

SBU350 series

V1.6

350W Open Frame Power Supply for General Purpose

The SBU350 series of AC/DC switching mode power supplies provide 350 Watts of continuous output power. All models meet FCC Part-15, AS/NZS CISPR 32 and EN55032, BS EN55032 class B emission Limits, EN55035, BS EN55035 and are designed to comply with UL/cUL, TUV T-mark and conformity assessment in CE marking. All units pass burn-in test at full load condition.



FEATURES:

- * Wide Operating Voltage, 90 to 264 VAC, 47 to 63 Hz
- * Single Output
- * Protection: OVP, OLP, OTP(option)
- * Size : 3"x5"x1.46"
- * Input to Output : Double Isolation
- * High ESD immunity
- * 3 year warranty

APPLICATIONS:

- * Ideal for 1U Application
- * Industrial PC
- * Electrical Test & Measurement Instrument
- * Communication equipment
- * AV equipment

GENERAL SPECIFICATION:

- * **Short Circuit Protection:** Auto Recovery
- * **Cooling:** 250W full load at free air convection, 350W with 12CFM forced air.
- * **Protection Classes:** Class I
- * **Safety:** UL62368-1 2nd Edition, CSA C22.2 NO. 62368-1-14 2nd Edition, IEC62368-1:2014, EN62368-1:2014+A11

APPROVALS:



Electrical Characteristics:

Symbol	Characteristic	Condition	Min.	Typ.	Max.	Unit
Vins	Safety Approval Input Voltage Range	Safety Approval & Specification in Label	100		240	VAC
Vin	Input Operate Voltage Range	Detail to see Fig.1	90		264	VAC
Fi	Input Frequency	Sine wave	47		63	Hz
PF	Power Factor Correction		0.95		1	
Po	Output Power Range	See Rating Chart			350	W
Iil	Low Line Input Current	Full Load, Vin=100VAC		4.4		A
Iih	High Line Input Current	Full Load, Vin=240VAC		1.7		A
Irl	Low Line Input Inrush Current	Full Load, 25°C, Cool start, Vin=100VAC			60	A
Irh	High Line Input Inrush Current	Full Load, 25°C, Cool start, Vin=240VAC			136	A
Ik	Safety Ground Leakage Current	Vin=240VAC, Fi=60Hz			0.75	mA
η	Efficiency	Po:350W, Vin=230VAC, Detail to see Rating Chart	See Rating Chart			
ΔVoi	Line Regulation	Full Load, Vin=100~120VAC or 200~240VAC			1	%
OVP	Over Voltage Protection	Latch off, recycle input to reset	112		132	%
OLP	Over Load Protection	Recovers automatically after fault condition is removed	105		150	%
ttr	Time of Transient Response	Io=Full Load to Half Load, Vin=110VAC			4	ms
thu	Hold-Up Time	Full Load, Vin=110VAC	See Rating Chart			
ts	Start-up time	Full Load, Vin=100~240VAC			2	s
Ris	Insulation Resistance		50			MΩ
Tc	Temperature Coefficient	All Condition			±0.04	%/°C
HV	Dielectric Withstanding Voltage (P-S)	Primary to Secondary, limit current <10mA			4242	VDC
Vpg	Dielectric Withstanding Voltage (P-G)	Primary to PE, limit current <10mA			2506	VDC
EMI	EMC Emission	Compliance to EN55032 (CISPR32), EN55035	B			Class

Environmental:

Symbol	Characteristic	Condition	Min.	Typ.	Max.	Unit
To	Operating Temperature	Detail to see Fig.2 (Derate linearly from 100% load at 40°C to 50% load at 70°C)	-40		70	°C
Ts	Storage Temperature	10 ~ 95% RH	-40		85	°C
Ho	Operating Humidity	non-condensing	0		95%	RH
Hs	Storage Humidity		0		95%	RH
ESDa	Electro Static Discharge	Air Discharge, IEC61000-4-2			8	kV
ESDc	Electro Static Discharge	Contact Discharge, IEC61000-4-2			6	kV
MTBF	Mean Time Between Failure	Operating Temperature at 25°C, Calculated per MIL-HDBK-217F	200k			h
ELEV	Operating Altitude (Elevation)	All condition			5000	m
VBR	Vibration	10 ~ 500Hz, 10min./1cycle, 60min. each along X, Y, Z axes			5	G
Vsl	Surge Voltage	Line-Neutral			1	kV
Vsg	Surge Voltage	Line-PE & Neutral-PE			2	kV

