



FEATURES:

- AC-DC Constant current LED Driver
- Input range 90-277VAC/47-440Hz
- High Efficiency up to 91%
- Operating temperature -40 to 85°C
- Over Temperature Protection
- Waterproof Case rated IP68
- Power Factor Correction
- SCP, Over Current Protection



Models
Single output

Model	Max Output Power (W) *	Output Voltage Range (V)	Output Current (A)	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Efficiency (%)
AMER120-50250AZ	125	36-50	2.5	90-277/47-440	120-390	91
AMER120-36340AZ	122.4	24-36	3.4	90-277/47-440	120-390	90
AMER120-24500AZ	120	12-24	5	90-277/47-440	120-390	90

*Exceeding the maximum output power will permanently damage the converter

NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Inrush current <2ms	115VAC	45		A
	230VAC	60		
Leakage current	115VAC	0.5		mA
	230VAC	0.75		
AC current	115VAC	1.8		A
	230VAC	0.7		
Power Factor	115VAC		0.98	
	240VAC		0.94	
External fuse			250V/3A	
Start up time		400		ms
Surge voltage	2sec		440	V

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Current accuracy		±3		%
Line regulation	LL-HL	±1		%
Load regulation	0-100% load	±3		%
Ripple & Noise *	20MHz Bandwidth	75		mV p-p
Hold-up time		80		ms
Current adjustment range		100-0		%
Minimum Load Voltage	See the models table			

* Tested with 0.1µF (M/C) or (C/C) and 47µF (E/C) parallel capacitors at the end.

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3sec/3.2mA		3000	VAC
Isolation Resistance	500VDC	>1000		MΩ
Isolation Capacitance		1000		pF

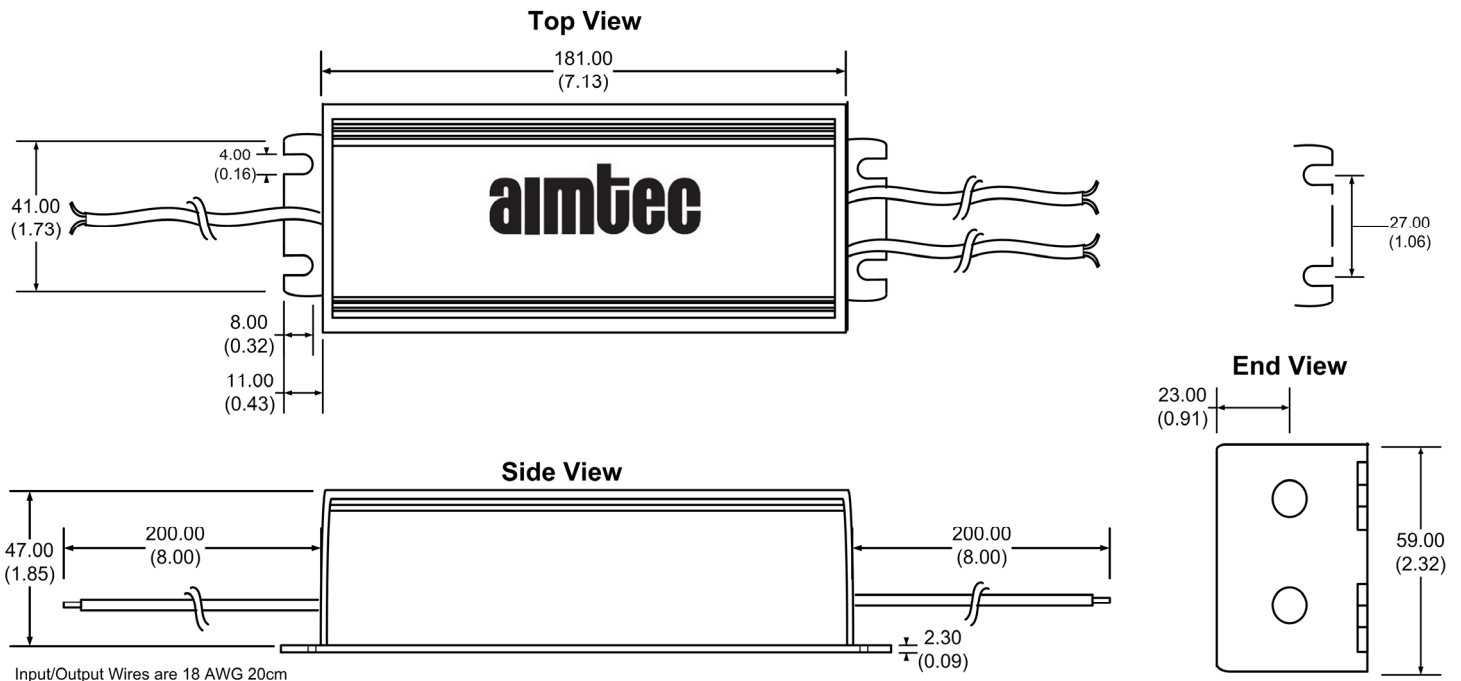
General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency		100		KHz
Over current protection		110% of Iout		
Over voltage protection		110% of Vout		
Short circuit protection		Continuous		
Short circuit restart		Auto recovery		
Over temperature protection		>105°C		
Operating temperature	With derating over 55°C	-40 to +85		°C
Maximum case temperature			100	°C
Storage temperature		-40 to +95		°C
Temperature coefficient		±0.02		% / °C
Cooling	Free air convection			
Humidity			95	% RH
Case material	Aluminum			
Potting	Epoxy (IP67 rated)			
Wires	UL1015 18AWG Input & 14AWG output *20CM			
Weight		750		g
Dimensions (L X H X W)		7.13 x 2.32 x 1.85 inches	181.00 x 59.00 x 47.00 mm	
MTBF		>400,000 hrs (MIL-HDBK-217F at +25°C)		

