ANC50 Series

50 W Switching Power Module for PCB Mounting

CoolPower Solutions

KEY FEATURES

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Regulated Output and Low Ripple and Noise
- Small Size as ANC 15Watt with 50Watt Higher Power
- Screw Terminal For Optional
- CE, UL Approval
- 3-Years Product Warranty



E199779 LEVEL3

ELECTRICAL SPECIFICATIONS

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

Model No. (Single Output)		ANC50-5S	ANC50-12S	ANC50-15S	ANC50-24S	ANC50-48S
Max Output Wattage (W)		40W	50W	50W	50W	50W
Input	Voltage	90-264 VAC or 120-370 VDC				
	Frequency (Hz)	47-63 Hz				
	Current (Full load)	1000 mA max. (115 VAC) / 600 mA max. (230 VAC)				
	Inrush Current (<2ms)	30 A max. (115 VAC) / 60 A max. (230 VAC)				
	Leakage Current	0.25 mA max.				
	External Fuse (recommend)	3.15 A slow blow type				
Output	Voltage (V.DC.)	5V	12V	15V	24V	48V
	Voltage Accuracy	±2%				
	Current (mA) max	8000	4167	3333	2083	1040
	Line Regulation (LL-HL) (typ.)	±1%				
	Load Regulation (5-100%) (typ.)	±1%				
	Minimum Load	0%				
	Maximum Capacitive Load	80000 uF	20000 uF	18000 uF	6000 uF	470uF
	Ripple & Noise	120mV	120mV	150mV	240mV	480mV
	Efficiency (at 230 VAC)	86%	90%	87%	88%	89%
	Hold-up Time	10 ms min.				
	Switching Frequency	65 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				
	Temperature Coefficient	±0.02%/°C				
	Humidity	95% RH				
	MTBF	>200,000 h @ 25°C (MIL-HDBK-217F)				
Physical	Dimension (L x W x H)	2.91 x 2.13 x 0.87 Inches (74.0 x 54.0 x 22.0 mm) Tolerance ±0.5 mm				
	Case Material	Plastic resin with Fiberglass (flammability to UL 94V-0)				
	Weight	166 g				
	Cooling Method	Free air convection				
Safety	Agency Approvals	CE, UL/cUL				
EMC	EMI (Conducted & Radiated Emission)	EN 55022				
	EMS (Noise Immunity)	EN 55024				

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ANC50 Series

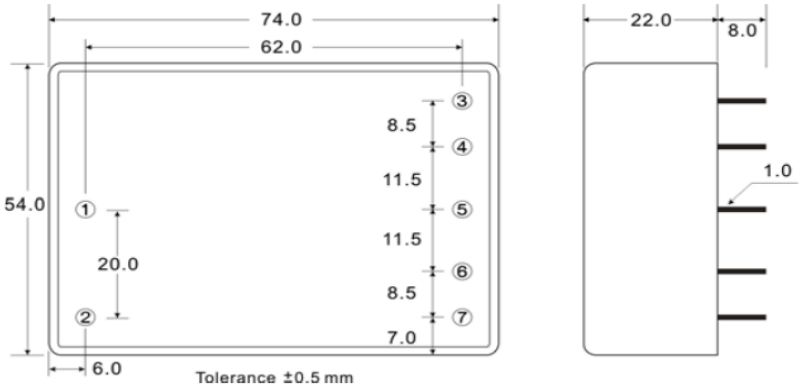
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NOTE

