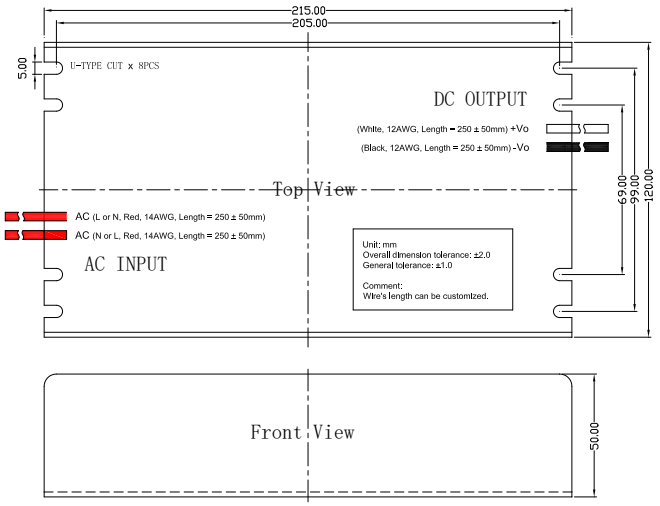


VA350-V6Sxx

AC-DC Power Supply Module
AC or DC input, isolated single output

VA xx - V6 S xx

- Output voltage in volt
- S means single output
- Internal reserved letter and number
- Rated output power in watt
- Product series name, normally including two or three letters

Product Characteristics

- Input voltage range, 600-1000VAC or 840-1400VDC
- Input under voltage protection
- High reliability, industrial grade
- Output protection, OCP and SCP
- Input and output isolation, 3000VAC
- No minimum load requirement
- Applications: photovoltaic power station, energy storage system, other high voltage input industrial equipment

Model Selection Table

Model	Dimensions (L*W*H)	Rated power	Rated output voltage/current		Typical efficiency （Vin=800VAC）
			Vo	Io	
VA350-V6S24	215*120*50.0mm	350W	24V	14580mA	83%
VA350-V6S28			28V	12500mA	83%
VA350-V6S32			32V	10930mA	85%
VA350-V6S48			48V	7290mA	86%

Input Characteristics

Item	Test Condition / Description	MIN	TYP	MAX
Input voltage range	AC input	600VAC	800VAC	1000VAC
	DC input	840VDC	1130VDC	1400VDC
Input current	Vin = 800VAC	-	1200mA	-
Surge current	Vin = 800VAC	-	300A	-
Input UVP	Input under voltage trigger point	-	540VAC	-
	Input under voltage released point	-	555VAC	-
External input fuse		Required		

Output Characteristics

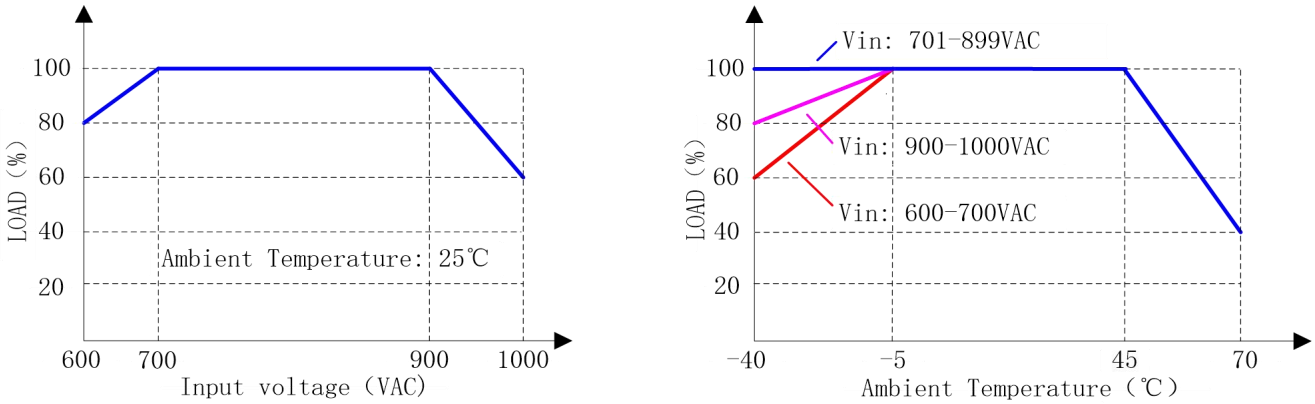
Item	Test Condition / Description	MIN	TYP	MAX
Voltage accuracy		-	±2%	-
Line regulation	100%Io	-	±1%	-
Load regulation	10%-100%Io	-	±1.5%	-
Ripple and noise*1	20MHz bandwidth (Peak-peak value)	-	480mV	-
OCP	Output over current protection	≥110%Io, Self recovery		
SCP	Output short circuit protection	Self recovery		
Minimum load		0	-	-
Hold-up time		-	10ms	-
Hot plug		Prohibited		
Paralleled working		Prohibited		

