



■ **Features**

- Power Rating 60W
- 100-240Vac Universal input
- Frequency: 50/60Hz
- Multiple Port Output
- OVP, and short circuit protection
- Efficiency: level VI
- USB-C output connector
- Flipping A/C input plug US Model only
- Dimensions: 60.5x60.5x31.4mm



*Product images are for illustrative purposes only and may vary from actual design.

■ **Applications**

- Personal electronic devices

■ **Model List***(See part number scheme for model number details)

Only USB-C Model

Model	Output Voltage	Output Current	Power	Ripple & Noise
WM060QF-X-GaN-USBC	5V	3A	60W	260mVp-p
	9V	3A	60W	260mVp-p
	12V	3A	60W	260mVp-p
	15V	3A	60W	260mVp-p
	20V	3A	60W	260mVp-p

Model	Output Voltage	Output Current	Power	Ripple & Noise
Type-C1 Port 1	5V	3A	30W	260mVp-p
	9V	3A	30W	260mVp-p
	12V	2.5A	30W	260mVp-p
	15V	2A	30W	260mVp-p
	20V	1.5A	30W	260mVp-p

Model	Output Voltage	Output Current	Power	Ripple & Noise
Type-C2 Port 2	5V	3A	30W	260mVp-p
	9V	2A	30W	260mVp-p
	12V	1.5A	30W	260mVp-p
	15V	2A	30W	260mVp-p
	20V	1.5A	30W	260mVp-p

Ripple & Noise: Measurement is done by 20MHz bandwidth oscilloscope and the output paralleled a 0.1uF ceramic capacitor and a 10uF electrolysis capacitor. (test under the condition of rated input and rated output)

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■ **Technical Data**

Input voltage range	100-240Vac
Rated Frequency	50/60Hz(typ.)
AC Input Current	1.5A max.@100Vac
AC Input Power saving	0.3 W max. @230Vac no load
Inrush Current	40A max.@100Vac (Cold start); 60A max.@230Vac (Cold start)
Leakage Current	0.25mA max.
Efficiency	While the input is 115Vac and 230Vac, the average efficiency is more than 87.72%. Tested at 25%,50%,75% and 100% load after 30 min warm up at max load. Complies with level VI requirements
Over Voltage Protection	Auto recovery once fault condition is removed
Short Circuit Protection	Auto recovery once fault condition is removed
Operating temperature	0~35°C
Storage temperature	-25°C to 70°C
Operating humidity	8% to 90%
Storage humidity	5% to 95%
MTBF	50K hours min. @full load at 25°C ambient temperature.
Burn-in	2-4hours, 25~35°C, 220Vac Input, 100% Output load
Drop test	Dropped at 1M height, dropped on each side. Dropping on concrete floor standard: No failure of function & case joints still intact
Dimensions	60.5x60.5x31.4mm
Weight	150g

■ **Safety and EMC**

Safety Standard	EN 62368
EMI	FCC Part 15 Class B, EN 55032: 2015, EN 55035: 2017
EMS	EN 61000-4-2/ESD, EN 61000-4-5/Surge, EN 61000-4-3/RS, EN 61000-4-6/CS,EN 61000-4-4/EFT/Burst
HI-POT test	Primary to secondary: 3000VAC for 3sec. 5mA(production testing) 3000VAC for 1min. 5mA(sample testing) Primary to case: 3000VAC for 3sec 5mA(Production test)
Insulation resistance	Input to output >10Mohm.@500VDC

Disclaimer:

Autec Power Systems' (Autec) Power Supplies are Hi-Pot tested during the manufacturing process. Autec assumes no responsibility for secondary Hi-Pot testing at customer location or designated production line(s). Should customer require further Hi-Pot testing, at their own production line, following assembly of the Power Supply into the customer's assembled fixture, Autec requests advance notice. This request must be communicated to Autec in a timely manner and is recommended to be requested at time of issuing each purchase order.

