



SP9919B

MODEL NO.: SP9919B  
 CUSTOMER P/N:  
 DESCRIPTION: SWITCHING POWER SUPPLY  
 ISSUED DATE: August 4, 1999  
 REVISION NO.: ORIGINAL

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00	Initial Released	04-08-1999
REV	DESCRIPTION	DATE

APP. BY	CHK. BY	PRE. BY
Bill Peng 08-04-1999	Sandy 08-04-1999	Sandy 08-04-1999

## 1.0 INPUT SPECIFICATIONS

### 1.1 AC VOLTAGE:

THE RANGE OF INPUT VOLTAGE IS FROM 90Vac TO 264Vac

### 1.2 FREQUENCY:

THE RANGE OF INPUT FREQUENCY IS FROM 47Hz TO 63Hz

### 1.3 AC CURRENT:

THE MAXIMUM INPUT CURRENT SHALL BE LESS THAN 1A

### 1.4 INRUSH CURRENT:

THE INRUSH CURRENT WILL NOT EXCEED 30A AT 115Vac INPUT OR 60A AT 230Vac INPUT, COLD START, and 25

## 2.0 OUTPUT SPECIFICATIONS

### 2.1 OUTPUT REGULATION, RIPPLE AND NOISE, CURRENT:

OUTPUT VOLTAGE	VOLTAGE REGULATION	OUTPUT TOLERANCE	RIPPLE & NOISE	LOAD	
				MIN	MAX
+5Vdc	+/-5%	+4.75V~ + 5.25V	50mVp-p	0.50A	3.5A
+12Vdc	+/-7%	+11.16V~+12.84V	240mVp-p	0.00A	0.5A
-12Vdc	+/-10%	-10.80V~ - 13.20V	240mVp-p	0.00A	0.1A

### 2.2 RIPPLE & NOISE:

THE PEAK TO PEAK RIPPLE AND NOISE FOR EACH OUTPUT IS LESS THAN SPECIFICATION AT RATED LOAD. MEASURING IS DONE BY 20MHz BAND WIDTH LIMITED OSCILLOSCOPE AND TERMINATED EACH OUTPUT WITH A 0.1uF AND A 10uF CAPACITORS

### 2.3 RISE TIME:

THE +5V OUTPUT RISE TIME SHALL BE LESS THAN 100ms

### 2.4 OVERSHOOT:

NO OUTPUT VOLTAGE SHALL EXCEED 110% OF ITS NOMINAL VALUE AT TURN ON OR TURN OFF

## 3.0 GENERAL FEATURES

### 3.1 EFFICIENCY:

THE EFFICIENCY IS HIGHER THEN 65% WHILE MEASURING AT NOMINAL LINE AND RATED LOAD

### 3.2 SHORT-CIRCUIT PROTECTION:

THE POWER SUPPLY SHALL BE PROTECTED SUCH THAT A SHORT FROM ANY OUTPUT TO RETURN SHALL NOT RESULT IN A FIRE HAZARD, SHOCK HAZARD. WHEN THE SHORT CONDITION IS REMOVED, THE POWER SUPPLY MUST EITHER RECOVER AUTOMATICALLY OR RESET BY RECYCLING THE INPUT VOLTAGE AND OPERATE NORMALL

### 3.3 OVER-VOLTAGE PROTECTION:

THE POWER SUPPLY SHALL BE SHUT DOWN, IF +5V OUTPUT VOLTAGE EXCEEDS THE VALUE LISTED BELOW. A CROWBAR ON THE +5V OUTPUT IS REQUIRED TO SHORT THE OUTPUT TO PREVENT DAMAGE TO THE EXTERNAL CIRCUITS O.V.P. TRIP POINT FROM 5.6V TO 6.7V

## 4.0 ENVIRONMENT SPECIFICATIONS

### 4.1 OPERATING:

TEMPERATURE 0 TO 50

RELATIVE HUMIDITY 20% TO 80% RH

### 4.2 STORAGE:

TEMPERATURE -20 TO 85

RELATIVE HUMIDITY 10% TO 90% RH

## 5.0 INTERNATIONAL STANDARDS

### 5.1 SAFETY STANDARDS:

DESIGNED TO MEET THE FOLLOWING STANDARDS:

UL 1950

CSA 22.2 NO.234

VDE EN 60950

### 5.2 EMI STANDARDS:

DESIGNED TO MEET THE FOLLOWING CONDUCTED LIMITS:

FCC DOCKET 20780 CURVE "B"

CISPR 22 CLASS "B"