Remark *1: Oscilloscope probe should be connected with the paralleled combination of a 10uF high frequency low resistance electrolytic capacitor and a 0.1uF ceramic capacitor.

General Characteristics

Item	Test Condition / Description	MIN	TYP	MAX
Working temperature		-40℃	-	+70℃
Storage temperature		-40℃	-	+85℃
Storage humidity		-	-	95%RH
Switching frequency		-	65kHz	-
Isolation voltage	Input to output, 60s, ≤5mA	3000VAC	-	-
MTBF	MIL-HDBK-217F@25℃	215000h	-	-
Weight		-	1650g	-
Cooling method	Forced air cooling is recommended	Natural air cooling		

Derating Curves

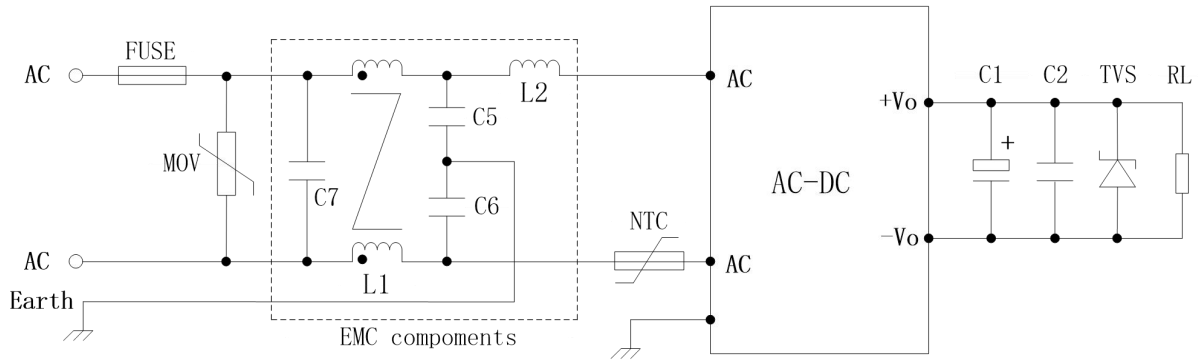


Comment: Both temperature derating and input voltage derating should be considered.

Comment: the continuous working time should be considered for the PSU.
If loading is 85% ~ 100% of rated power, continuous working time should be less than half an hour.
If loading is 70% ~ 85% of rated power, continuous working time should be less than one hour.
If loading is less than 70% of rated power, working time is not restricted if derating curves has been considered.

Application Notes

1. Application circuit recommendation



2. Input part recommendation

Component	Function and description	Recommendation
FUSE	Cut off fault circuit	Required, 8A, time lag type is preferred
NTC	Limit the surge current	Negative temperature coefficient resistor, 1.3D-20
MOV	Absorb surge energy	Varistor, 182KD20
C7	EMC component, X-CAP	Four 1uF safety X1 capacitors in series
L1	EMC component	Commond mode inductor, >10mH
L2	EMC component	Differential mode inductor, 330μH
C5, C6	EMC component	Three 1nF safety Y1 capacitors in series

3. Output part recommendation

Output voltage	C1	C2	TVS	RL
24V	680μF/25V	1μF/50V	1.5KE30CA	User load
28V	470μF/35V	1μF/50V	1.5KE39CA	
32V	220μF/50V	1μF/50V	1.5KE43CA	
48V	100μF/63V	1μF/100V	1.5KE62CA	

Remarks：

a. C1: Output filter electrolytic capacitor, high frequency low resistance electrolytic capacitor is recommended.

b. C2: Ceramic capacitor to suppress high frequency noise.

c. TVS: Transient suppression diode to protect post-stage circuit (user load).

Notes：

- If not specified, the test condition is ambient temperature 25℃, humidity < 75%, input voltage 800VAC and output rated load.
- All parameters listed in the data sheet are tested according to the company's enterprise standards.
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