

# TOTAL POWER INT'L

## TPS50A SWITCHING MODE 50 WATT ADAPTERS



### KEY FEATURES

- \*Universal input
- \*Built-in EMI filter
- \*Optional constant current charger
- \*Optional  $\pm 12\text{VDC}/\pm 24\text{VDC}/\pm 48\text{VDC}$  input
- \*Optional output cable and plug
- \*Optional constant current change (for single output)

### APPLICATIONS

- \*Telecommunications
- \*Computer peripherals/Set-Top Box
- \*Test & industrial equipments
- \*Medical instruments
- \*Business machines

### ELECTRICAL SPECIFICATIONS

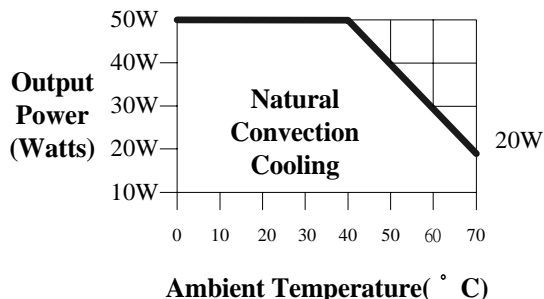
#### INPUT

- \*Input range-----90~264 VAC, universal
- \*Frequency-----47~63Hz
- \*Inrush current-----30A typical, Cold start @25°C,115VAC
- \*Efficiency-----65% ~80% typical at full load
- \*EMI filter-----FCC Class B conducted, CISPR 22  
Class B conducted, EN55022 class B  
Conducted
- \*Line regulation----- +/- 0.5% typical

#### OUTPUT

- \*Maximum power----40W (Multi)/50W (Single)  
(Refer next page)
- \*Hold-up time -----10ms typical at full load and 115 VAC  
nominal line
- \*Overload protection-Short circuit protection.
- \*Overvoltage  
protection -----Main output 20% to 40% above  
nominal output
- \*Ripple/Noise ----- +/- 1% Max. @full load  
(Optional +/- 0.5% per inquiry)

**Power Derating Curve**



### EMI & EMC

- \*FCC part 15, Class B
- \*CISPR 22 / EN55022, Class B
- \*VCCI ,Class 2
- \*CE,EN 61000-3-2 (Class A) and -3; EN61000-4-2,  
-3,-4,-5,-6 and -11

### SAFETY APPROVAL

- \*UL1950 / c UL
- \*Optional CSA 22.2, LEVEL 3 (COMPLY WITH)
- \*TUV EN60950
- \*Optional UL 2601 (EMI Class A) (COMPLY WITH)

### ENVIRONMENTAL

- \*Operating temperature :  
0 to 40°C ambient; derate each output at 2% per  
degree from 40°C to 70°C
- \*Humidity:  
Operating; non-condensing, 5% to 95%
- \*Vibration :  
10~55 Hz at 1G 3 minutes period, 30 minutes along  
X, Y and Z axis
- \*Storage temperature:  
-40 to 85°C
- \*Temperature coefficient:  
+/- 0.05% per degree C
- \*MTBF demonstrated:  
>100,000 hours at full load and 25°C ambient  
conditions

MODEL	OUTPUT VOLTAGE	ADJUSTMENT RANGE	MAXIMUM OUTPUT CURRENT	PEAK OUTPUT CURRENT(NOTE1)	MINIMUM OUTPUT CURRENT	TOTAL REGULATION(NOTE3)	RIPPLE & NOISE %P-P(NOTE2)	PEAK OUTPUT POWER(NOTE1)
<b>TPS50A-10</b>	+5V	Fixed	8A	12A	0A	±5%	±1%	60W Typical
<b>TPS50A-11</b>	+12V	Fixed	4.2A	5A	0A	±5%	±1%	60W Typical
<b>TPS50A-12</b>	+15V	Fixed	3.33A	4A	0A	±5%	±1%	60W Typical
<b>TPS50A-13</b>	+24V	Fixed	2.08A	2.5A	0A	±5%	±1%	60W Typical
<b>TPS50A-14</b>	+48V	Fixed	1.04A	1.2A	0A	±5%	±1%	60W Typical
<b>TPS50A-15</b>	+36V	Fixed	1.4A	1.6A	0A	±5%	±1%	60W Typical
<b>TPS50A-17</b>	+9V	Fixed	5.5A	6.6A	0A	±5%	±1%	60W Typical
<b>TPS50A-18</b>	+3.3V	Fixed	8A	13.6A	0A	±5%	±1.5%	45W Typical