## 6.0 RELIABILITY REQUIREMENTS

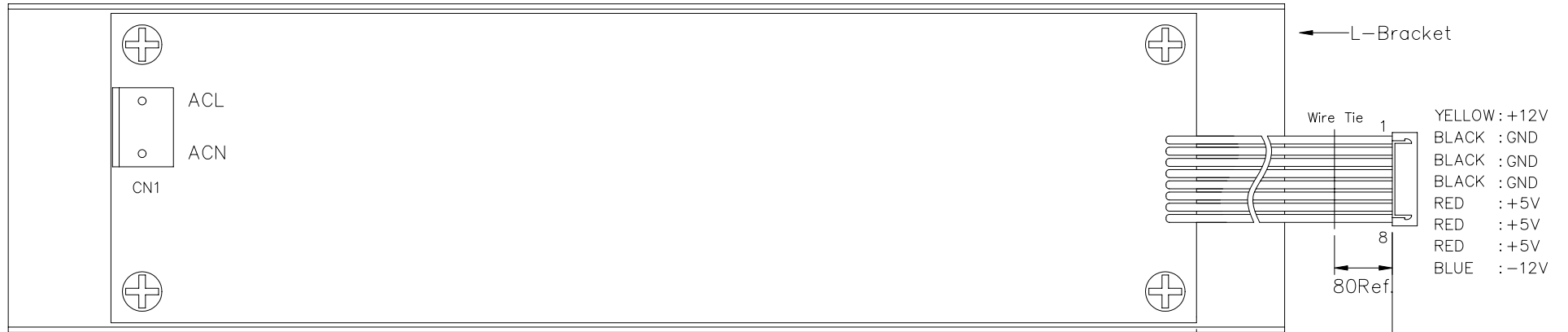
### 6.1 MTBF: 40000 HOURS

6.2 B-TEST:

VIBRATION, SHOCK, ALTITUDE, STATIC COMPRESSION, DROP...ETC, PLEASE REFER TO B-TEST PROCEDURE

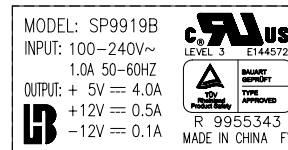
7.0 MECHANICAL SPECIFICATION

SEE ASSEMBLY DRAWING



CN1: B3P2-VH JST or Equiv.

Label:



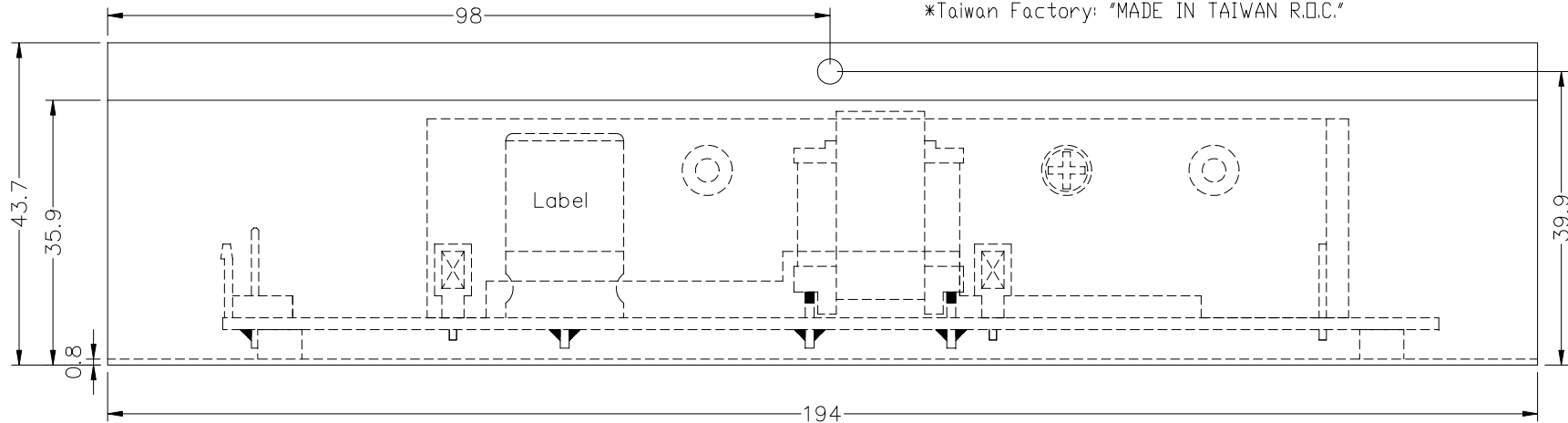
HOUSING: XHP-8 JST or Equiv

Wire: 22AWG UL#1007

Unit: m.m.

\*China Factory: "MADE IN CHINA FV"

\*Taiwan Factory: "MADE IN TAIWAN R.D.C."



COMMON TOLERANCE		
0 - 5	±0.4	
5 - 10	±0.6	
10 - 50	±0.8	
50 - 100	±1.0	
100 -	±1.0%	

				Bill Pena	Bill Pena	Sandy	BOTHHAND ENTERPRISE INC.	Outline Drawing	SP9919B
				2002/8/5	2002/8/5	2002/8/5			PART NO.
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