Safety Specifications

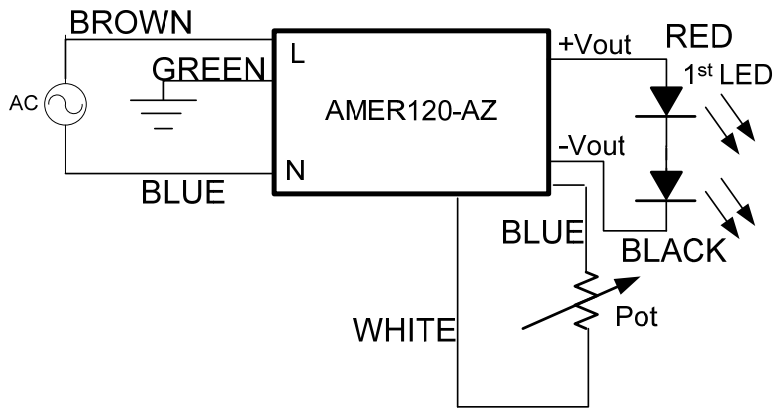
Parameters	
Agency approvals	cULus , CE
Standards	UL8750, UL60950-1, EN55022, class B, EN60529(IP68), EN61347-1, EN61347-2-13

Dimensions



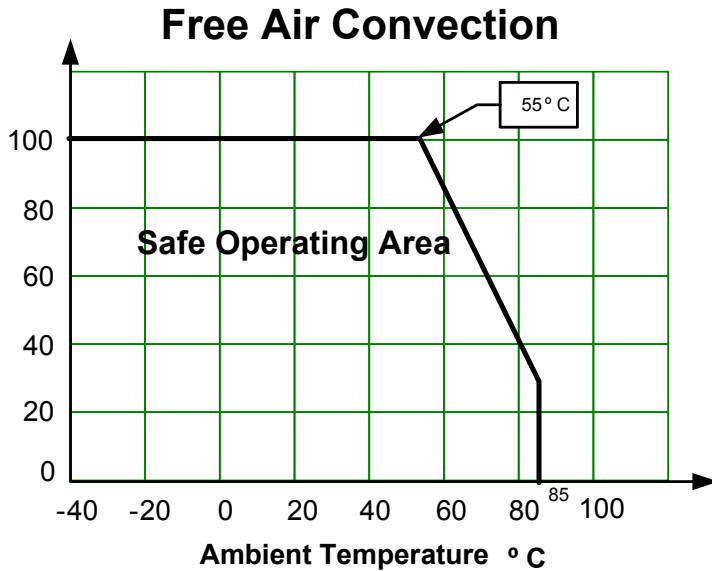
Measurements in Millimeters (inch)
Case Tolerance: ±0.5 (±0.02)