**SINGLE OUTPUT MODEL SELECTION CHART**

<b>TPS50A-20Y</b>	+5 V	Fixed	5A	6.5A	0.5A	±5%	±1%	55W Typical
	+12V	Fixed	1.25A	1.56A	0.12A	±5%	±1%	
<b>TPS50A-21Y</b>	+5 V	Fixed	5A	6.5A	0.5A	±5%	±1%	55W Typical
	+15V	Fixed	1A	1.3A	0.1A	±5%	±1%	
<b>TPS50A-22Y</b>	+5 V	Fixed	7A	9.1A	0.7A	±5%	±1%	55W Typical
	- 5V	Fixed	1A	1.3A	0.1A	±10%	±1%	
<b>TPS50A-23</b>	+12V	Fixed	1.66A	2.9A	0.17A	±5%	±1%	55W Typical
	- 12V	Fixed	1.66A	2.9A	0.17A	±10%	±1%	
<b>TPS50A-24</b>	+15V	Fixed	1.33A	2.4A	0.13A	±5%	±1%	55W Typical
	- 15V	Fixed	1.33A	2.4A	0.13A	±10%	±1%	
<b>TPS50A-25Y</b>	+5V	Fixed	5A	6.5A	0.5A	±5%	±1%	55W Typical
	+24V	Fixed	0.63A	0.82A	0.06A	±5%	±1%	
<b>TPS50A-26Y</b>	+3.3V	Fixed	7A	9.1A	0.7A	±5%	±1.5%	45W Typical
	+12V	Fixed	1.4A	1.82A	0.14A	±5%	±1%	
<b>TPS50A-27Y</b>	+3.3 V	Fixed	7A	0.82A	0.7A	±5%	±1.5%	45W Typical
	+24V	Fixed	0.7A	0.91A	0.07A	±5%	±1%	
<b>TPS50A-28Y</b>	+3.3 V	Fixed	7A	9.1A	0.7A	±5%	±1.5%	45W Typical
	+5V	Fixed	3.4A	4.42A	0.34A	±5%	±1%	

**TRIPLE OUTPUT MODEL SELECTION CHART**

<b>TPS50A-30Y</b>	+ 5V	Fixed	5A	6.5A	0.5A	±5%	±1%	55W Typical
	+12V	Fixed	1A	1.3A	0.1A	±5%	±1%	
	- 5 V	Fixed	0.6A	0.78A	0.06A	±10%	±1%	
<b>TPS50A-31Y</b>	+ 5V	Fixed	5A	6.5A	0.5A	±5%	±1%	55W Typical
	+12V	Fixed	1A	1.3A	0.1A	±5%	±1%	
	-12V	Fixed	0.25A	0.33A	0.02A	±10%	±1%	
<b>TPS50A-32Y</b>	+ 5V	Fixed	5A	6.5A	0.5A	±5%	±1%	55W Typical
	+15V	Fixed	0.8A	1.04A	0.08A	±5%	±1%	
	-15V	Fixed	0.2A	0.26A	0.02A	±10%	±1%	
<b>TPS50A-33Y</b>	+ 5V	Fixed	5A	6.5A	0.5A	±5%	±1%	55W Typical
	+15V	Fixed	0.8A	1.04A	0.08A	±5%	±1%	
	- 5 V	Fixed	0.6A	0.78A	0.06A	±10%	±1%	
<b>TPS50A-34Y</b>	+ 5V	Fixed	5A	6.5A	0.5A	±5%	±1%	55W Typical
	+15V	Fixed	0.8A	1.04A	0.08A	±5%	±1%	
	-12V	Fixed	0.25A	0.33A	0.02A	±10%	±1%	
<b>TPS50A-35Y</b>	+ 5 V	Fixed	5A	6.5A	0.5A	±5%	±1%	55W Typical
	+24V	Fixed	0.5A	0.65A	0.05A	±5%	±1%	
	-12V	Fixed	0.25A	0.33A	0.02A	±10%	±1%	
<b>TPS50A-36Y</b>	+ 5V	Fixed	2A	2.6A	0.2A	±5%	±1%	55W Typical
	+12V	Fixed	2A	2.6A	0.2A	±5%	±1%	
	- 12V	Fixed	0.5A	0.65A	0.05A	±10%	±1%	
<b>TPS50A-37Y</b>	+ 5V	Fixed	2A	2.6A	0.2A	±5%	±1%	55W Typical
	+12V	Fixed	2A	2.6A	0.2A	±5%	±1%	
	+24 V	Fixed	0.25A	0.33A	0.02A	±10%	±1%	

MODEL	OUTPUT VOLTAGE	ADJUSTMENT RANGE	MAXIMUM OUTPUT CURRENT	PEAK OUTPUT CURRENT(NOTE1)	MINIMUM OUTPUT CURRENT	TOTAL REGULATION(NOTE3)	RIPPLE & NOISE %P-P(NOTE2)	PEAK OUTPUT POWER(NOTE1)
<b>TRIPLE OUTPUT MODEL SELECTION CHART</b>								
PPS50A-39	+3.3V	±10% Typical	3A	4.2A	0.3A	±5%	±1.5%	45W Typical
	+ 5V	Fixed	4A	5.6A	0.4A	±5%	±1%	
	+12V	Fixed	0.9A	1.08A	0.09A	±10%	±1%	

- NOTES:** 1) Peak loads for lasting <30 seconds with a maximum 10% duty cycle are acceptable. Please contact us if need special peak load.  
 2) Maximum peak to peak noise expressed as a percentage of output voltage, 20MHz bandwidth, 0.1  $\mu$ F and 47  $\mu$ F Cap. on outputs.  
 3) Loading test conditions are set for all outputs at minimum, middle and maximum of loads. Special cross loading requirement is welcomed.  
 4) Detailed engineering specification of each model is available for inquiry.  
 5) Special output voltage/current inquiry is welcomed.  
 6) Specifications subject to change without notice.  
 7) 25% derated if 24 VDC input version; 50% derated if 12 VDC input version.  
 8) Above data is measured at the output plug/connector of 1M long cable. Please contact us if need special cable and connector  
 9) For single 3.3V output, the output is 29.7W maximum; For single 5V output, the output is 45W maximum.  
 For multiple outputs with 3.3V as V1, the output is 27W maximum; For multiple outputs with 5V as V1, the output is 30W maximum.