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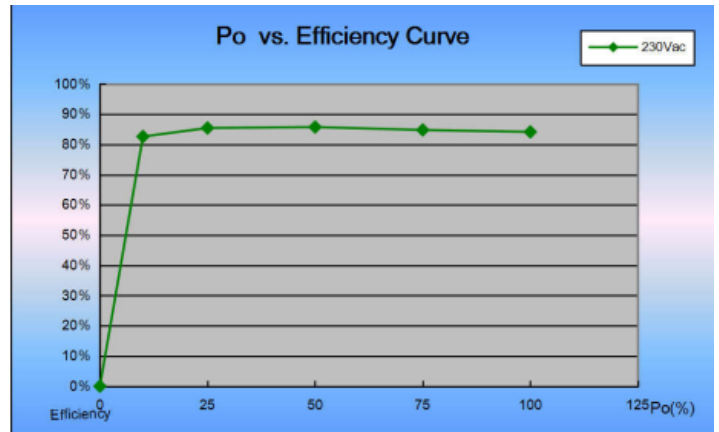
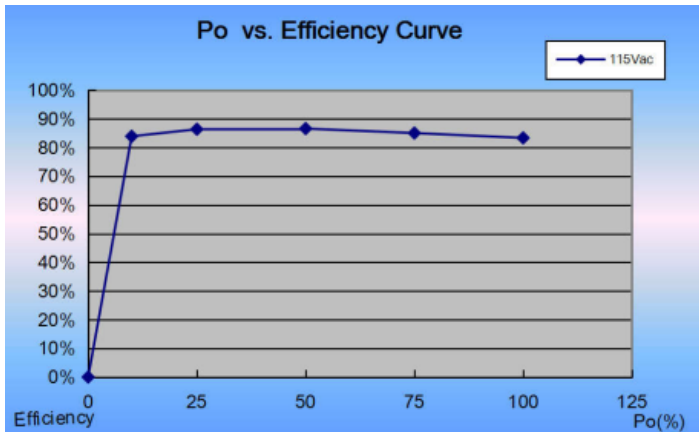
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■ Sample Test Result

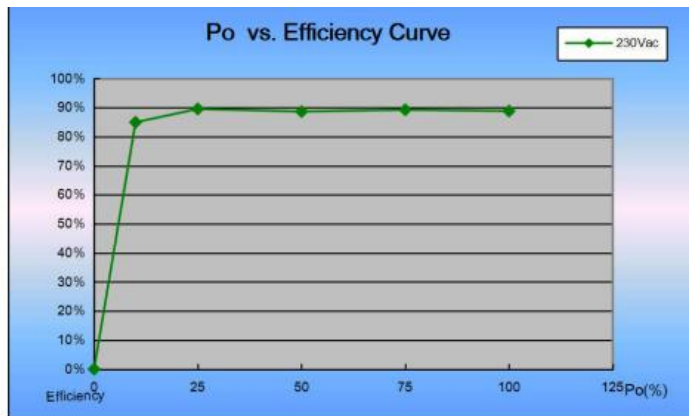
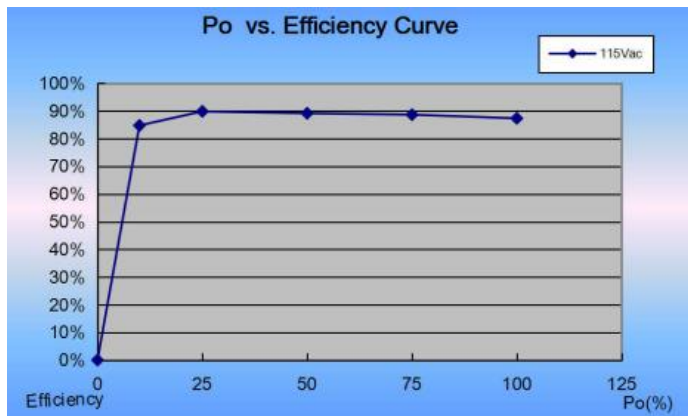
Test Items	Test Condition	Unit	5V/3A	5V/3A	9V/3A	9V/2A	12V/2.5A	12V/1.5A	15V/2A	15V/2A	20V/1.5A	20V/1.5A	20V3A
			TYPE-C1	TYPE-C2	TYPE-C1	TYPE-C2	TYPE-C1	TYPE-C2	TYPE-C1	TYPE-C2	TYPE-C1	TYPE-C2	TYPE-C1
Unload output voltage	90Vac	V	5.2	5.23	9.16	9.19	12.14	12.16	15.11	15.15	20.09	20.12	20.12
	115Vac	V	5.2	5.23	9.16	9.19	12.14	12.16	15.11	15.15	20.09	20.12	20.12
	230Vac	V	5.2	5.23	9.16	9.19	12.14	12.16	15.11	15.15	20.09	20.12	20.12
Rated load output voltage	90Vac	V	5.00	5.08	8.9	9.02	11.9	12.02	14.9	15.05	19.9	20.04	19.98
	115Vac	V	5.00	5.08	8.9	9.02	11.9	12.02	14.9	15.05	19.9	20.04	19.98
	230Vac	V	5.00	5.08	8.9	9.02	11.9	12.02	14.9	15.05	19.9	20.04	19.98
Output ripple & noise voltage (Full load)	90Vac	mV	78	58	80	62	72	45	80	61	54	48	63
	115Vac	mV	75	54	78	68	74	49	77	69	58	56	68
	230Vac	mV	72	62	70	61	85	52	74	66	53	53	70
Short-circuit protection	90Vac	V	0.59										
	264Vac	V	0.78										
Over current protection	90Vac	V	3.7	3.7	3.7	3.7	3	3.2	2.5	2.6	1.9	2	3.6
	264Vac	V	3.7	3.7	3.7	3.7	3	3.2	2.5	2.6	1.9	2	3.6
IC Vcc voltage test	90Vac	V	23										
	264Vac	V	22.7										
Hi-pot test	3000Vac/5mA/1Minute		OK										

