

ATC30 SERIES

30 Watts

KEY FEATURES

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-305VAC
- High Efficiency up to 89%
- Isolation Class II
- <0.3W No Load Input Power
- Very Small 2.52" x 1.77" x 0.92 " Package
- CE, CB and UL Approval
- 3-Year Product Warranty



ELECTRICAL SPECIFICATIONS

All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated

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Model No. (Single Output)		ATC30-3.3S	ATC30-5S	ATC30-12S	ATC30-15S	ATC30-24S
Max Output Wattage (W)		16.5W	25W	30W	30W	30W
Input	Voltage (Note1)	90-305 VAC or 120-430 VDC				
	Frequency (Hz)	47-63 Hz				
	Current (Full load)	600 mA max. (115 VAC) /400 mA max. (230 VAC)				
	Inrush Current (<2ms)	30 A max. (115 VAC) / 60 A max. (230 VAC)				
	Leakage Current	0.25 mA max.				
	No Load Input Power (<240 VAC)	<0.3W				
	External Fuse (mandatory)	3.15 A slow blow type				
Output	Voltage (V.DC.)	3.3V	5V	12V	15V	24V
	Voltage Accuracy	±2%				
	Current (mA) max	5000	5000	2500	2000	1250
	Line Regulation (LL-HL) (typ.)	±0.5%				
	Load Regulation (0-100%) (typ.)	±1.5%	±1%			
	Minimum Load	0%				
	Maximum Capacitive Load	6800 uF	6800 uF	1600 uF	1200 uF	470 uF
	Ripple & Noise (max.) (Note2)	100mVp-p	100mVp-p	150mVp-p	150mVp-p	240mVp-p
	Efficiency (at 230 VAC)	80%	84%	89%	86%	86%
	Hold-up Time	10 ms min.				
	Switching Frequency (typ.) (at 230 VAC)	66 kHz				
Protection	Over Power Protection	Hiccup technique, auto-recovery				
	Over Voltage Protection	Zener diode clamp				
	Short Circuit Protection	Hiccup mode, indefinite (automatic recovery)				
Isolation	Input-Output (V.AC)	3000V				
	Input-FG (V.AC)	1500V				
	Output-FG (V.AC)	500V				
Environment	Operating Temperature	-40°C...+70°C (with derating)				
	Storage Temperature	-40°C...+85°C				
	Max Case Operating Temperature	Under 115 VAC 78°C , others 85°C				
	Temperature Coefficient	±0.02%/°C				
	Humidity	95% RH				
	MTBF	>400,000 h @ 25°C (MIL-HDBK-217F)				
Physical	Dimension (L x W x H)	2.52 x 1.77 x 0.92 Inches (64.0 x 45.0 x 23.5 mm) Tolerance ±0.5 mm				
	Case Material	Plastic resin (flammability to UL 94V-0)				
	Weight	130 g				
	Cooling Method	Free air convection				

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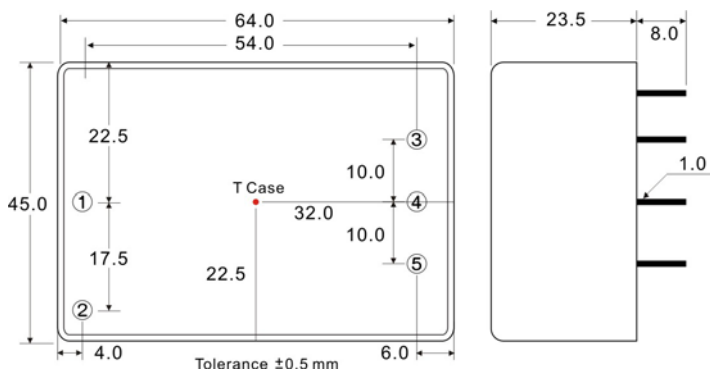
All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated

Model No.	(Single Output)	ATC30-3.3S	ATC30-5S	ATC30-12S	ATC30-15S	ATC30-24S
Safety	Agency Approvals	CE, UL/cUL, CB				
EMC	EMI (Conducted & Radiated Emission)	EN 55022 class B				
	EMS (Noise Immunity)	EN 55024				
	ESD	EN61000-4-2 air $\pm$ 8kV , Contact $\pm$ 4kV (A)				
	Radiated Immunity	EN61000-4-3 3V/m (A)				
	Fast Transient	EN61000-4-4 $\pm$ 1kV (A)				
	Surge	EN61000-4-5 $\pm$ 1kV (A)				
	Conducted Immunity	EN61000-4-6 3Vrms (A)				
	PFMF	EN61000-4-8 1A/m (A)				
	Dips	EN61000-4-11 30% 500ms (A)				

NOTE

1. Please check the derating curve for more details.
2. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
3. It's necessary to add Varistor 14S561K at L / N input side in parallel.
4. Please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw

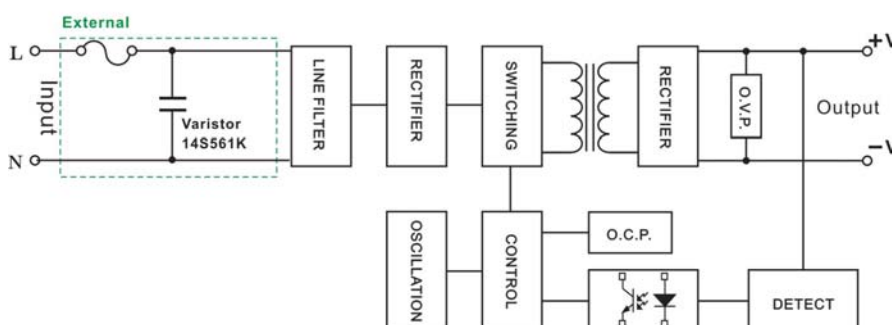
MECHANICAL DIMENSION (Top View)



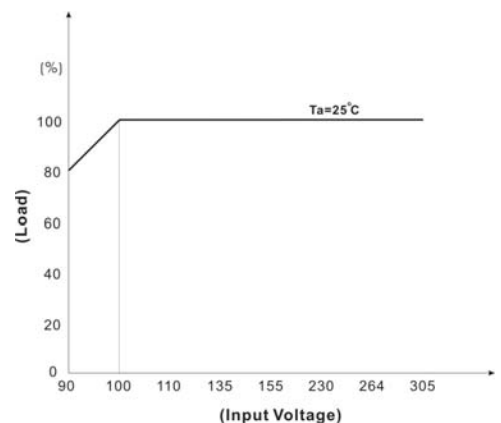
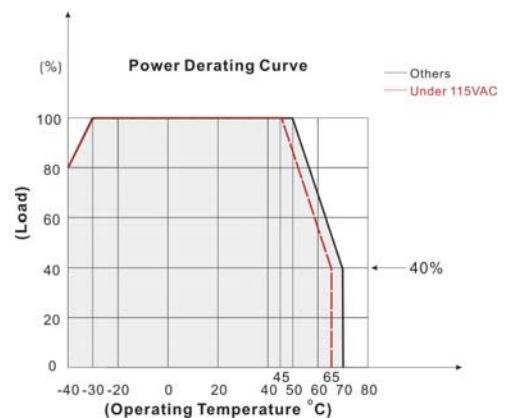
PIN#	Single
1	AC IN (N)
2	AC IN (L)
3	-DC OUT
4	NO PIN
5	+DC OUT

BLOCK DIAGRAM

Single Output

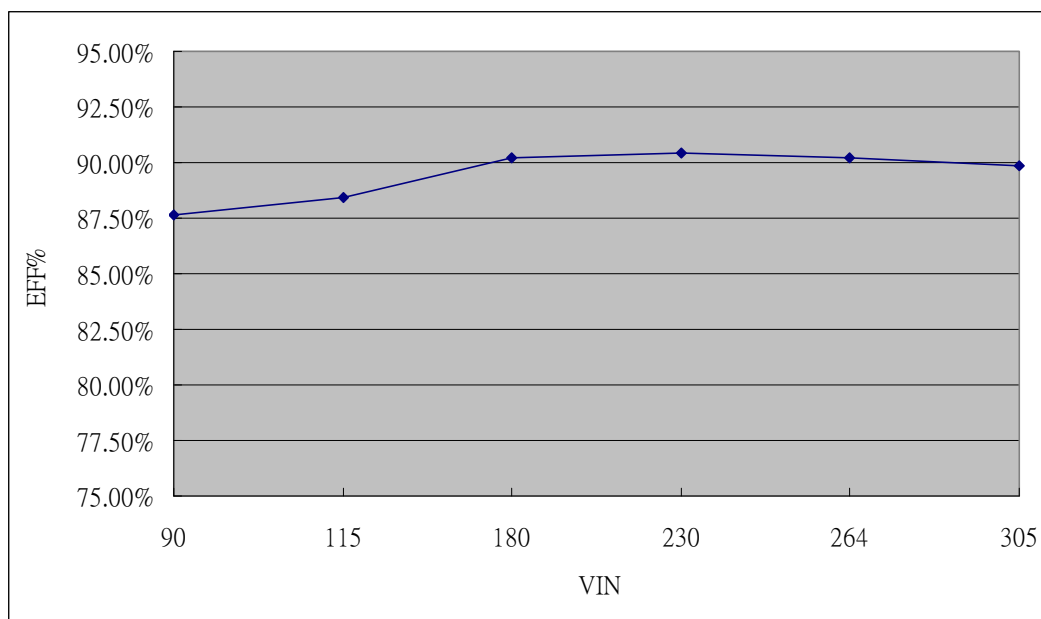


DERATING



EFFICIENCY VERSUS LOAD
ATC30-12S
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264	305
Efficiency (%)	87.6	88.4	90.2	90.4	90.2	89.9


LOAD VS Efficiency

Load (%)	10	20	30	40	50	60	70	80	90	100
230V (%)	84.6	87.9	89.3	90.2	90.3	89.9	89.9	90.1	90.1	90.4

