FEATURES:

- Ultra-wide 85 - 305VAC and 70 - 430VDC input voltage
- High efficiency up to 81%
- Protection: short circuit / over load
- Accepts AC or DC input (dual-use of same terminal)
- No Load Power Consumption 0.1W
- Output short circuit, over-current protection
- 2 Years Warranty
- ROHS Compliant

Volgen

AC-DC Converter

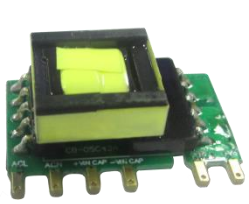
GS5H1 SERIES

5Watt

3.6KVac / 5KVdc Isolated

Single Output

Open Frame



CB Scheme CE cULus UKCA ROHS COMPLIANT

Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified

Part Number	Output Wattage	Output Voltage	Output Current	Efficiency	Max. Capacitive Load
	(W)	(VDC)	(mA)	(TYP %)	(μF)
GS5H1-S03(F)	3.3	3.3	1000	69	2200
GS5H1-S05(F)	5	5	1000	76	1500
GS5H1-S09(F)	5	9	560	77	680
GS5H1-S12(F)	5	12	420	79	470
GS5H1-S15(F)	5	15	340	79	330
GS5H1-S24(F)	5	24	210	81	100

Note:
add suffix"F"for 90°bending Products. For example:GS5H1-S05F

Input Specifications

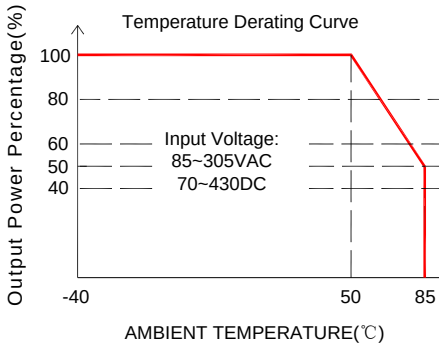
Parameters	Conditions		Min	Typ	Max	Unit
Rated Input	Vo,Io nom			100~277		Vac
Voltage Range	Vo,Io nom	AC in	85		305	Vac
		DC in	70		430	Vdc
Line frequency	Vi nom, Ionom		47		63	Hz
Input Current	Io nom	Vi:115VAC			0.20	A
		Vi:230VAC			0.10	A
Inrush Current	Io nom	Vi:115VAC		20		A
		Vi:230VAC		40		A

Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Output Voltage Accuracy	3.3V, 10%~100% load		±8		%
	5~24V, 10%~100% load		±5		%
Minimum Load		10			%
Line Regulation	Io nom, Vi min...Vi max		±1.5		%
Load Regulation	10%~100% Load		±3.0		%
No Load			0.10	0.15	W
Ripple & Noise	Vi nom,Io nom, BW=20MHz		80	150	mVp-p
Protection	Over Load	Above 110% rated output power			
		Protection type: Recovers automatically after fault condition is removed			
	Short circuit	Recovers automatically after fault condition is removed			

Note: The product is able to work with 0% - 10% load and with stable output.

Temperature Derating Graph



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General Specifications

Parameters	Conditions	Min	Typ	Max	Units
Switching Frequency	Vi nom, Io nom		65		KHz
Isolation Voltage	Input / Output		3.6KVac/ 5mA/5Secs		Vac
			5KVdc/ 5mA/5Secs		Vdc
Operating Temperature	Refer to Temperature Derating Graph	-40		+85	℃
Storage Temperature	Non Operational	-40		+105	℃
Relative Humidity	Vi nom, Io nom			95	% RH
Safety Standards	UL 62368-1, IEC62368-1 approved				
EMI Conduction & Radiation	EN55032,CLASS B(See Fig. 2 for recommended circuit)				
EMS Immunity	EN55035 (See Fig. 2 for recommended circuit)				
Dimension	L26.4 x W14.73 x H11.0 / L27.84 x W11.60 x H17.60 mm				
Cooling	Free air convection				

Part Number

GS5H1	-	S	XX	(F)
A		B	C	D

A : Series
B : Single Output
C : Output Voltage
D : Package

Basic Application

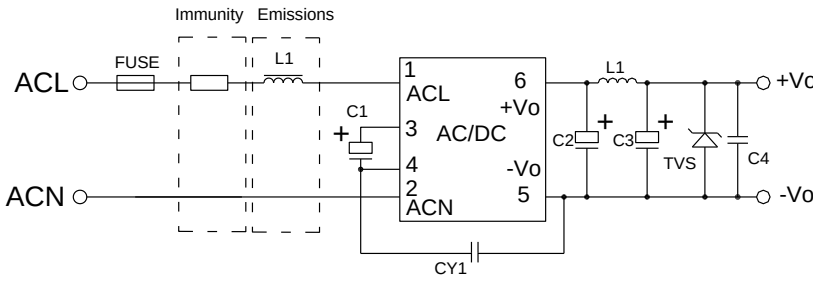
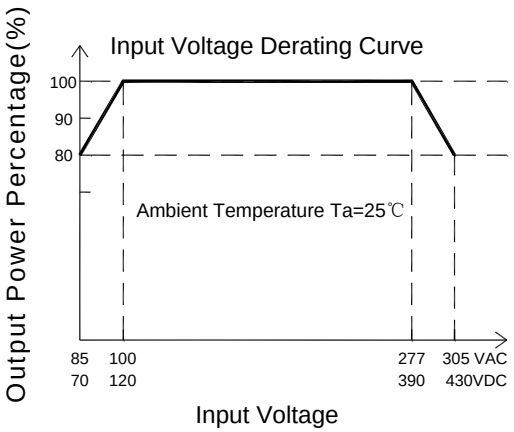
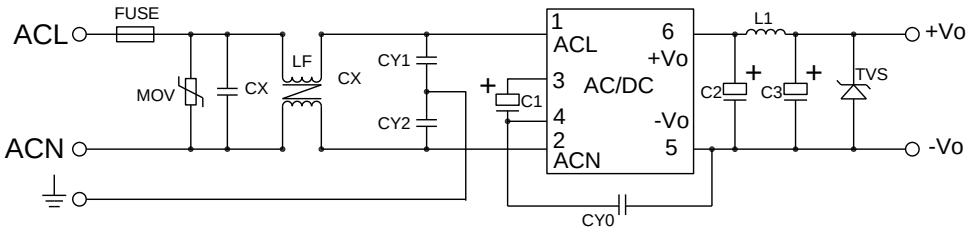