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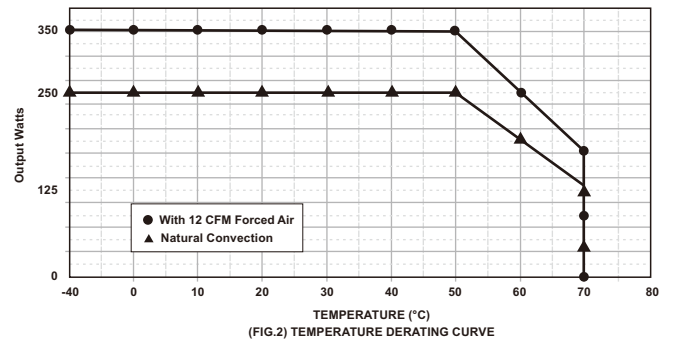
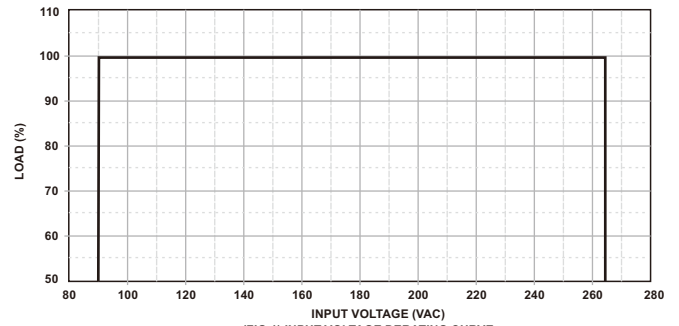
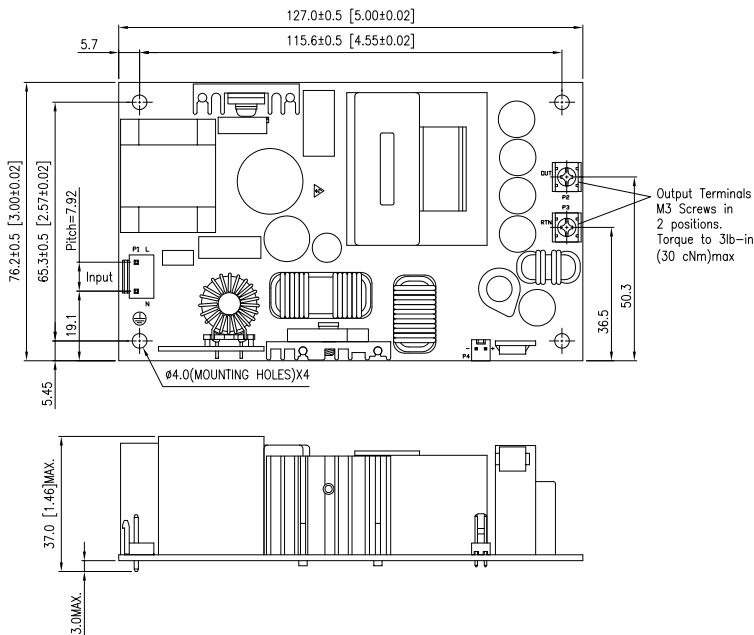
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SPECIFICATION NOTE :

1. Output can provide up to peak load when the power supply starts up. Continuous staying in more than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing $\pm 10\%$ of input voltage from nominal line at rated load.
4. Load regulation is defined by changing $\pm 40\%$ of measured output load from 60% rated load.
5. The ripple is measured from peak to peak with a bandwidth-limit of 20MHz (Measured at the output connector with a 0.1uF ceramic capacitor and a 47uF electrolytic capacitor).
6. Hold up time is measured from the end of the last charging pulse to the time which the main output drops down to low limit of main output at rated load and nominal line.
7. Efficiency is measured at rated load, and nominal line.

MECHANICAL DIMENSIONS: (UNIT: mm [inch])



PIN CHART

MODEL	Screw Terminal	
	P2	P3
SBU350-105~111	OUT	RTN

P4:With Optional Output

MODEL	PIN	+		-	
		12V		RTN	
SBU350-1XXP	12V	RTN			

PACKING :

1. Net weight: 370g approx.
2. Input connector mates with JST housing VHR-3N and JST SVH series crimp terminal.
3. Output connector mates with PINGOOD #JH-4A-CXS.

Rating Chart:

MODEL NO.	Voltage Range		Output Current			Maximum Output Power		Ripple & Noise (mVp-p)	Total Regulation (%)	Typ. Efficiency (%)	Typ. No Load Consumption (W)	Hold-Up Time (ms)
	Vo (VDC)	Optional Output (VDC)	Max1 (A)	Max2* (A)	Optional Output (A)	Max1 (W)	Max2* (W)					
	SBU350-105(P)	12.0	12.0	20.83	29.16	0.1	250					
SBU350-106(P)	15.0	12.0	16.66	23.33	0.1	250	350	150	±5	92	0.5	16
SBU350-107(P)	19.0	12.0	13.15	18.42	0.1	250	350	190	±5	93	0.5	16
SBU350-108(P)	24.0	12.0	10.42	14.58	0.1	250	350	240	±3	94	0.5	16
SBU350-109(P)	30.0	12.0	8.33	11.66	0.1	250	350	240	±3	94	0.5	16
SBU350-110(P)	36.0	12.0	6.94	9.72	0.1	250	350	240	±2	94	0.5	16
SBU350-111(P)	48.0	12.0	5.21	7.30	0.1	250	350	240	±2	95	0.5	16

*With 12 CFM min Forced Air.

*Max1:Free Air Max2:Forced Air

*"P" means with optional output (12V@0.1A).