

**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

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, Io nom	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 <b>Protection type:</b> 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.



AC-DC Converter

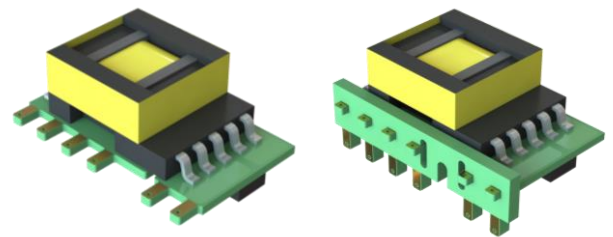
GS5H1SERIES

5Watt

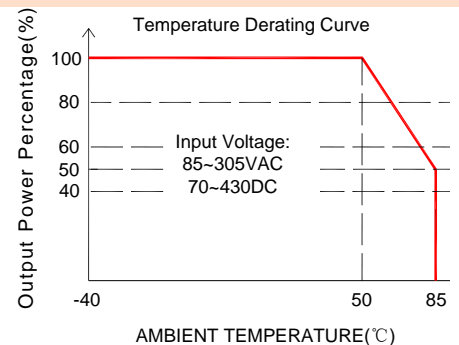
3.6KVac / 5KVdc Isolated

Single Output

Open Frame



Temperature Derating Graph



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	°C
Storage Temperature	Non Operational	-40		+105	°C
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

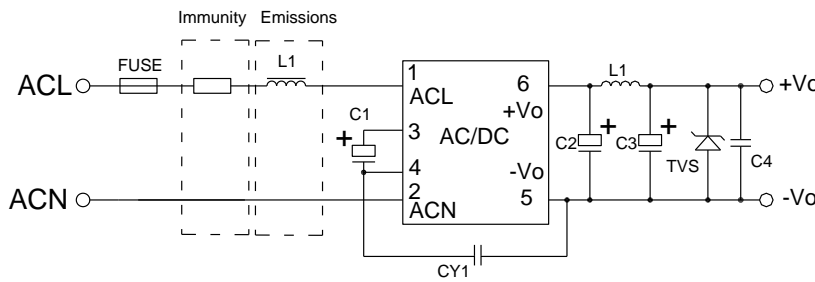
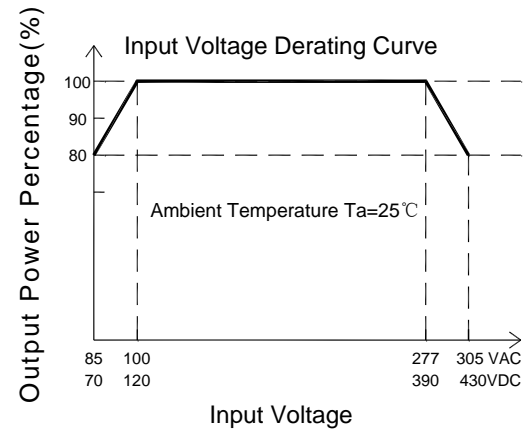


Fig.1

Input Voltage Derating Graph



EMC Solution-Recommended Circuit

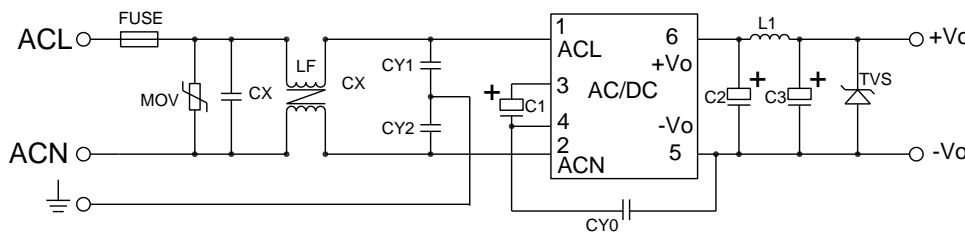
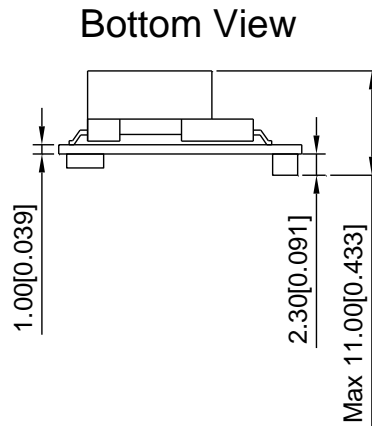
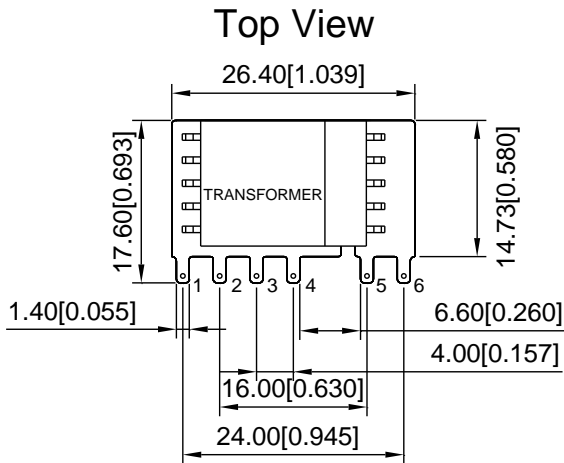