Application Circuit



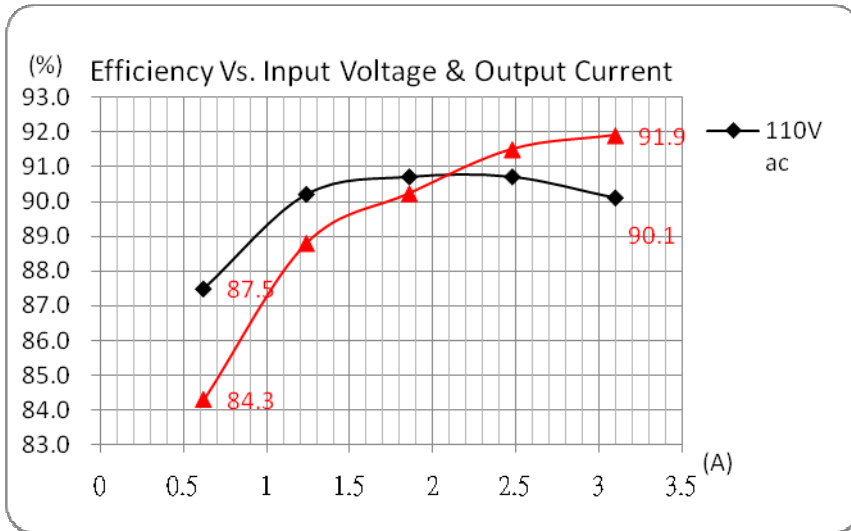
Model Number	Maximum Pot Value (kΩ)
AMER120-50250AZ	31.75
AMER120-36340AZ	25.00
AMER120-24500AZ	26.00

Temperature graph

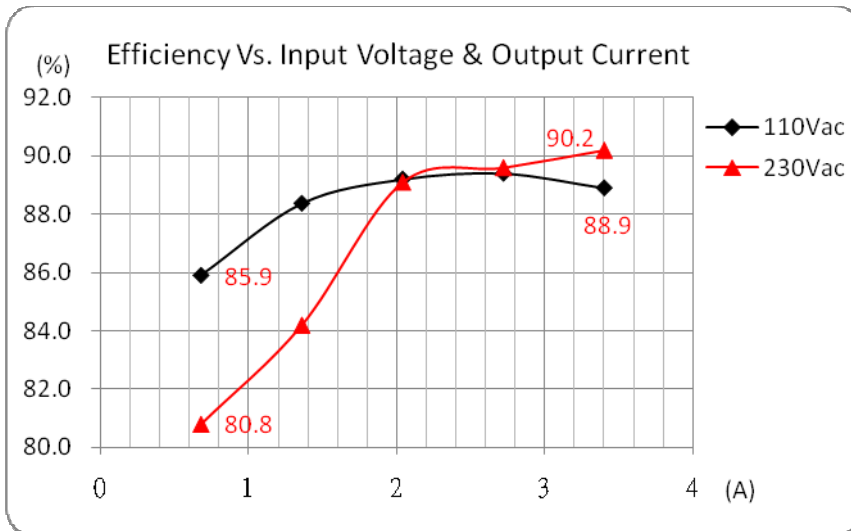


Efficiency vs. Input Voltage and Output Current (CC Load)