Fig.1

Input Voltage Derating Graph



EMC Solution-Recommended Circuit



	3.3~24V
FUSE	300V/2A
MOV	14D561K
LF	UU9.8,30mH Min
CX	0.1uF/310V
CY1	470pF/250V
CY2	

	3.3~5V	9~15V	24V
C1	15uF/450V		
CY0	1000pF/400V		
C2	820uF/10V (solid-state capacitor)	470uF/25V (solid-state capacitor)	330uF/35V (solid-state capacitor)
C3	470uF/10V	220uF/35V	
L1	2.2uH		

	3.3~5V	9V	12V,15V	24V
TVS	SMBJ7.0A	SMBJ12A	SMBJ20A	SMBJ30A

Fig.2

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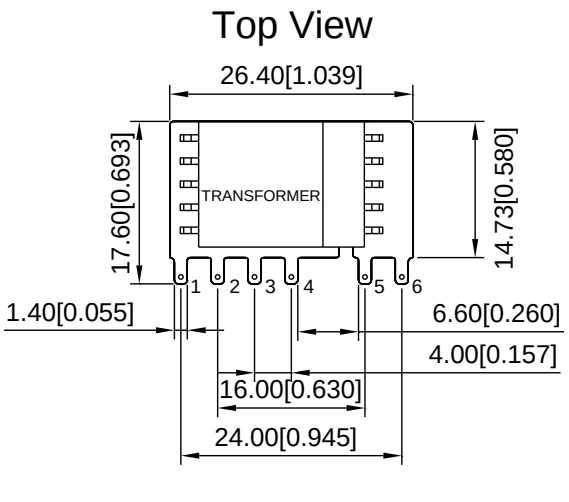
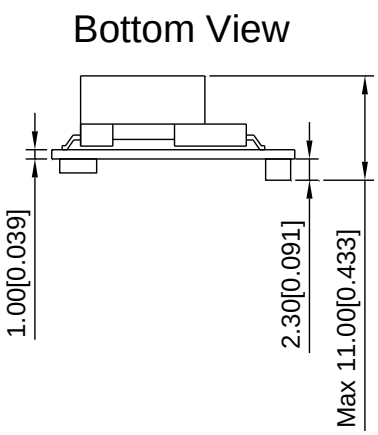
GS5H1-SXX Dimensions

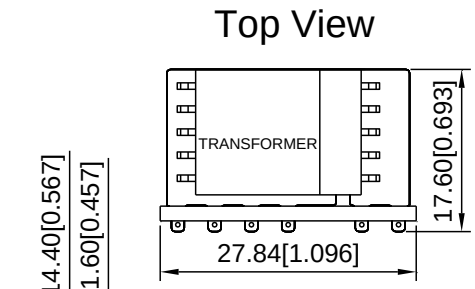


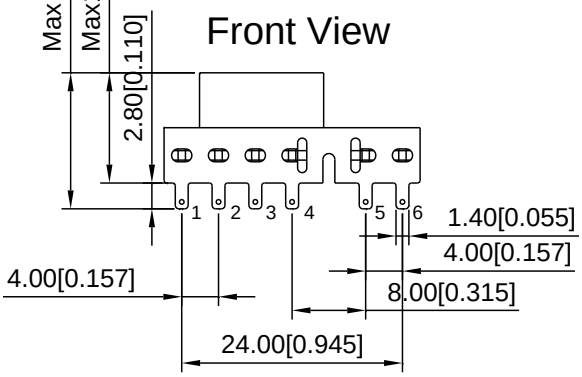


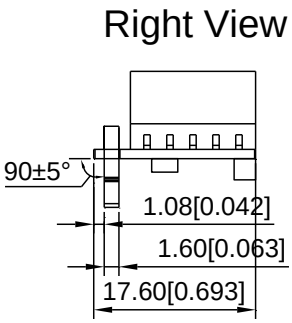
	Model
PIN	Single
1	ACL
2	ACN
3	+V(cap)
4	-V(cap)
5	-Vo
6	+Vo

Note:
Unit: mm(inch)
Pin section tolerances:+0.15(+0.006)
General tolerances:+1.0(+0.040)

GS5H1-SXXF Dimensions







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Note:
Unit: mm(inch)
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