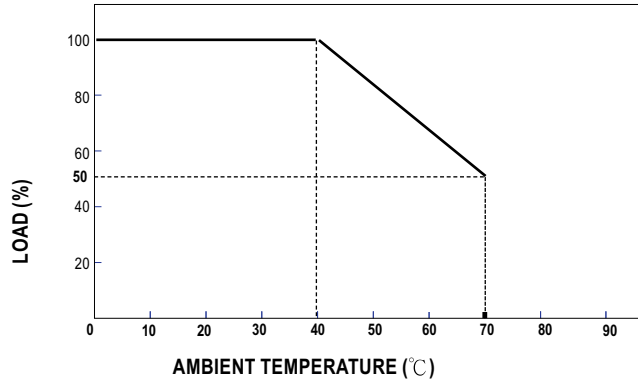
POWER SUPPLY WILL BE CONTAINED IN A PLASTIC BAG AND INDIVIDUAL WHITE BOX.

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MODEL NO: GT(M)91110P200	REV. A
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6. OUTPUT DERATING CURVES:



NOTES:

1. MEDICAL VERSION IS DESIGNED NOT TO BE USED IN SYSTEM WITH DIRECT PATIENT CONTACT.
2. ALL MEASUREMENTS ARE MADE DIRECTLY AT THE TERMINALS OF THE SUPPLY.
3. OUTPUT RIPPLE AND SPIKE ARE MEASURED DIRECTLY AT THE OUTPUT TERMINALS OF THE POWER SUPPLY WITH 10 μ F TANTALUM AND 0.1 μ F CERAMIC CAPACITORS CONNECTED IN PARALLEL. PEAK-TO-PEAK METERING EQUIPMENT MUST HAVE A 20 MHz FREQUENCY RESPONSE WITH PROBES AND CABLES THAT MAINTAIN A FREQUENCY RESPONSE OF 20Hz TO 20MHz.
4. CONDUCTED AND RADIATED EMI WERE PERFORMED WITH RESISTIVE LOAD SET TO FULL LOAD. PSU AND RESISTIVE LOAD WERE MOUNTED TOGETHER IN AN ALUMINUM PLATE.
5. REMOTE SENSE WIRE SHOULD BE TWISTED TOGETHER WHEN USED.
6. ALL MEASUREMENTS ARE MADE AT 25°C AMBIENT TEMPERATURE AND ARE TYPICAL.
7. WHEN LONG INPUT AND/OR OUTPUT WIRE HARNESS IS USED, ADDITIONAL EMI FILTERING MAYBE NECESSARY. FERRITE CORE MAYBE ADDED TO THE WIRE HARNESS AS REQUIRED.
8. GLOBTEK PRODUCTS ARE NOT AUTHORIZED TO BE USED AS MISSION CRITICAL COMPONENTS WITHOUT PRIOR WRITTEN APPROVAL FROM THE CEO OF GLOBTEK INC.
9. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

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MODEL NO:	GT(M)91110P200	REV. A
PART NO:	GT(M)91110P200 - FAMILY	SHEET 8 OF 8