

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 1.8" x 0.93 " 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

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
Max Output Wattage (W)		16.5W	25W	30W	30W	30W
Input	Voltage (Note1)	90-305 VAC or 120-430 VDC				
	Frequency (Hz)	50 / 60 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 (recommended)	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 (automatic recovery)				
Isolation	Input-Output (V.AC)	3000V				
	Input-FG (V.AC)	1500V				
	Output-FG (V.AC)	500V				
Environment	Operating Temperature (Note 4)	-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	Dimensions (L x W x H)	2.52 x 1.8 x 0.93 Inches (64.1 x 45.6 x 23.5 mm) Tolerance ±0.5 mm, Height Tolerance ±1 mm				
	Case Material	Plastic resin (flammability to UL 94V-0)				
	Weight	130 g				
	Cooling Method	Free air convection				

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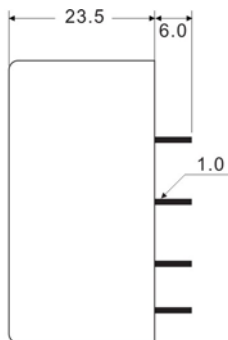
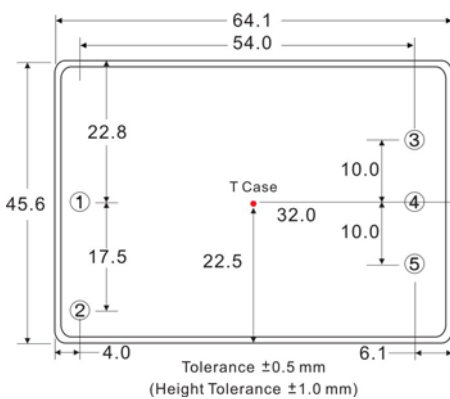
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Model No.	(Single Output)	ATC30-3.3S	ATC30-5S	ATC30-12S	ATC30-15S	ATC30-24S
Safety	Agency Approvals	IEC / EN 60950, UL / IEC / EN 62368-1				
EMC	EMI (Conducted & Radiated Emission)	EN 55032 class B				
	EMS (Noise Immunity)	EN 55024				
	ESD	EN61000-4-2 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 recommended Varistor 14S561K at L / N input side in parallel.
4. Due to varying customer application conditions, the product is tested for maximum operating temperature under full load only. For other regulatory requirements, please contact ARCH.
5. Please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw

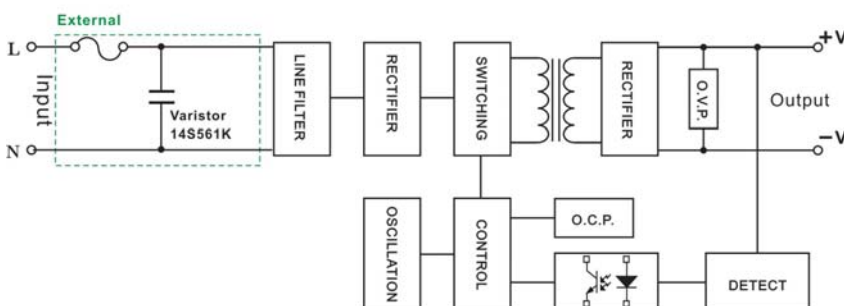
MECHANICAL DIMENSIONS (Top View)



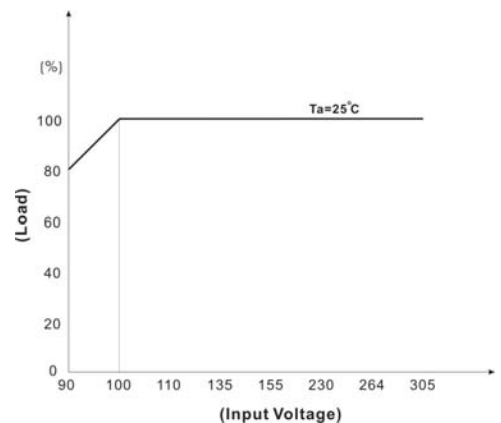
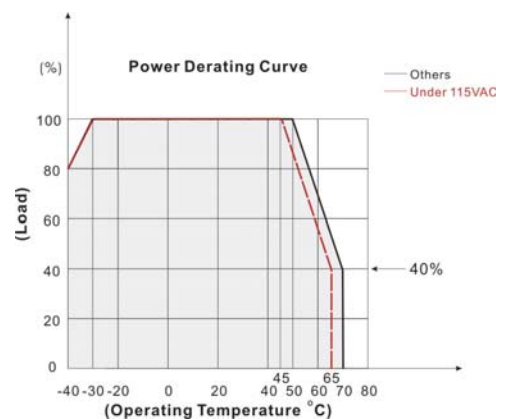
PIN#	Single
1	AC IN (N)
2	AC IN (L)
3	-DC OUT
4	NO PIN
5	+DC OUT

BLOCK DIAGRAM

Single Output



DERATING

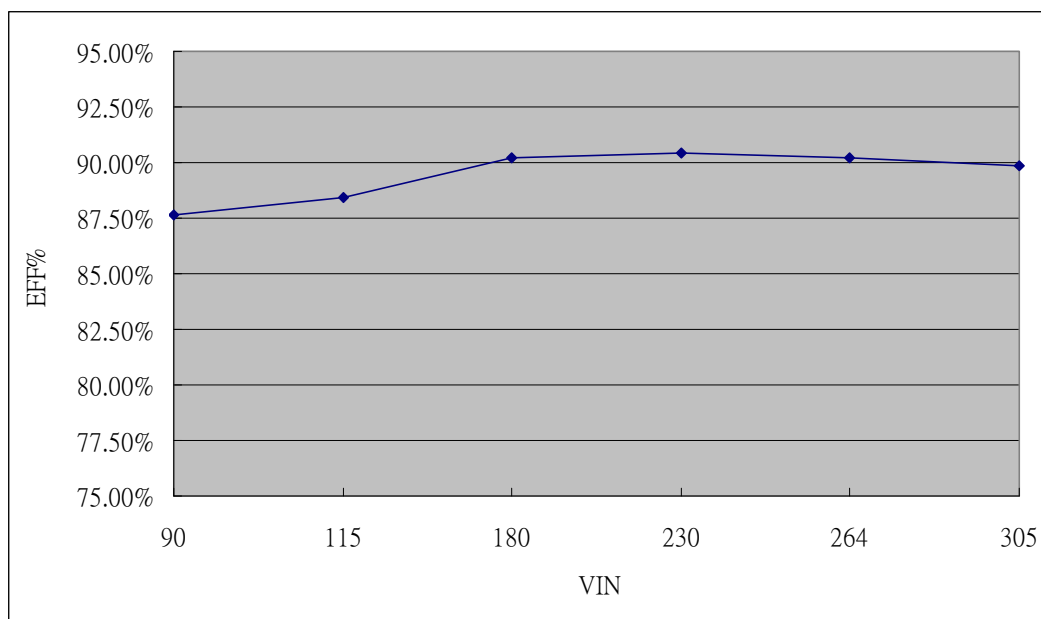


EFFICIENCY VERSUS LOAD

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