Fig.2

	3.3~24V	3.3~5V	9~15V	24V
FUSE	300V/2A	C1	15uF/450V	
MOV	14D561K	CY0	1000pF/400V	
LF	UU9.8,30mH Min	C2	820uF/10V (solid-state capacitor)	470uF/25V (solid-state capacitor)
CX	0.1uF/310V	C3	220uF/35V (solid-state capacitor)	330uF/35V (solid-state capacitor)
CY1	470pF/250V	L1	2.2uH	
CY2				
	3.3~5V	9V	12V,15V	24V
TVS	SMBJ7.0A	SMBJ12A	SMBJ20A	SMBJ30A

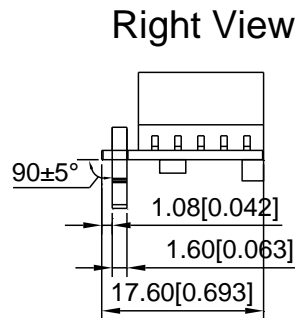
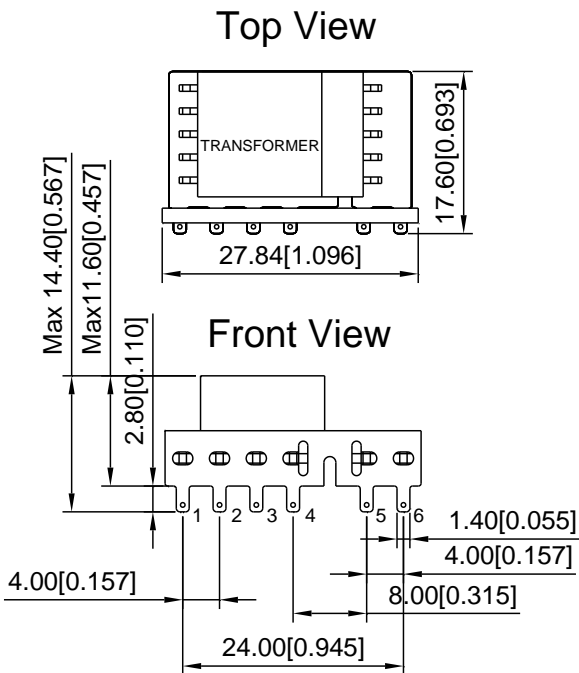
GS5H1-SXX Dimensions



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

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

GS5H1-SXXF Dimensions

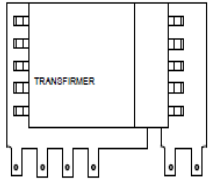


PIN	Model
1	Single
2	ACL
3	ACN
4	+V(cap)
5	-V(cap)
6	+Vo

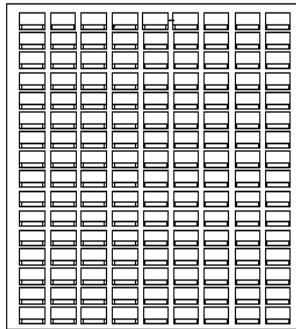
Note:  
 Unit: mm(inch)  
 Pin section tolerances: +0.15(+0.006)  
 General tolerances: +1.0(+0.040)

GS5H1-SXX Package

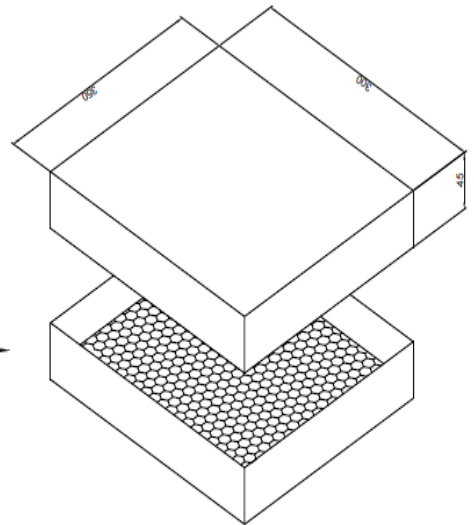
1.Weight:5.5grams/pcs    2.outer carton unit: 432pcs/box    3.Weight: 4.1kg    per carton