■ Efficiency Curve

5V Model



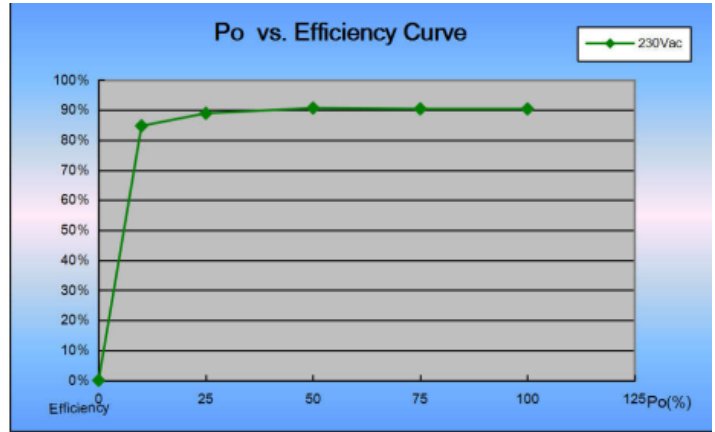
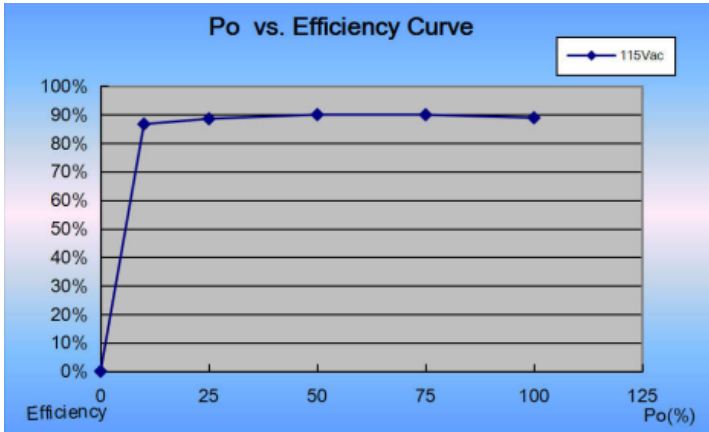
9V Model



