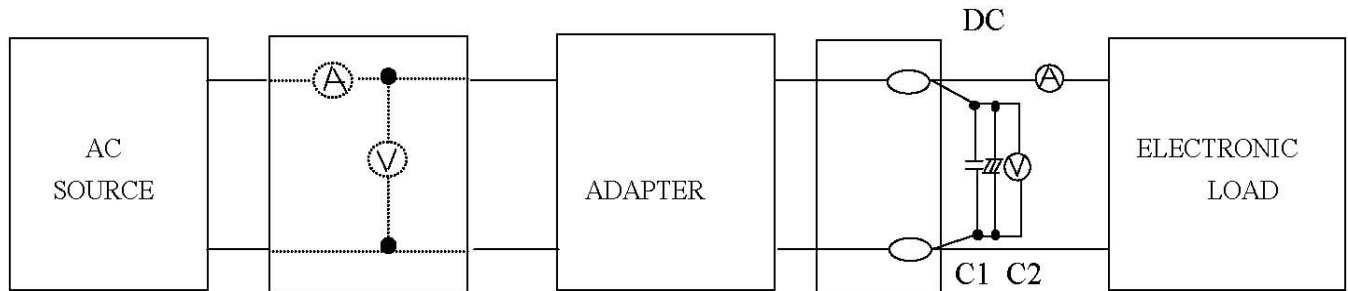


1.0 MTP051SA-042050

This specification defines the functional requirements and characteristics of MTP051SA-042050 AC-DC Switching power supplies.

2.0 Electrical Requirements

*TEST MEASURES



C1 : 0.1uF CERAMICS CAPACITOR; C2 : 10uF 50V ALUMINUM CAPACITOR

2.1 Input Voltage Requirements

ITEM	SPECIFICATION	MIN	TYP.	MAX
1. NORMAL INPUT VOLTAGE(Vrms)	SINGLE PHASE		240	
2. INPUT VOLTAGE RANGE(Vrms)	SINGLE PHASE	100	240	256
3. INPUT CURRENT(A)	TYPICAL INPUT VOLTAGE& OUTPUT AT FULL LOAD			0.3
4. INPUT FREQUENCY(Hz)	SINGLE PHASE	47	50	63
5. INRUSH CURRENT(A)	TYPICAL INPUT VOLTAGE& OUTPUT AT FULL LOAD , 25 °C.			
6. EFFICIENCY(%)	TYPICAL INPUT VOLTAGE& OUTPUT AT FULL LOAD			
7. LEAKAGE CURRENT(mA)	TYPICAL INPUT VOLTAGE			
8. POWER FACTOR	TYPICAL INPUT VOLTAGE& OUTPUT AT FULL LOAD			

2.1.9 INPUT FUSE:

The hot line side of the input shall have a fuse

2.1.10 INPUT PROTECTION DEVICE:

An adequate internal fuse on the AC input line shall be provided.

2.2 Output Voltage Requirements

ITEM	SPECIFICATION	MIN	TYP.	MAX
1.NORMAL DC OUTPUT VOLTAGE(V)			4.2	
2. DC OUTPUT VOLTAGE RANGE(V)	TYPICAL OUTPUT VOLTAGE	4.0		4.4
3. LOAD CURRENT RANGE (A)		0		0.3
4. PEAK LOAD CURRENT(A)	TIME<60S			
5. RIPPLE & NOISE(mV)	TYPICAL INPUT VOLTAGE& OUTPUT AT FULL LOAD , 25°C.			
6. HOLD-UP TIME(ms)	TYPICAL INPUT VOLTAGE AND TYPICAL LOAD CURRENT			
7. TURN-ON DELAY TIME(ms)	TYPICAL INPUT VOLTAGE AND TYPICAL LOAD CURRENT			
8. DROPOUT TIME(ms)	TYPICAL INPUT VOLTAGE AND TYPICAL LOAD CURRENT			
9. LINE REGULATION RATE (%)	CHANGE AC INPUT VOLTAGE .			
10. LOAD REGULATION RATE (%)	STEP LOAD CHANGE IS 0.1 A/μsec.			
11.TRANSIENT RESPONSE TIME(ms)	STEP LOAD CHANGE IS 1 A/μsec.			
12. VOLTAGE DRIFT RATE (%)	TYPICAL INPUT VOLTAGE AND TYPICAL LOAD CURRENT , 25 °C.			

