

**FEATURES :**

- Ultra Compact Size 1.0" x 1.0" x 0.64" Package
- Universal Input 90~264VAC
- High Efficiency Up To 85%
- Protection: Short Circuit /Overload/Over Voltage
- Fully Encapsulated Plastic Case
- UL/cUL/IEC/EN60950-1, 62368-1 Approved
- EMC Standard of EMI EN55032:2015 Approved
- EMC Standard of EMS EN55024:2010 Approved
- 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	Ripple & Noise	Efficiency	Max. Capacitive Load
	(W)	(VDC)	(mA)	(mV) max(Note)	(TYP %)	(µF)
GA5E-S03-X	5.0	3.3	1515	60	73	2200
GA5E-S05-X	5.0	5	1000	60	80	1000
GA5E-S09-X	5.0	9	555	90	81	300
GA5E-S12-X	5.0	12	416	120	81	160
GA5E-S15-X	5.0	15	333	150	82	100
GA5E-S24-X	5.0	24	208	240	82	43
GA5E-S48-X	5.0	48	104	480	84	10

**Note:**

X= ONE digit representing the output power (W) The output power is rising in steps of 1W from 1W to the max. output Power; When the output power is maximum power, X is omitted. E.g:3W=GA5E-S05-3, GA5E-S15-3 ; 5W=GA5E-S05, GA5E-S15

**Input Specifications**

Parameters	Conditions	Min	Typ	Max	Units
Rated Input Voltage	Vo,lo nom		100~240		Vac
Voltage Range	Vo,lo nom	AC in	90	264	Vac
		DC in	120	370	Vdc
Line Frequency	Vi nom,lo nom	47	50	63	Hz
Inrush Current	lo nom	Vi:115VAC		5	A
		Vi:230VAC		10	A
Input Fuse	VDE/UL/CCC	FUSE 2.5A/250V (Slow blow)			

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AC-DC Converter

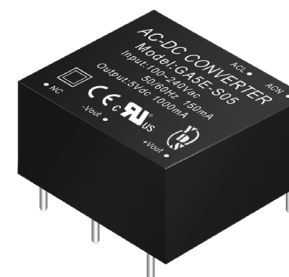
GA5E SERIES

1~5Watt

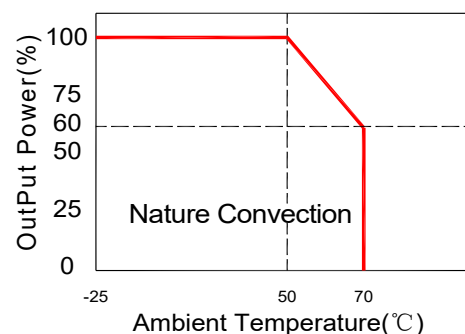
3KV Isolated

Single Output

1" x 1" Package Module



Temperature Derating Graph



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Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Output Voltage Accuracy	Vi nom, lo nom	3.3...5V Models		±3	%
		9...48V Models		±2	%
Minimum Load	Vi nom	0			%
Line Regulation	lo nom, Vi min...Vi max			±1.0	%
Load Regulation				±1.0	%
Transient recovery time	Vi nom, lo nom = ↔0.5 lo nom		1000		us
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			
	Over Voltage	120%-150% rated output Voltage <b>Protection type:</b> Zener diode clamp			

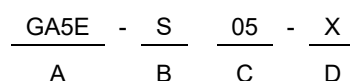
Note :

Ripple & noise is measured by using 20 MHz bandwidth, measured with a 10uf paralleled with a high-frequency 0.47uf capacitor across each output by full load.

General Specifications

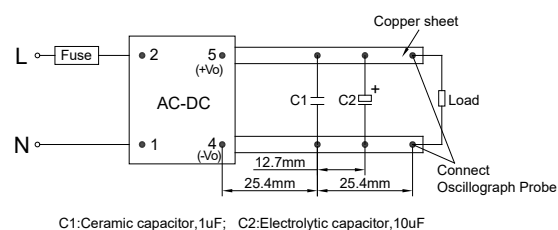
Parameters	Conditions	Min	Typ	Max	Units
Switching Frequency	Vi nom, lo nom		65		KHz
Isolation Voltage	Input / Output		3KVac/ 5mA/5Secs		
Isolation Resistance	Input / Output, @500 Vdc	100			MΩ
Operating Temperature	Refer to Temperature Derating Graph	-25		+70	°C
Storage Temperature	Non Operational	-40		+85	°C
Relative Humidity	Vi nom, lo nom			95	% RH
Safety Standards	UL 62368-1 , IEC 62368-1 approved				
EMI Conduction & Radiation	Compliance to EN55032, CLASS B				
EMS Immunity	Compliance to EN61000				
Dimension	L25.4 x W25.4 x H16.1 mm				
Cooling	Free air convection				

Part Number

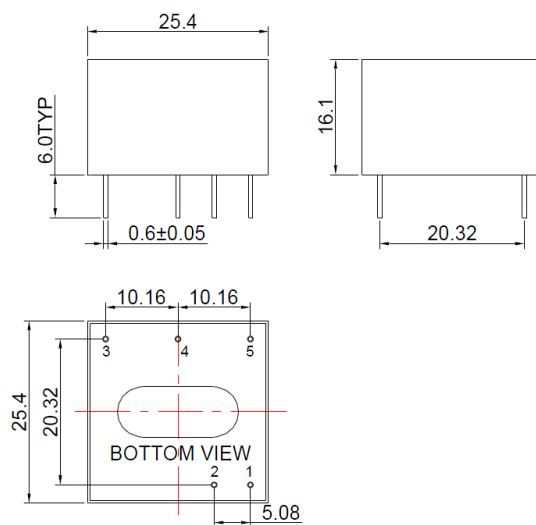


- A : Series
- B : Single Output
- C : Output Voltage
- D : Output Power

Parallel Lines Measure



Markings and Dimensions



Unit : mm,  
Unless otherwise specified, all tolerances are ±0.50

PIN	Model
1	ACN
2	ACL
3	NC
4	-Vo
5	+Vo