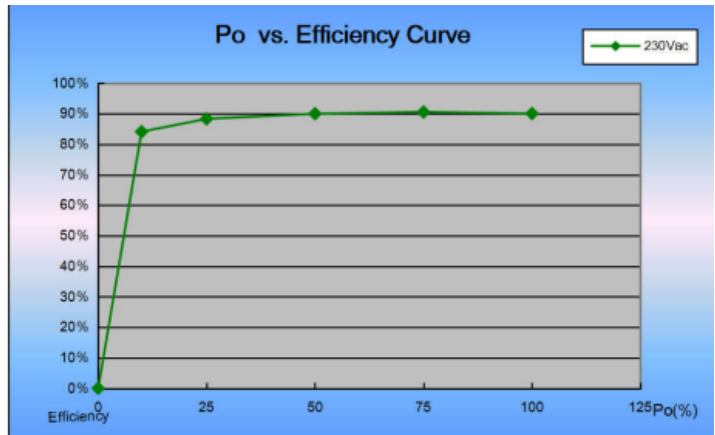
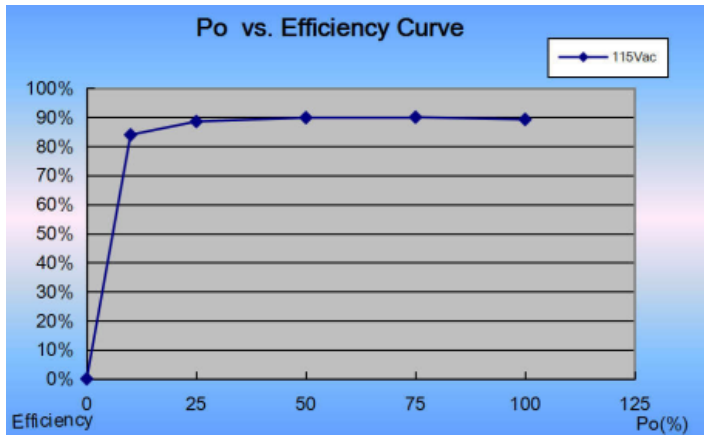
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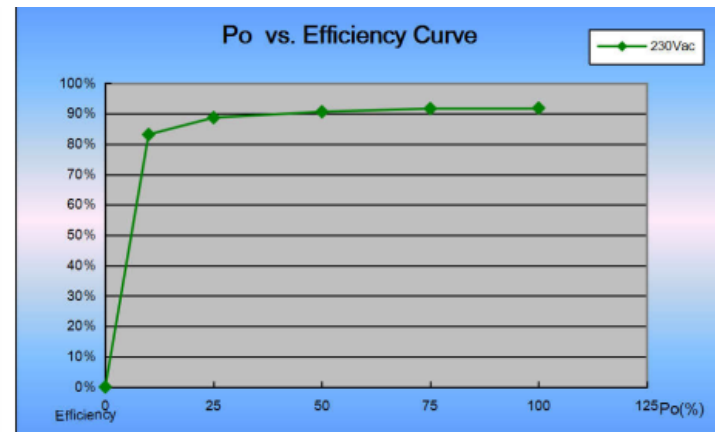
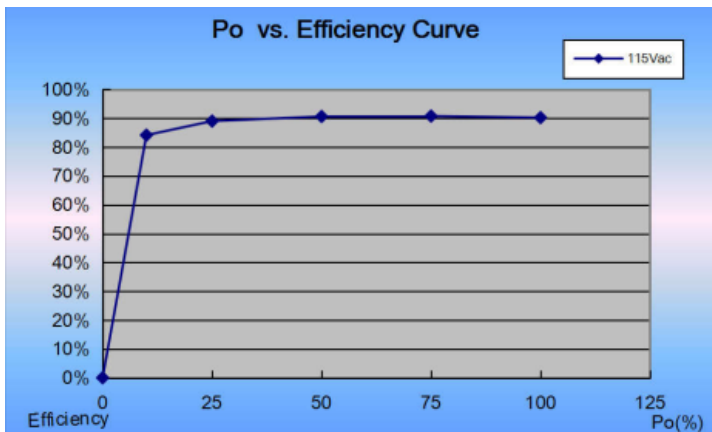
12V Model