AMER120-50250AZ

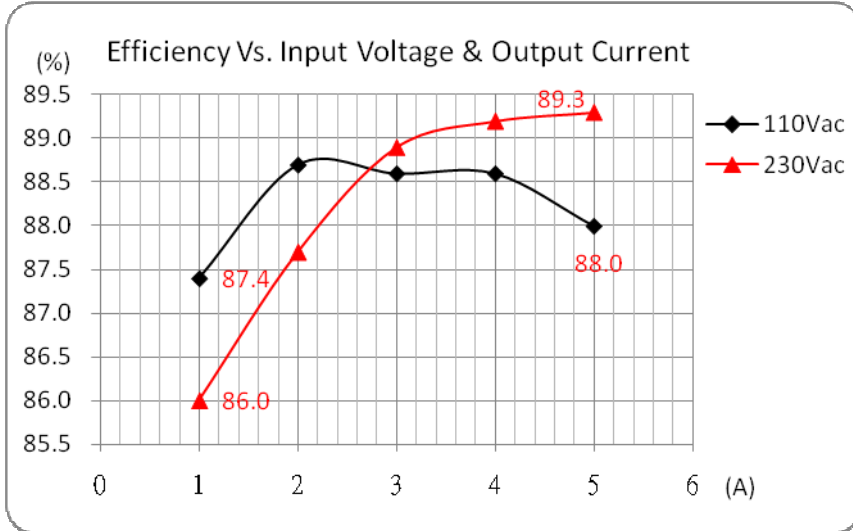


AMER120-36340AZ



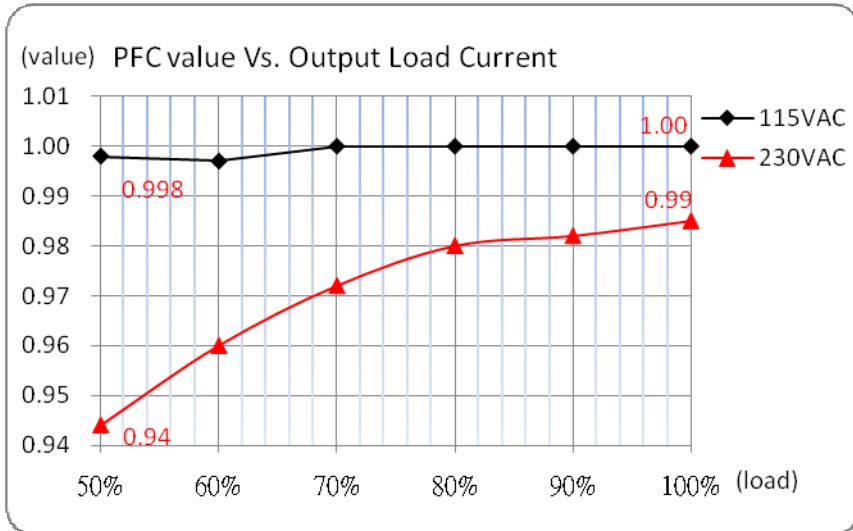
**Efficiency vs. Input Voltage and Output Current (CC Load)
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AMER120-24500AZ



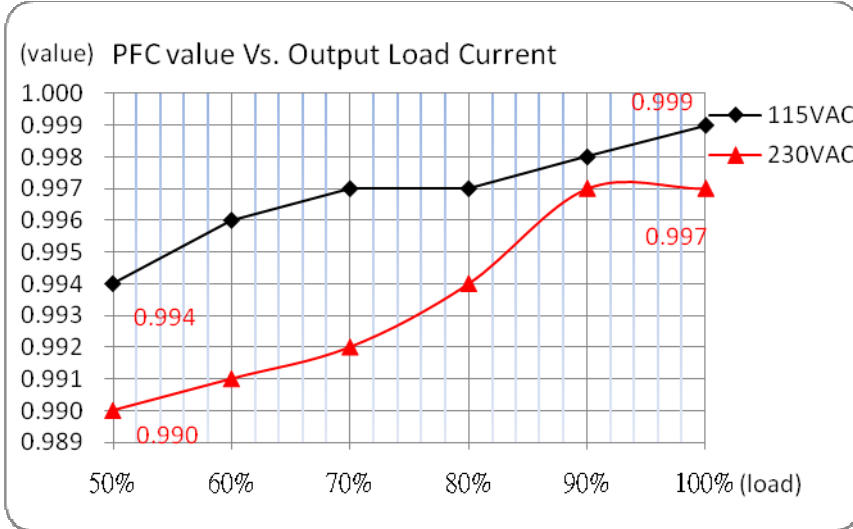
PFC Value vs. Output Load Current (CC Load)

