ANHUI-TIGER
Passive Components

AC/DC Converter

TGC20-K

Address： Building.E9 & E13, Xingmeng Park Enterprises Mansion, No.198, Mingzhu Avenue, High-tech Zone, Hefei, 230088, China
Fax: 0551-65547975
sale@tiger-transformer.com

ANHUI-TIGER
Passive Components

TGC20-K

Features

Regulated Converter

- Wide input range 85-264VAC / 85-305VAC
- Standby mode optimized PSU (ENER Lot 6)
- Operating Altitude up to 5000m
- Operating temperature range: -40°C to +85°C
- Class II installations (without FG)
- EMC compliant without external components
- No load power consumption 40mW typ.

Description

The TGC20-K series are highly efficient PCB-mount power conversion modules with ultra-low energy losses especially in light load conditions, making them a benchmark for always-on and standby mode operations, which are typically coming along with IoT and smart applications. The power supply units cover worldwide mains input range of 85VAC up to 305VAC and come with international safety certifications for industrial, AV and ITE as well as household standards. These AC/DC modules operate in a temperature range of -40°C to +85°C with up to 5000m operating altitude and offer fully protected single or dual outputs as well as EMC class B compliance without the need of any external components in floating connections. Modified versions for OVC III requirements are available on request.

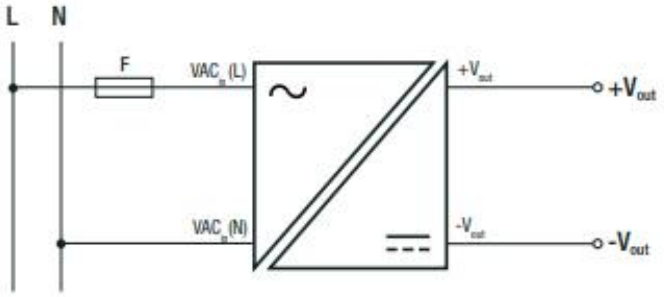
Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated

BASIC CHARACTERISTICS					
Parameter	**Condition**		**Min.**	**Typ.**	**Max.**
Internal Input Filter					Pi type
Nominal Input Voltage [5, 6]	50/60Hz	standard version "/277" version	100VAC		240VAC 277VAC
Operating Range	standard	47-63Hz DC	85VAC 120VDC		264VAC 370VDC
	"/277" version	47-63Hz DC	85VAC 120VDC		305VAC 430VDC
Input Current	115VAC 230VAC 277VAC				450mA 400mA 300mA
Inrush Current	cold start at +25°C	115VAC 230VAC 277VAC			20A 40A 50A
No Load Power Consumption	230VAC			40mW	
ErP Lot 6 Standby Mode Conformity (Output Load Capability)	Input Power =	0.5W 1.0W 2.0W			0.3W 0.7W 1.6W
Input Frequency Range	AC Input		47Hz		63Hz
Minimum Load [8]	single dual (required for regulation on both outputs)		0%	10%	
Power Factor	115VAC 230VAC 277VAC		0.6 0.5 0.45		
Start-up Time				150ms	
Rise Time				40ms	
Hold-up Time	115VAC 230VAC 277VAC			12ms 60ms 90ms	
Internal Operating Frequency					100kHz
Output Ripple and Noise [7]	20MHz BW	5Vout others		100mVp-p	1% of Vout

Notes: Note4: No proper operation with DC input voltage Note5: The products were submitted for safety files at AC-Input operation Note6: Refer to "Line Deratin

ANHUI-TIGER
Passive Components

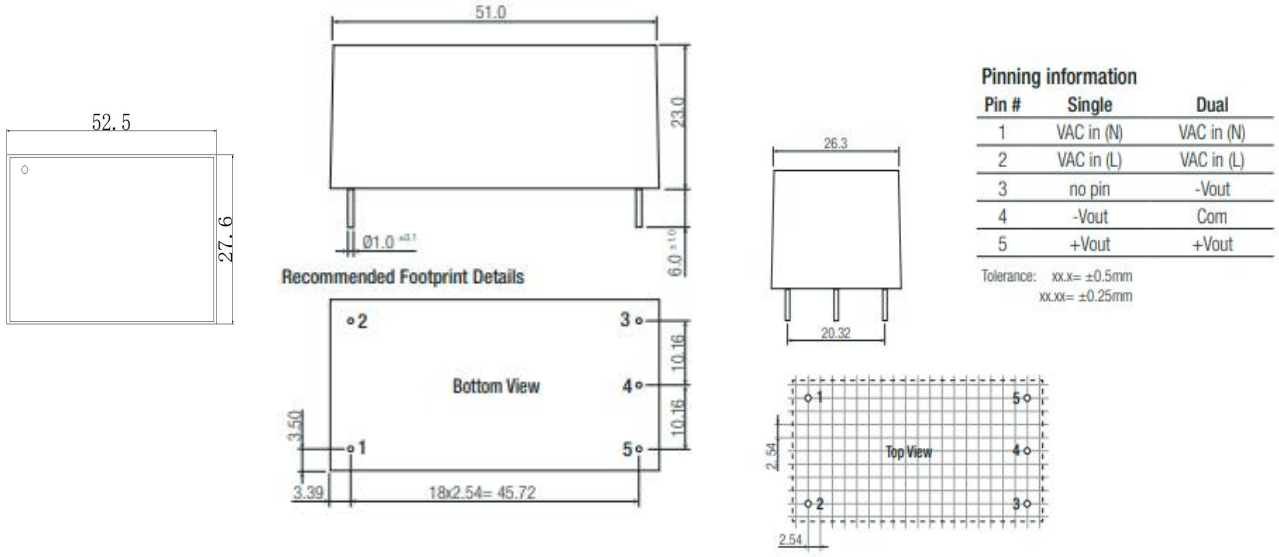
Protection Circuitm



Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated

ENVIRONMENTAL			
Parameter	**Condition**		**Value**
Operating Temperature Range	@ natural convection 0.1m/s	full load	-40°C to +55°C
		refer to ***"Derating Graph"***	-40°C to +85°C
Maximum Case Temperature			+95°C
Temperature Coefficient			0.05%/K
Operating Altitude [12]			5000m
Operating Humidity	non-condensing		20% - 90% RH max.
IP Rating			IP20
Pollution Degree			PD2
Vibration	according to MIL-STD-202G		10-500Hz, 2G 10min./1cycle, period 60min. along x,y,z axes
Design Lifetime	+25°C		130 x 10^3 hours
	+55°C		16 x 10^3 hours
MTBF	according to MIL-HDBK-217F, G.B.	+25°C	>1196 x 10^3 hours
		+40°C	>955 x 10^3 hours

Dimension Drawing (mm)



Pinning information

Pin #	Single	Dual
1	VAC in (N)	VAC in (N)
2	VAC in (L)	VAC in (L)
3	no pin	-Vout
4	-Vout	Com
5	+Vout	+Vout

Tolerance: xx.x= ±0.5mm
xx.xx= ±0.25mm