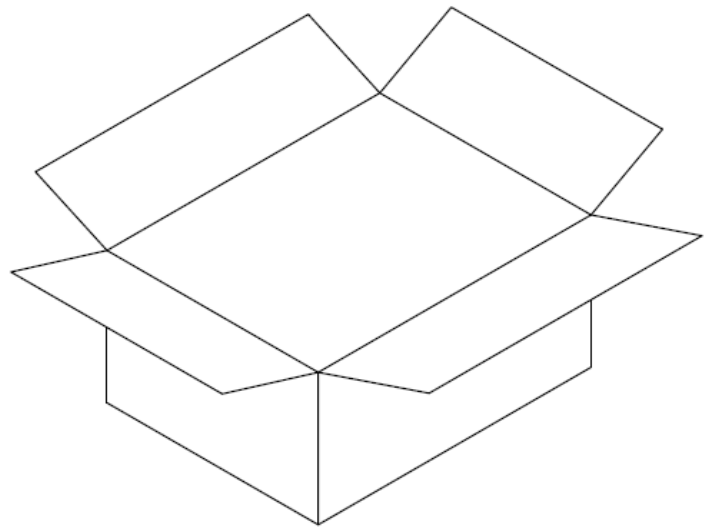
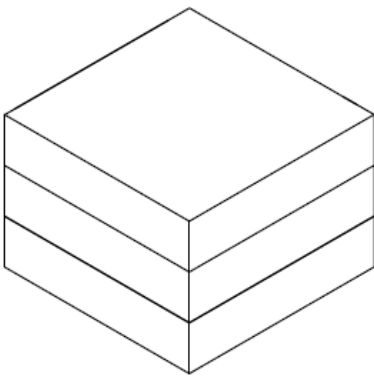
Mechanicals



144Pcs/BOX



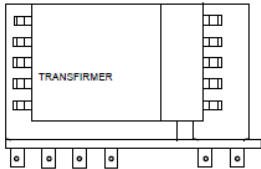
Box Size:350x300x45



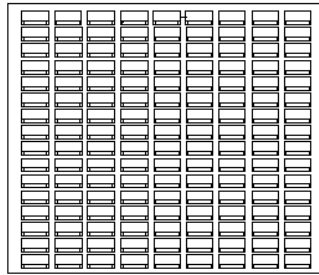
Outer carton: 375x320x160mm

GS5H1-SXXF Package

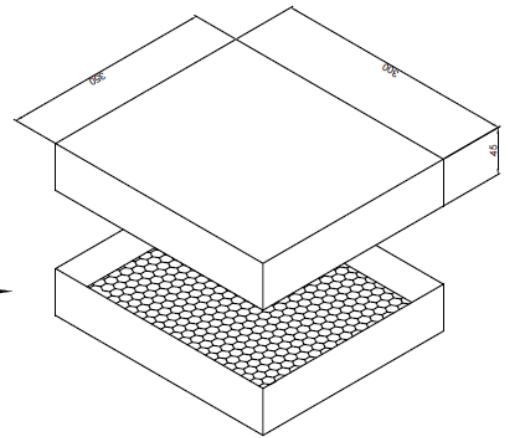
1.Weight:6.3grams/pcs    2.outer carton unit: 432pcs/box    3.Weight: 4.4kg per carton



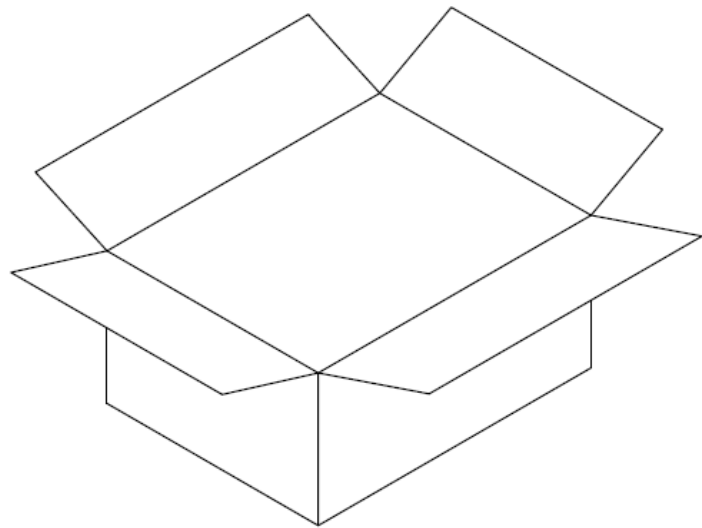
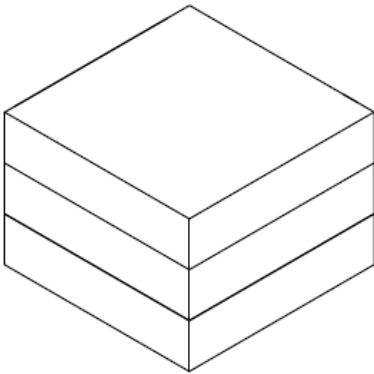
Mechanicals



144Pcs/BOX



Box Size:350x300x45



Outer carton: 375x320x160mm