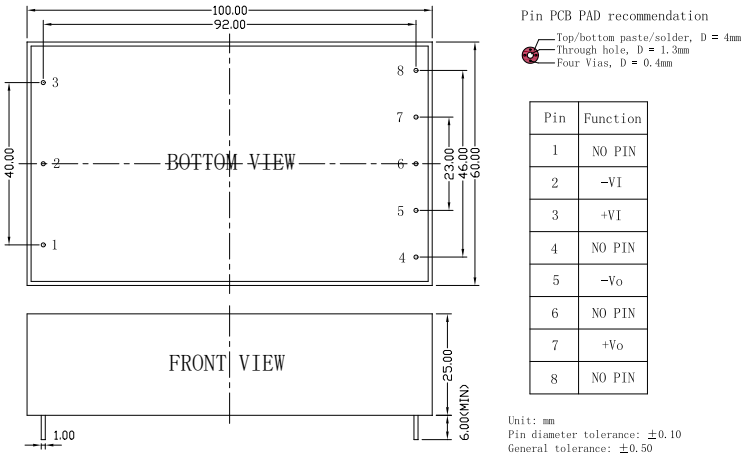


Pin	Function
1	NO PIN
2	-VI
3	+VI
4	NO PIN
5	-Vo
6	NO PIN
7	+Vo
8	NO PIN

GH25(40)-V2Sxx-C-UL

DC-DC Power Supply Module
Ultra wide input, isolated single output

GH xx - V2 S xx - C - UL

- UL — Designed based on safety standards
- C — Constant current mode (CC) and constant voltage mode (CV)
- xx — **Output voltage in CV mode, can be customized (contact GTL-POWER)**
- S — S means single output
- V2 — Internal reserved letter and number
- xx — Rated output power in watt
- GH — Product series name, normally including two or three letters

Product Characteristics

- Ultra wide input voltage range, 300-1500VDC
- Designed based on EN62109 and UL1741
- Input and output isolation, 4000VAC
- Input protection: UVP, reversed polarity protection
- Output protection: OCP, SCP
- 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 Vo / Io		Typical efficiency （Vin=1000VDC）
GH25-V2S24-C-UL	100*60*25mm	25W	CC mode	18-24V/1040mA	80%
			CV mode	24V/850mA	
GH25-V2S26-C-UL			CC mode	18-26V/970mA	81%
			CV mode	26V/800mA	
GH25-V2S32-C-UL			CC mode	24-32V/780mA	82%
			CV mode	32V/670mA	

GH40-V2S24-C-UL	100*60*25mm	40W	CC mode	16-24V/1660mA	78%
			CV mode	24V/1200mA	
GH40-V2S28-C-UL			CC mode	16-28V/1430mA	80%
			CV mode	28V/1000mA	
GH40-V2S32-C-UL			CC mode	16-32V/1250mA	82%
			CV mode	32V/900mA	

Input Characteristics

Item	Test Condition / Description		MIN	TYP	MAX
Input voltage range	DC input		300VDC	1000VDC	1500VDC
Input current	Vin = 1000VDC, 100%Io		-	-	50mA
Surge current	Vin = 300VDC	GH25-V2Sxx-C-UL	-	30A	-
		GH40-V2Sxx-C-UL	-	60A	-
Input UVP	Input under voltage trigger point		-	250VDC	-
	Input under voltage released point		-	265VDC	-
Input reversed polarity protection	If input polarity is reversed, the PSM should not be damaged.		Available		
External input fuse	1A/1500VDC, time lag type is preferred		Required		

