

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

YUAN DEAN SCIENTIFIC



AC-DC Converter

GA5E SERIES

1~5Watt

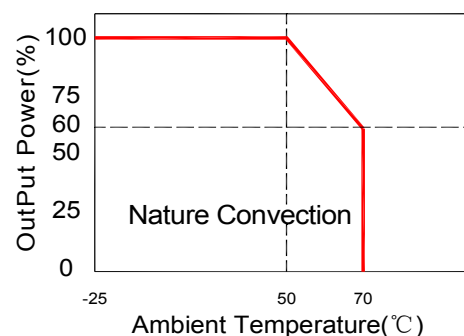
3KV Isolated

Single Output

1" x 1" Package Module



Temperature Derating Graph



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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, 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	63	Hz
Inrush Current	Io nom	Vi:115VAC		5	A
		Vi:230VAC		10	A
Input Fuse	VDE/UL/CCC FUSE 2.5A/250V (Slow blow)				



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Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Output Voltage Accuracy	Vi nom, Io nom	3.3....5V Models		±3	%
		9....48V Models		±2	%
Minimum Load	Vi nom	0			%
Line Regulation	Io nom, Vi min...Vi max			±1.0	%
Load Regulation				±1.0	%
Transient recovery time	Vi nom, Io nom = $\leftrightarrow$ 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

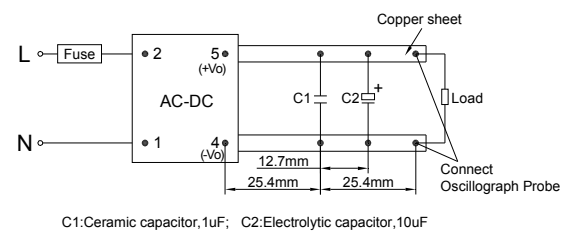
Parameters	Conditions	Min	Typ	Max	Units
Switching Frequency	Vi nom, Io nom		65		KHz
Isolation Voltage	Input / Output		3KVac/ 5mA/5Secs		
Isolation Resistance	Input / Output, @500 Vdc	100			MΩ
Operating Temperature	Refer to Temperature Derating Graph	-25		+70	°C
Storage Temperature	Non Operational	-40		+85	°C
Relative Humidity	Vi nom, Io nom			95	% RH
Safety Standards	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

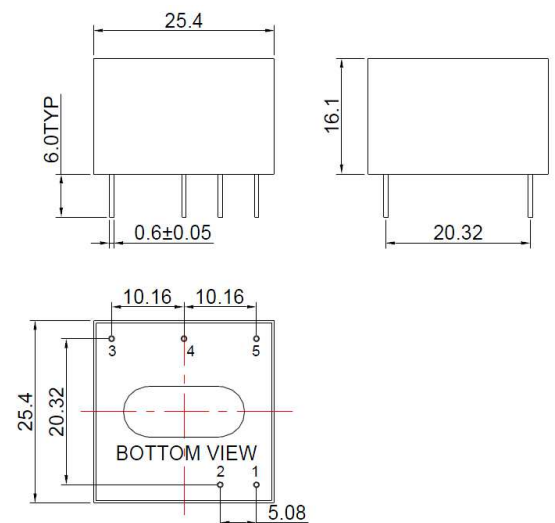
GA5E	-	S	05	-	X
A		B	C		D

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 Single
1	ACN
2	ACL
3	NC
4	-Vo
5	+Vo