

**FEATURES :**

- Universal Input 85~305VAC
- High Efficiency Up to 70%
- Protection: Short Circuit / Over Load
- Ultra Small Size
- 3 Years Warranty
- 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)
GS1-S05(F)	1	5	200	66	600
GS1-S09(F)	1	9	111	67	470
GS1-S12(F)	1	12	83	69	220
GS1-S15(F)	1	15	67	70	180
GS1-S24(F)	1	24	42	68	120

**Note:**  
add suffix "F" for 90°bending Products. For example: GS1-S05F, GS1-S12F

**Input Specifications**

Parameters	Conditions	Min	Typ	Max	Units
<b>Rated Input Voltage</b>	Vo, lo nom		100~277		Vac
<b>Voltage Range</b>	Vo, lo nom	AC in	85	305	Vac
		DC in	70	430	Vdc
<b>Line frequency</b>	Vi nom, lo nom	47		63	Hz
<b>Input Current</b>	lo nom	Vi:115VAC		0.06	A
		Vi:230VAC		0.03	A
<b>Inrush Current</b>	lo nom	Vi:115VAC	10		A
		Vi:230VAC	15		A

**Output Specifications**

Parameters	Conditions	Min	Typ	Max	Units
<b>Output Voltage Accuracy</b>	Vi nom, lo nom			±5	%
<b>Minimum Load</b>	Vi nom	0			%
<b>Line Regulation</b>	lo nom, Vi min...Vi max		±1.5		%
<b>Load Regulation</b>	5%~100% Load		±2.5		%
<b>No Load</b>				0.5	W
<b>Ripple &amp; Noise</b>	Vi nom, lo nom, BW=20MHz		50	120	mVp-p
<b>Protection</b>	Over Load	Above 110% rated output power			
		<b>Protection type:</b> Recovers automatically after fault condition is removed			
	Short circuit	Recovers automatically after fault condition is removed			

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AC-DC Converter

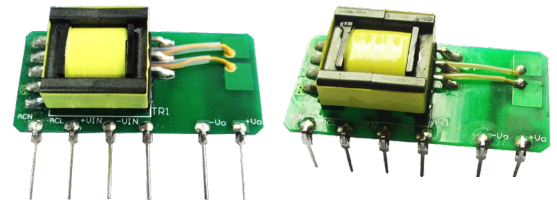
GS1 SERIES

1Watt

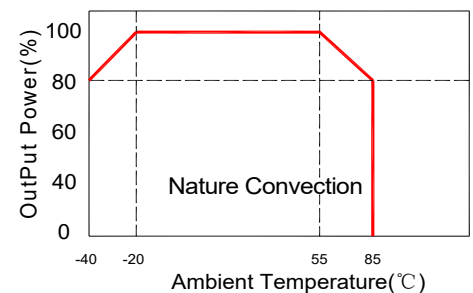
3KVac Isolated

Single Output

Open Frame



**Temperature Derating Graph**



General Specifications

Parameters	Conditions	Min	Typ	Max	Units
Switching Frequency	Vi nom, Io nom			60	KHz
Isolation Voltage	Input / Output	3KVac/ 5mA/5Secs			
Isolation Resistance	Input / Output,@500 Vdc	100			MΩ
Operating Temperature	Refer to Temperature Derating Graph	-40		+85	°C
Storage Temperature	Non Operational	-40		+105	°C
Relative Humidity	Vi nom, Io nom			85	% RH
Safety Standards	Design refer to UL60950-1,IEC60950-1				
EMI Conduction & Radiation	EN55032,CLASS B(See Fig. 1 for recommended circuit)				
EMS Immunity	EN61000 (See Fig. 1 for recommended circuit)				
Dimension	L35.0 x W11.0 x H18.0 mm				
Cooling	Free air convection				

Part Number

GS1 - S 05 (F)  
A B C D

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

EMC Solution-Recommended Circuit

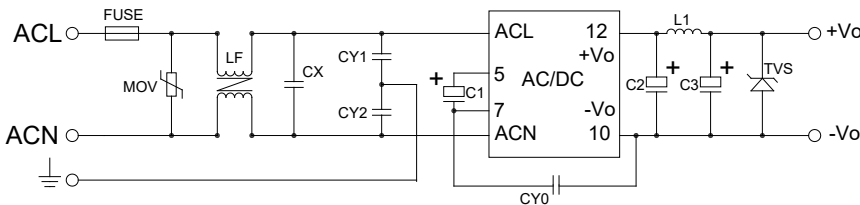
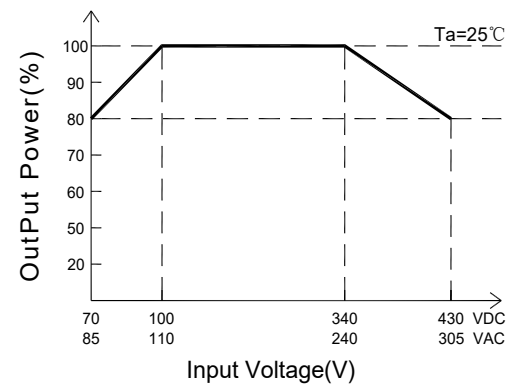


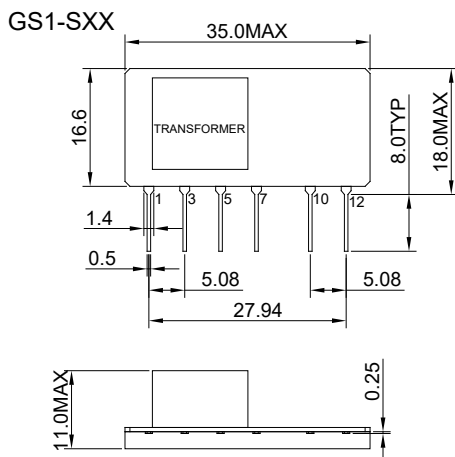
Fig.1

	5~24V		5~9V	12~24V
FUSE	250V/1A	C1	4.7uF/400V	
MOV	07D471K	CY0	1000pF/250V	
LF	UU9.8,30mH Min	C2	220uF/35V	68uF/35V
CX	0.1uF/275V	C3	68uF/35V	
CY1	470pF/250V	L1	2.2uH	
CY2				
	5V	9V	12V,15V	24V
TVS	SMBJ7.0A	SMBJ12A	SMBJ20A	SMBJ30A

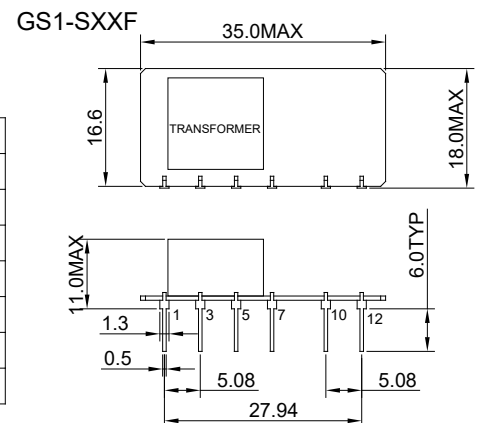
Input Voltage Derating Graph



Markings and Dimensions



PIN	Model
	Single
1	ACN
3	ACL
5	+V(cap)
7	-V(cap)
10	-Vo
12	+Vo



UNIT:mm Unless otherwise specified,all tolerances are ±0.5