2.3 Protection

ITEM	SPECIFICATION	MIN	TYP.	MAX
1. OUT OVER CURRENT PROTECTION(A)	The power supply shall be protected against output overloads. The power supply is not damaged or life degraded by continuous operation in output overloads.			0.5
2. SHORT CIRCUIT PROTECTION	The power supply shall be protected against short circuits. The power supply is not damaged or life degraded by continuous operation in short circuit.		Pass	
3. OVER TEMPERATURE PROTECTION			N/A	
4.Output Voltage Protection(v)	When the power supply output voltage over 9V,the power supply protection		N/A	

2.4 Green Mode Requirements

2.4.1 When the switching power supply working on stand by mode and no loads, the input power will less than 0.5 W.

2.5 Isolation Requirements

ITEM	SPECIFICATION OR TEST CONDITION	ACCEPTANCE CRITERIA
1.HI-POT	INPUT TO OUTPUT, 3000Vac 60 SECONDS 5mA	NO DAMAGE
2.INSULATION RESISTANCE	INPUT TO OUTPUT,DC 500V	>10MΩ
3.INSULATION CLASS	INSULATION CLASS OF TRANSFORMER	CLASS B

3. Safety & EMC Requirements

ITEM	SPECIFICATION OR TEST CONDITION	ACCEPTANCE CRITERIA
1.EMI/EMS	MEET AS/NZS CISPR 22	C-TICK
2. SAFETY REQUIREMENTS	MEET AS/NZS 60950	SAA

4. Environmental Requirements

ITEM	SPECIFICATION OR TEST CONDITION	MIN	TYP.	MAX
1.OPERATING TEMPERATURE		0°C		40°C
2. STORAGE TEMPERATURE		-20°C		85°C
3. OPERATING HUMILITY	NON-CONDENSING	5%RH		90%RH
4. STORAGE HUMILITY	NON-CONDENSING	5%RH		90%RH

5. Reliability

ITEM	SPECIFICATION OR TEST CONDITION	ACCEPTANCE CRITERIA
1.CALCULATED MTBF	MEET MIL-HDBK-217F	30000 HOURS
2.DEMONSTRATED MTBF	TYPICAL INPUT&FULL LOAD , 25°C	50000 HOURS
3.USEFUL LIFE	TYPICAL INPUT&FULL LOAD, 40°C	1YEARS ABOVE
	TYPICAL INPUT&FULL LOAD, 25°C	2YEARS ABOVE
4. BURN-IN	AT 30°C(±10°C),NORMAL INPUT VOLTAGE	2~4 HOURS
5.AC PLUG STRENGTH	THERE MUST NOT BE SHAKING AND WIRE BREAKING WHEN 98N IN 1 MINUTE IS ADDED TO THE AC PLUG FTO EVERY DIRECTION.	THERE MUST NOT BE SHAKING AND WIRE BREAKING

6.DC CORD BENDING	NORMAL TEMPERATURE THE CORD SHALL WITHSTAND WEIGHT OF 200g, SWINGING FROM LEFT TO RIGHT AT AN ANGLE OF 60 DEG. 1000CYCLE TIMES MIN. S/R SHALL WITHSTAND WEIGHT OF 1N. SWINGING FROM LEFT TO RIGHT AT AN ANGLE OF 60DEG. 1000CYCLE TIMES MIN. BENDING SPEED 40CYCLE/MINUTE.	THERE WILL BE NO ABNORMALITY NO APPEARANCE
7.TEMPERATURE UP WITH	TEST AT SURFACE OF THE CASE WITH TYPICAL AC INPUT AND TYPICAL LOAD, IN OUTPUT 50/60Hz.	TEMPERATURE UP UNDER 40 DEGREES.
8.VIBRATION	FREQUENCY RANGE:10~55Hz AMPLITUDE:1.5mm ACCELERATION: 1G SWEEP 1 MINUTE FOR X,Y,Z,AXIS EACH	THERE SHALL BE NO ABNORMALITY NO THE APPEARANCE STRUCTURE AND OPERATING.
9.DROP TEST	UNIT SHALL WITHSTAND WITHOUT EXPOSURE OF LIVE PARTS AFTER DROPPING 3 TIME (BY X ,Y ,Z DIRECTION EACH 1 TIME) FROM 100 CM HIGH ONTO A WOODEN BOARD.	UNIT SHALL WITHSTAND WITHOUT EXPOSURE OF LIVE PARTS.

6. Mechanical Requirements

6.1 AC INPUT TYPE: 2 PIN SAA

6.2 DC OUTPU TYPE: 3.5*1.35*10mm 直头



6.3 DC OUTPUT CABLE: USE 2468 24AWG 1.5M WIRE

6.4 WEIGHT: ABOUT 85 (g)

6.5 CASE MATERIAL: 94V-0 ABS+PC 带 LED 绿灯

6.6 PCB MATERIAL: 94V-0

6.7 OUT LINE DIMENSION:

According to the drawing