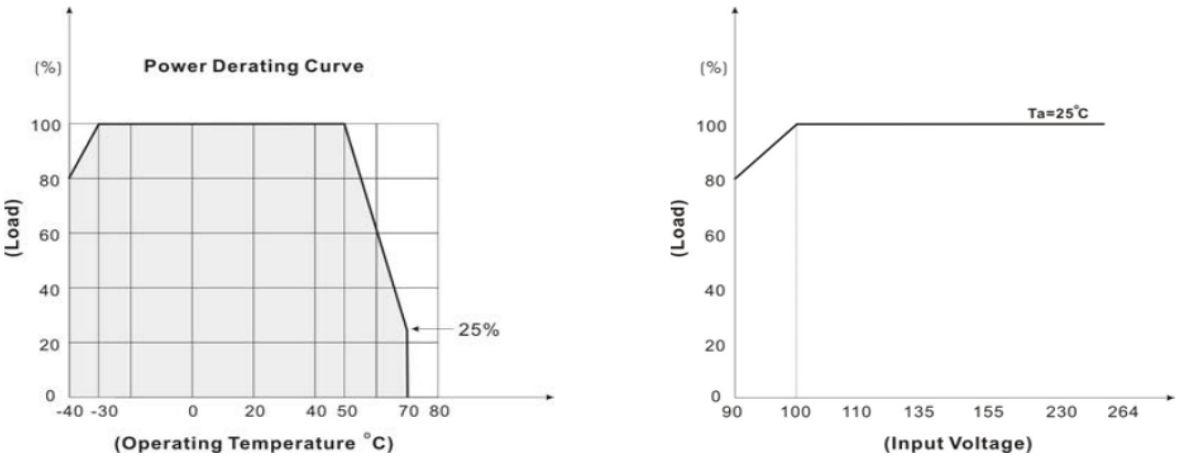
1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. It's recommended to add Varistor 14S471K at L / N input side in parallel.

MECHANICAL DIMENSION (Top View)



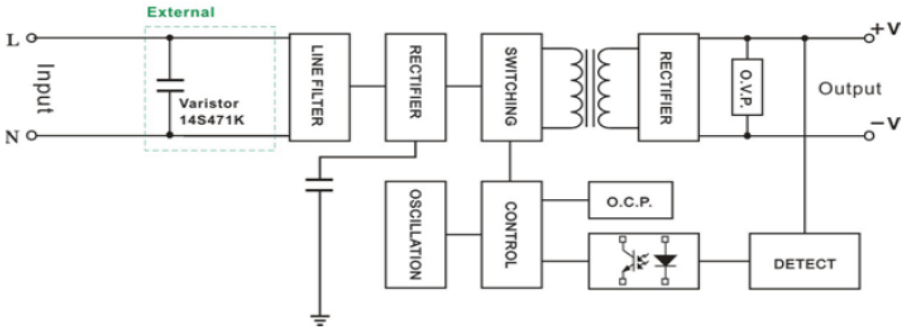
PIN#	Single
1	AC IN (N)
2	AC IN (L)
3	NO PIN
4	-DC OUT
5	NO PIN
6	+DC OUT
7	NO PIN

DERATING



BLOCK DIAGRAM

Single Output



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ANC50 Series

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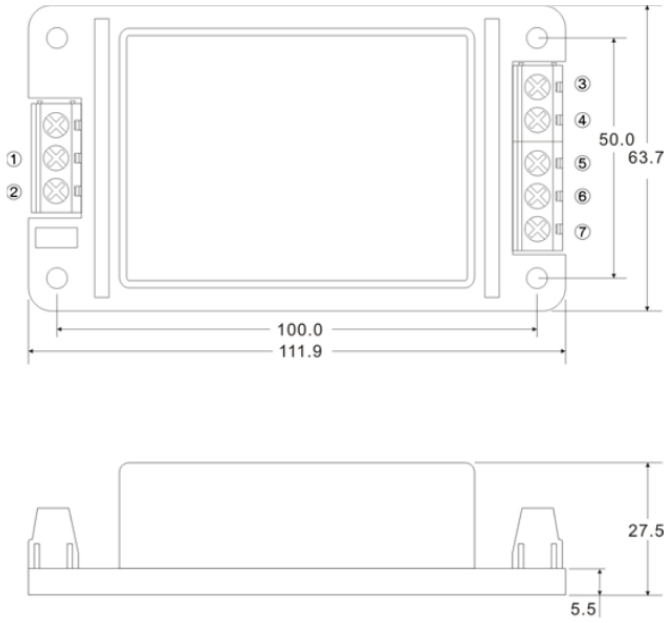
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SCREW TERMINAL