AMER120-50250AZ

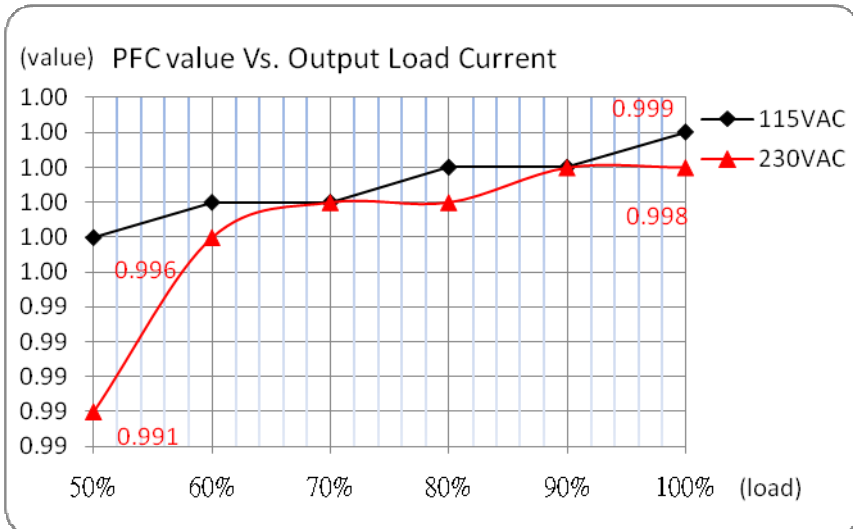


PFC Value vs. Output Load Current (CC Load)
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AMER120-36340AZ

