

**KEY FEATURES**

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-264VAC, 47-440 Hz
- Regulated Output
- Low Ripple and Low Noise
- Isolation Class II
- Low Standby <0.5W
- Small Size as AFC 10Watt with 20Watt Higher Power
- 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.

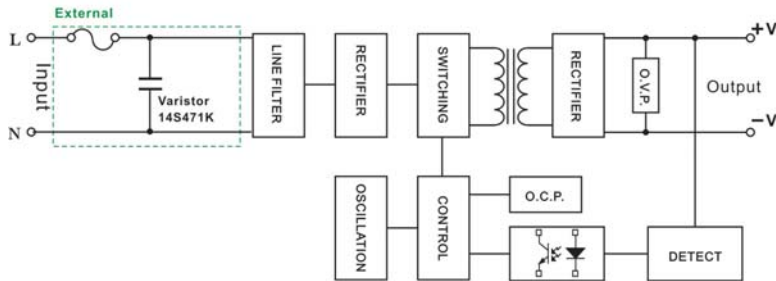
Model No.	DPAFC20-3.3S	DPAFC20-5S	DPAFC20-12S	DPAFC20-15S	DPAFC20-24S		
Max Output Wattage (W)	11.88W	18W	20W	20W	20W		
Input	Voltage						
	90-264 VAC or 120-370 VDC						
	Frequency (Hz)						
	47-440 Hz						
	Current (Full load)						
385 mA max. (115 VAC) / 250 mA max. (230 VAC)							
Inrush Current (<2ms,Cold Start)							
20 A max. (115 VAC) / 40 A max. (230 VAC)							
External Fuse (mandatory)							
2 A slow blow type							
Output	Voltage (V.DC.)		3.3V	5V	12V	15V	24V
	Voltage Accuracy		±2%				
	Current (mA) max		3600	3600	1660	1330	833
	Maximum Capacitive Load (at 230VAC)		4500uF	3500uF	470 uF	330uF	47uF
	Minimum Load		0%				
	Line Regulation (LL-HL) (typ.)		±0.5%				
	Load Regulation (5-100%) (typ.)		±1%				
	Ripple (Full load)		75mV max (Vp-p)		1% of Vout		
	Noise (Full load)		120mV max (Vp-p)		1% of Vout		
	Efficiency		74%	78%	82%	83%	83%
Hold-up Time(typ)		12 ms (115VAC) / 56ms (230VAC)					
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				
Environment	Operating Temperature		-40°C...+70°C (with derating)				
	Storage Temperature		-40°C...+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)		2.07 x 1.08 x 0.93 Inches ( 52.5 x 27.5 x 23.5 mm ) Tolerance ±0.5 mm				
	Case Material		Plastic resin (flammability to UL 94V-0)				
	Weight		59g				
	Cooling Method		Free air convection				
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				

## NOTE

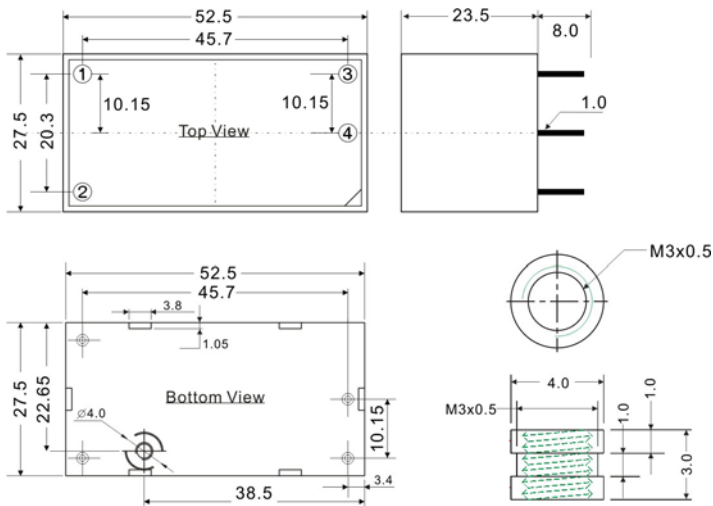
1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. It's recommended to add Varistor 14S471K at L / N input side in parallel.

## BLOCK DIAGRAM

Single Output



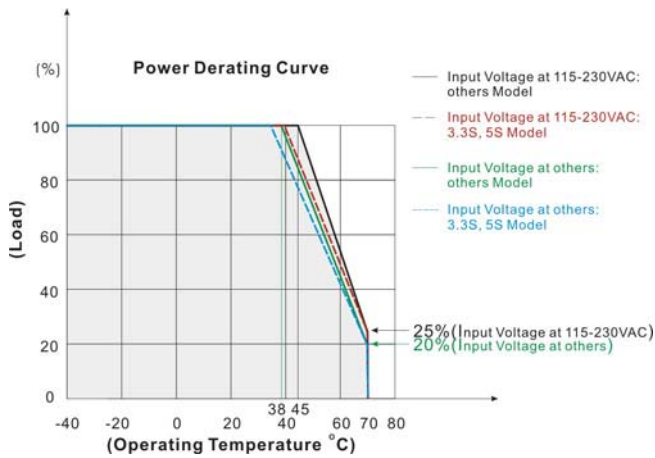
## MECHANICAL DIMENSIONS ( Top View )



PIN#	Single
1	AC IN (N)
2	AC IN (L)
3	+DC OUT
4	-DC OUT

## DERATING

Maximum Torque 1 2 { 1.2 1 } ( k g f . c m { N . m } )



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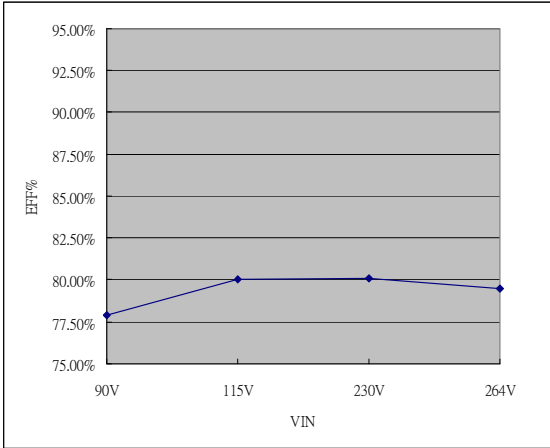
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# EFFICIENCY VERSUS LOAD

## DPAFC20-5S (Full Load & Temperature: 25 °C)

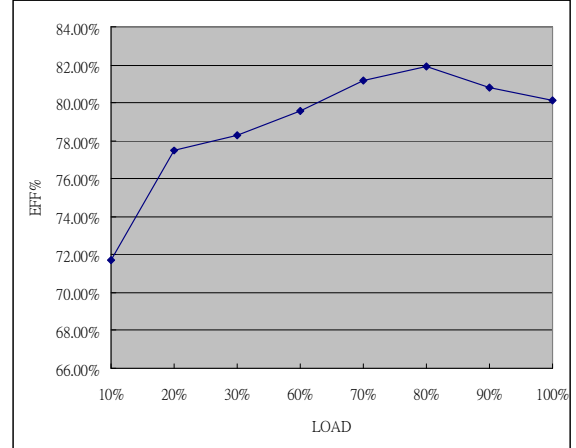
VIN VS Efficiency

Input Voltage (V)	90	115	230	264
Efficiency (%)	77.90	80.00	80.10	79.50



LOAD VS Efficiency

Load (%)	10	20	30	60	7	80	90	100
230V (%)	71.7	77.5	78.3	79.6	81.2	81.9	80.8	80.1



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