ANC50-A2



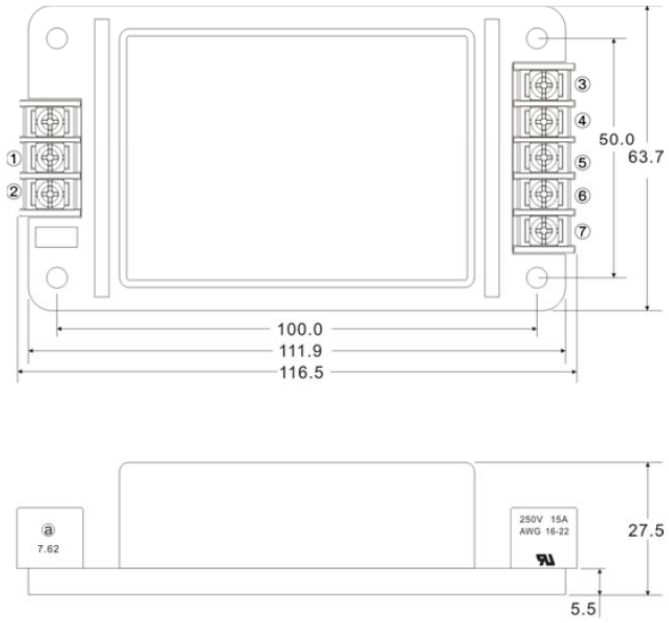
PIN#	Single
1	AC IN (N)
2	AC IN (L)
3	NO CONNECT
4	-DC OUT
5	NO CONNECT
6	+DC OUT
7	NO CONNECT



ANC50-A5



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



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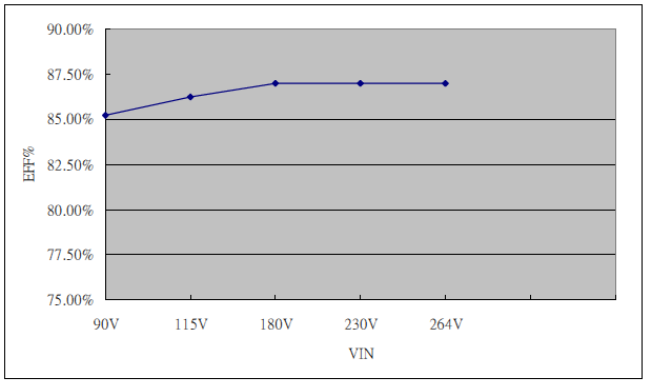
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EFFICIENCY VERSUS LOAD

ANC50-5S

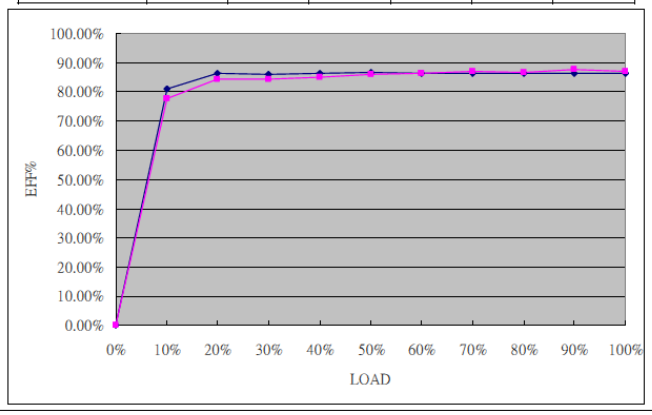
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	85.23	86.26	87.02	87.02	87.02



LOAD VS Efficiency

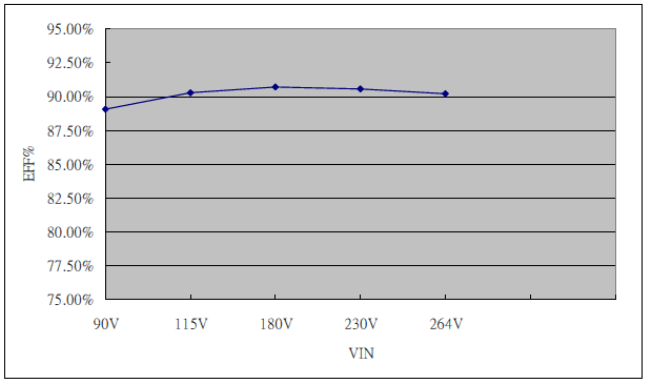
Load (%)	10	20	30	40	50	
115V (%)	80.95	86.34	86.17	86.53	86.61	
230V (%)	77.84	84.55	84.39	85.16	85.89	
Load (%)	60	70	80	90	100	
115V (%)	86.41	86.52	86.35	86.37	86.27	
230V (%)	86.39	87.06	86.81	87.60	87.18	