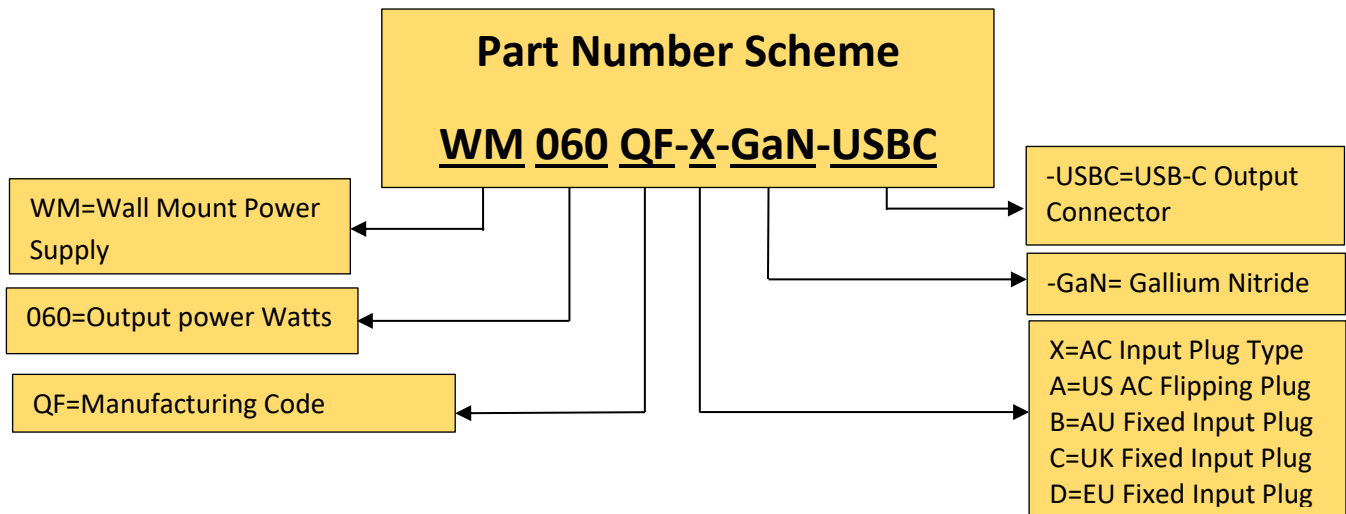
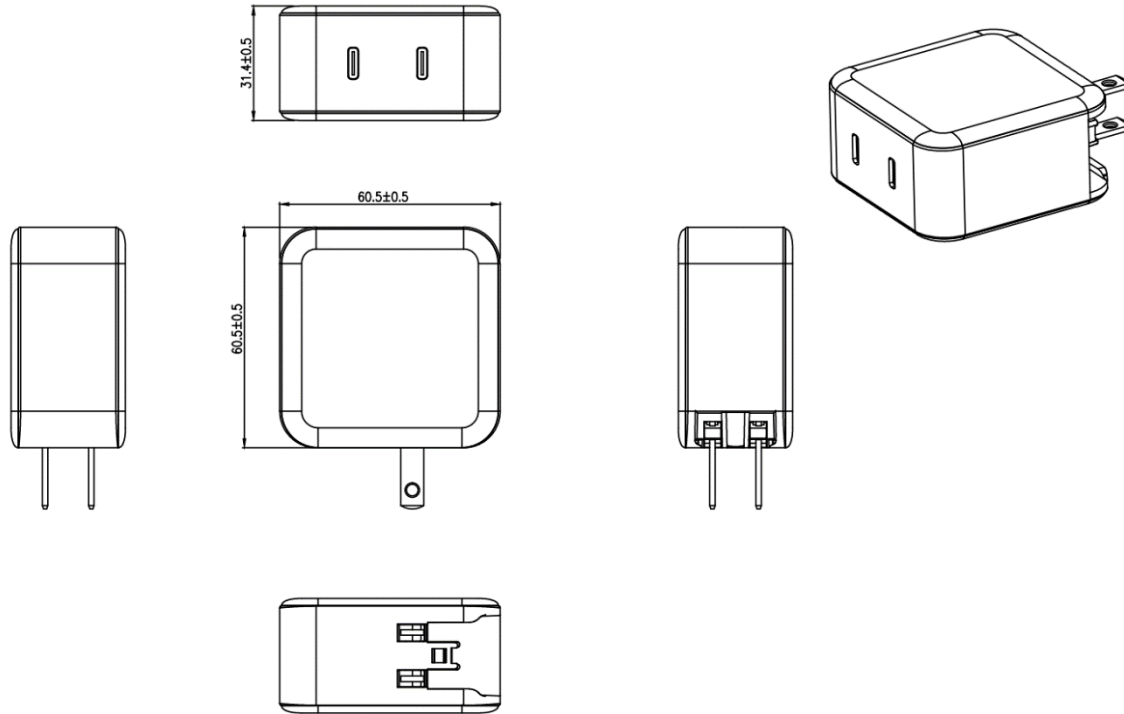
15V Model



20V Model



■ **Mechanical Diagram**



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***Specifications are subject to change without notice. Autec is not responsible for issues arising from errors or omissions.**

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