Output Characteristics

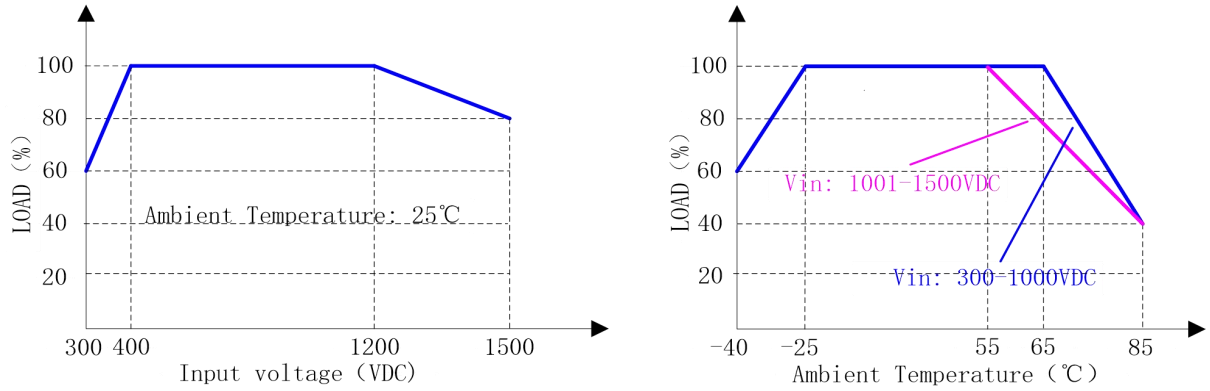
Item	Test Condition / Description	MIN	TYP	MAX
Voltage accuracy		-	±2%	-
Current accuracy		-	±10%	-
Line regulation	100%Io	-	±1%	-
Load regulation	10%-100%Io	-	±1%	-
Ripple and noise*1	20MHz bandwidth (Peak-peak value)	-	200mV	400mV
OCP	Output over current protection	≥110%Io, Self recovery		
SCP*2	Output short circuit protection	Self recovery		
Minimum load		0	-	-
Start-up delay time		-	15s	-
Hold-up time	Vin = 1000VDC, 100%Io	-	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.
Remark *2: If input voltage is higher than 1000VDC, short circuit time shall be less than 3 seconds, otherwise PSM may be damaged.

General Characteristics

Item	Test Condition / Description	MIN	TYP	MAX
Working temperature		-40℃	-	+85℃
Storage temperature		-40℃	-	+105℃
Storage humidity		-	-	95%RH
Switching frequency	Vin = 1000VDC, 100%Io	-	85kHz	-
Isolation voltage	Input to output, 60s, ≤5mA	4000VAC	-	-
MTBF	MIL-HDBK-217F@25℃	215000h	-	-
Weight		-	250g	-
Cooling method			Natural air cooling	

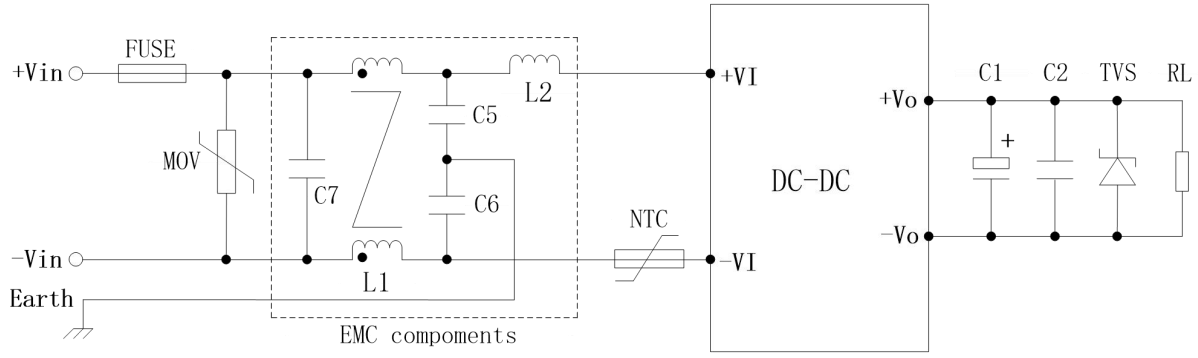
Derating Curves



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

Application Notes

1. Application circuit recommendation



2. Input part recommendation

Component	Function and description	Recommendation
FUSE	Cut off fault circuit	Required, 1A/1500VDC, time lag type is preferred
MOV	Absorb surge energy	Varistor (MOV), two 112KD14 in series
NTC	Limit the surge current	Negative temperature coefficient thermistor, 5D-9
C7	EMC component, X-CAP	Four 0.33uF 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	100μF/35V	1μF/50V	1.5KE30CA	User load
26V			1.5KE33CA	User load
28V			1.5KE36CA	User load
32V	100μF/50V		1.5KE39CA	User load

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 1000VDC and output rated load.
- All parameters listed in the data sheet are tested according to the company's enterprise standards.
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