ANC50-12S

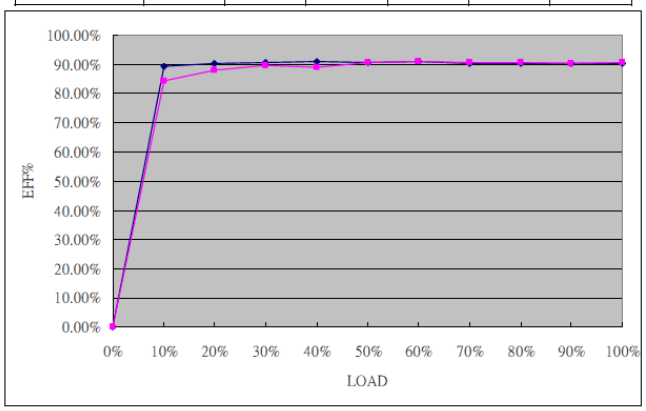
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	89.08	90.26	90.74	90.57	90.24



LOAD VS Efficiency

Load (%)	10	20	30	40	50	
115V (%)	89.21	90.43	90.68	91.11	90.72	
230V (%)	84.31	88.10	89.62	89.13	90.73	
Load (%)	60	70	80	90	100	
115V (%)	91.07	90.49	90.38	90.24	90.23	
230V (%)	91.07	90.77	90.76	90.48	90.69	



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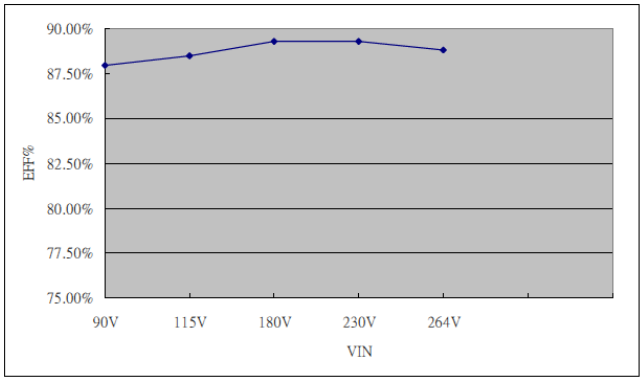
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EFFICIENCY VERSUS LOAD

ANC50-15S

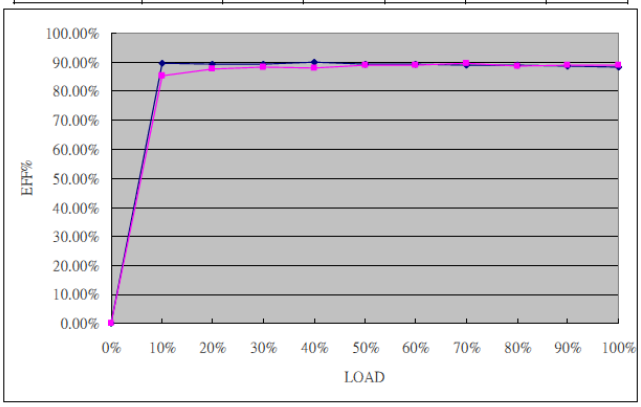
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	87.95	88.50	89.29	89.29	88.81



