

FEATURES :

- 1" x 1" Package
- Universal Input 90~264VAC
- High Efficiency Up To 85%
- Protection: Short Circuit /Overload/Over Voltage
- Fully Encapsulated Plastic Case
- 3 Years Warranty
- ROHS Compliant

YUAN DEAN SCIENTIFIC



AC-DC Converter

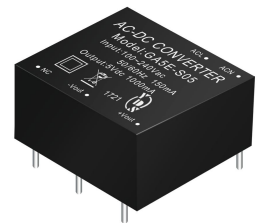
GA5E SERIES

5Watt

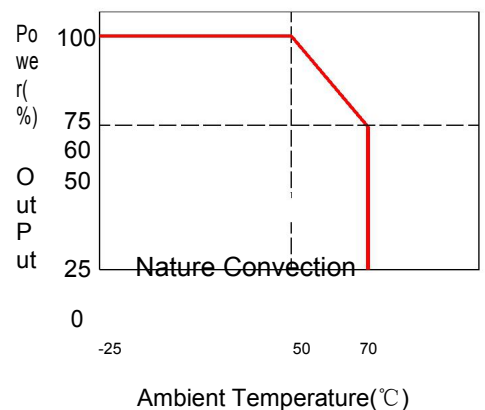
3KV Isolated

Single Output

1" x 1" Package Module



Temperature Derating Graph



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	5.0	3.3	1515	60	74	2200
GA5E-S05	5.0	5	1000	60	80	1000
GA5E-S09	5.0	9	555	90	82	300
GA5E-S12	5.0	12	416	120	82	160
GA5E-S15	5.0	15	333	150	83	100
GA5E-S24	5.0	24	208	240	83	43
GA5E-S48	5.0	48	104	480	85	10

Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Rated Input Voltage	Vo, Io nom		100~240		Vac
Voltage Range	Vo, Io nom	AC in	90	264	Vac
		DC in	120	370	Vdc
Line frequency	Vi nom, Io nom	47	50/60	63	Hz
Inrush Current	Io nom	Vi:115VAC		10	A
		Vi:230VAC		20	A
Input Fuse	VDE/UL/CCC	FUSE 2.5A/250V (Slow blow)			

Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Output Voltage Accuracy	Vi nom, 3.3...5V Models			±3	%
	Io nom, 9...48V Models			±2	%
Minimum Load	Vi nom	0			%
Line Regulation	Io nom, Vi min...Vi max			±1.0	%
Load Regulation				±1.0	%
Transient response setting time	Vi nom, Io nom = ↔ 0.5 Io nom		1000		us
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			
	Over Voltage	120%-150% rated output Voltage Protection type: 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

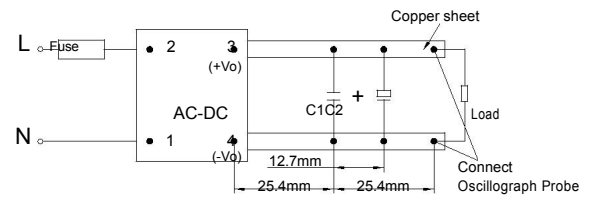
Parameters	Conditions	Min	Typ	Max	Units
Switching Frequency	Vi nom, Io nom		65		KHz
Isolation Voltage	Input / Output		3kVac/ 5mA/5Secs		
Isolation Resistance	Input / Output, @500 Vdc	100			MΩ
Operating Temperature	Refer to Temperature Derating Graph	-25		+70	°C
Storage Temperature	Non Operational	-40		+85	°C
Relative Humidity	Vi nom, Io nom			95	% RH
Safety Standards	Design refer to UL60950-1, IEC60950-1				
EMI Conduction & Radiation	Design refer to EN55022, CLASS B				
EMS Immunity	Design refer to EN61000				
Dimension	L25.4 x W25.4 x H16.1 mm				
Cooling	Free air convection				

Part Number

GA5E - S 05
A B C

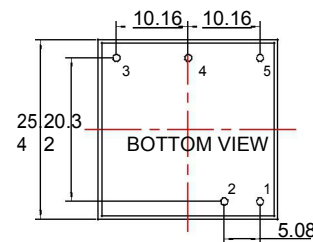
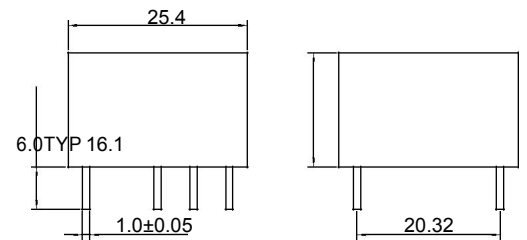
A: Series
B: Single Output
C: Output Voltage

Parallel Lines Measure



C1: Ceramic capacitor, 1uF; C2: Electrolytic capacitor, 10uF

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