

## GSAxxxxxHS(D)-4(8)

### DC-DC Power Supply Module

#### Low voltage input, high voltage output

#### Product Characteristics

- Input voltage range, 10-18VDC or 18-36VDC
- High voltage output, from 50VDC to 600VDC
- DIP 2"x1" package with international pin assignment
- High reliability, industrial grade
- Input and output isolation, 1500VDC
- No minimum load requirement
- Applications: industrial equipment, electrolytic capacitor charger, instruments, meters, medical equipment.

#### Model Selection Table

Model	Input voltage (VDC)			Vo (VDC)	Io (mA)	Typical efficiency (Vin=TYP)
	MIN	TYP	MAX			
GSA1250HS-8	10	12	18	50	160	80%
GSA12100HS-8				100	80	78%
GSA12150HS-8				150	53	77%
GSA12170HS-8				170	47	76%
GSA12200HS-8				200	40	75%
GSA12300HS-8				300	26	73%
GSA12400HS-8				400	20	72%
GSA12500HS-4				500	8	68%
GSA12600HS-4				600	6	61%
GSA2450HS-8	18	24	36	50	160	80%
GSA24100HS-8				100	80	79%
GSA24150HS-8				150	53	78%
GSA24170HS-8				170	47	76%
GSA24200HS-8				200	40	77%
GSA24300HS-8				300	26	75%
GSA24400HS-8				400	20	73%

GSA24500HS-4				500	8	66%
GSA24600HS-4				600	6	63%
GSA1250HD-8	10	12	18	±50	±80	78%
GSA12100HD-8				±100	±40	75%
GSA12150HD-8				±150	±26	73%
GSA12200HD-8				±200	±20	72%
GSA12250HD-4				±250	±8	68%
GSA12300HD-4				±300	±6	61%
GSA2450HD-8				18	24	36
GSA24100HD-8	±100	±40	77%			
GSA24150HD-8	±150	±26	76%			
GSA24200HD-8	±200	±20	75%			
GSA24250HD-4	±250	±8	73%			
GSA24300HD-4	±300	±6	66%			

Comment: Input voltage shall not exceed the maximum value, otherwise permanent and unrecoverable damage be caused.

### Input Characteristics

Item	Test Condition / Description	MIN	TYP	MAX
Input voltage range	GSA12xxxHS(D)-4(8)	10VDC	12VDC	18VDC
	GSA24xxxHS(D)-4(8)	18VDC	24VDC	36VDC
Input current	GSA12xxxHS(D)-4(8)	-	-	1400mA
	GSA24xxxHS(D)-4(8)	-	-	600mA
Input reversed polarity protection		No		
External input fuse		Required		

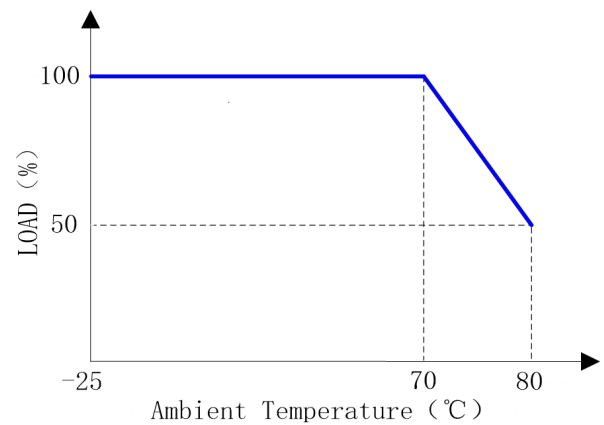
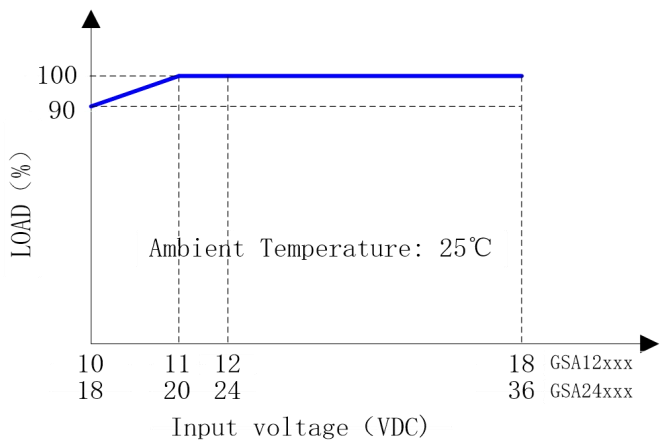
### Output Characteristics

Item	Test Condition / Description	MIN	TYP	MAX
Output power		-	-	8W
Voltage accuracy		-	±2%	±4%
Line regulation	100%Io	-	±1%	-
Load regulation	10%-100%Io	-	±1%	-
Ripple and noise	20MHz bandwidth, peak to peak value	-	±3%	-
Minimum load		0	-	-
Hot plug		Prohibited		
Paralleled working		Prohibited		

## General Characteristics

Item	Test Condition / Description	MIN	TYP	MAX
Working temperature		-25°C	-	+80°C
Storage temperature		-40°C	-	+105°C
Storage humidity		-	-	95%RH
Switching frequency		-	200kHz	-
Isolation voltage	Input to output, 60s, ≤1mA	1500VDC	-	-
MTBF	MIL-HDBK-217F@25°C	1000kh	-	-
Weight		-	30g	-
Cooling method		Natural air cooling		

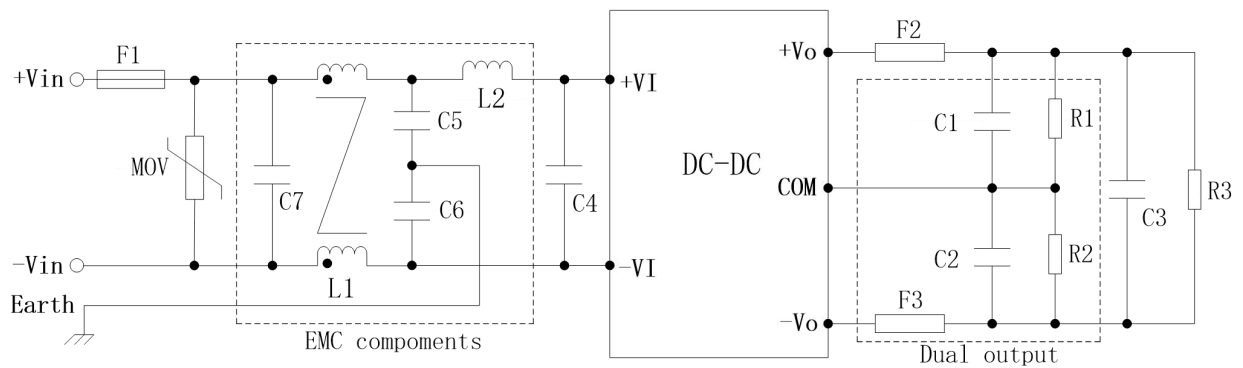
## Derating Curves



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
F1	Cut off fault circuit	Advised. Time lag type is preferred
C4	Input capacitor	Advised. 47uF for 12V input and 22uF for 24V input
MOV	Absorb surge energy	Optional. Varistor
C5, C6, C7, L1, L2,	EMC components	Optional.

## 3. Output part recommendation

Component	Function and description	Recommendation
F2, F3	Cut off fault circuit	Advised. Time lag type is preferred
C1, C2, C3	Output capacitor	Advised. For the high voltage capacitor, sufficient voltage margin must be considered
R3	Customer's load	For single output power supply module
R1, R2	Customer's load	For dual output power supply module

### Notes:

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