LOAD VS Efficiency

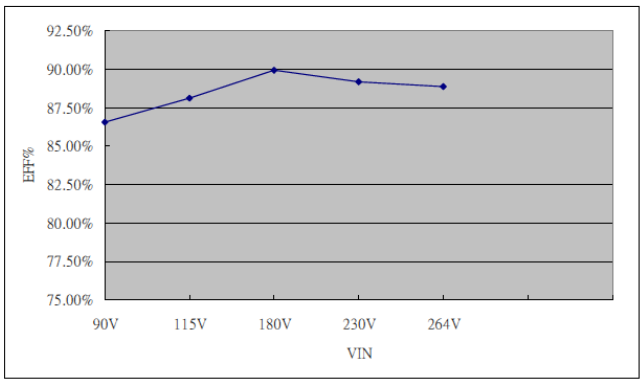
Load (%)	10	20	30	40	50	
115V (%)	89.71	89.24	89.42	89.89	89.44	
230V (%)	85.22	87.68	88.37	87.93	89.11	
Load (%)	60	70	80	90	100	
115V (%)	89.40	89.14	88.94	88.78	88.51	
230V (%)	89.13	89.66	88.73	88.95	89.13	



ANC50-24S

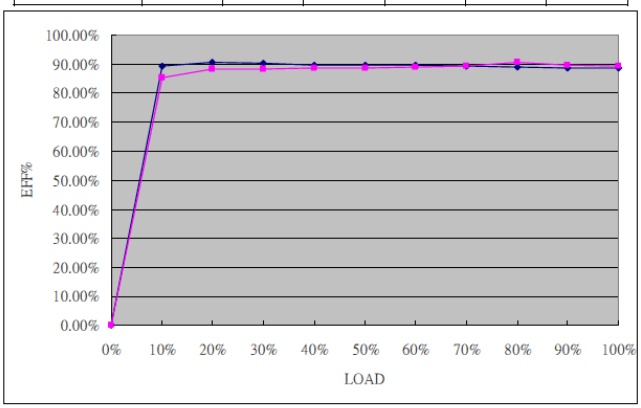
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	86.56	88.12	89.92	89.20	88.88



LOAD VS Efficiency

Load (%)	10	20	30	40	50	
115V (%)	89.27	90.83	90.25	89.76	89.66	
230V (%)	85.28	88.38	88.35	88.59	88.70	
Load (%)	60	70	80	90	100	
115V (%)	89.56	89.39	89.07	88.73	88.55	
230V (%)	89.03	89.27	90.54	89.57	89.43	



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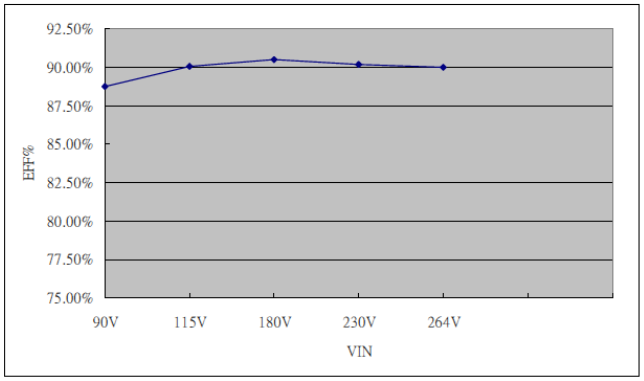
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EFFICIENCY VERSUS LOAD

ANC50-48S

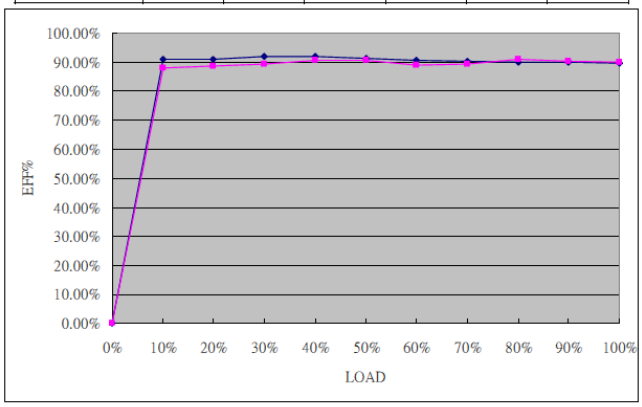
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	88.76	90.04	90.52	90.18	90.02



LOAD VS Efficiency

Load (%)	10	20	30	40	50	
115V (%)	91.16	91.16	92.04	92.02	91.27	
230V (%)	87.88	88.68	89.23	90.74	90.63	
Load (%)	60	70	80	90	100	
115V (%)	90.60	90.30	90.12	89.96	89.69	
230V (%)	88.93	89.39	90.93	90.50	90.16	



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