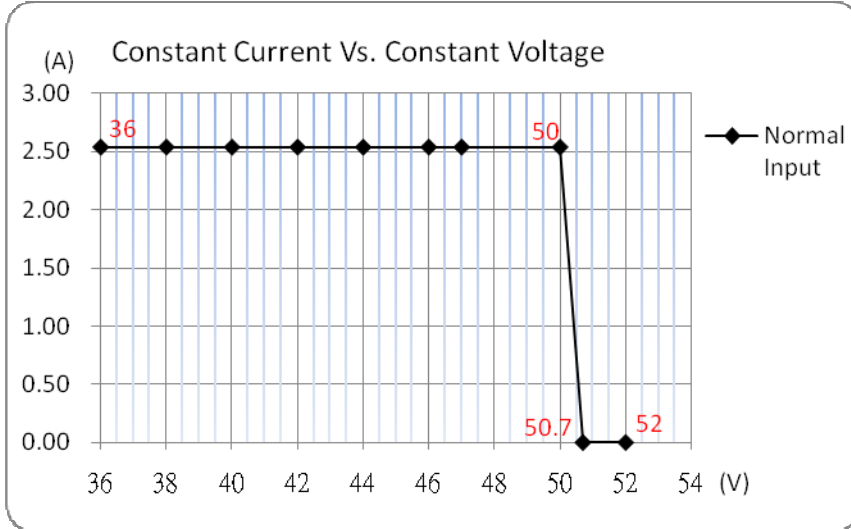


AMER120-24500AZ

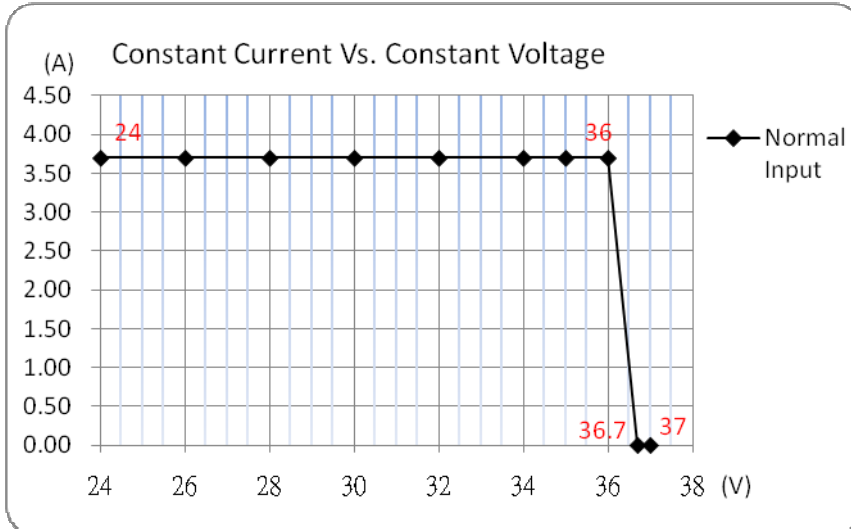


Constant Current Mode vs. Constant Voltage Mode

AMER120-50250AZ

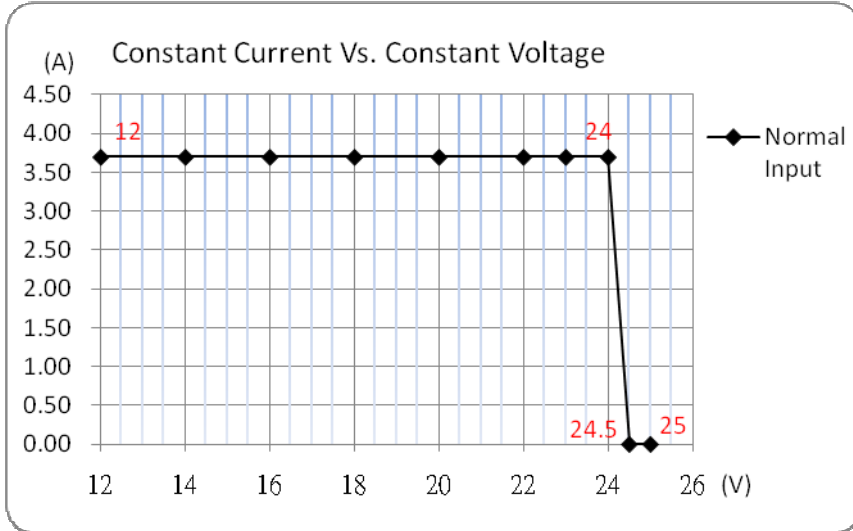


AMER120-36340AZ



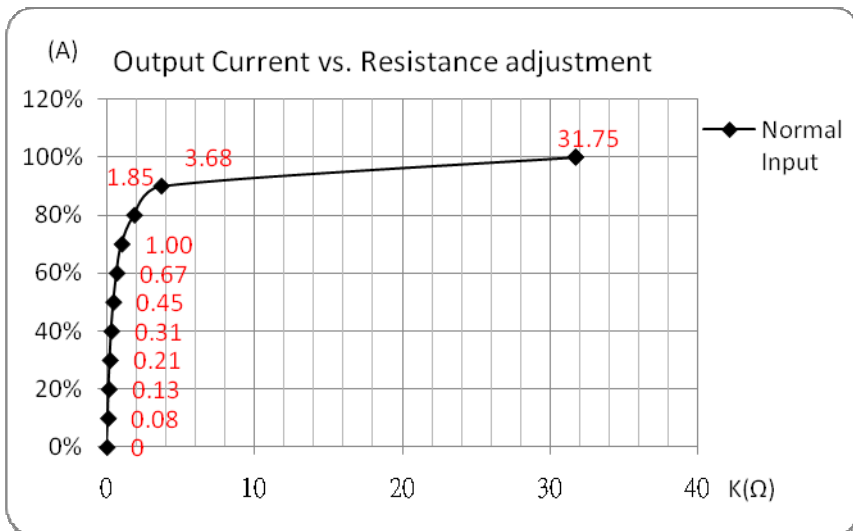
**Constant Current Mode vs. Constant Voltage Mode
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AMER120-24500AZ



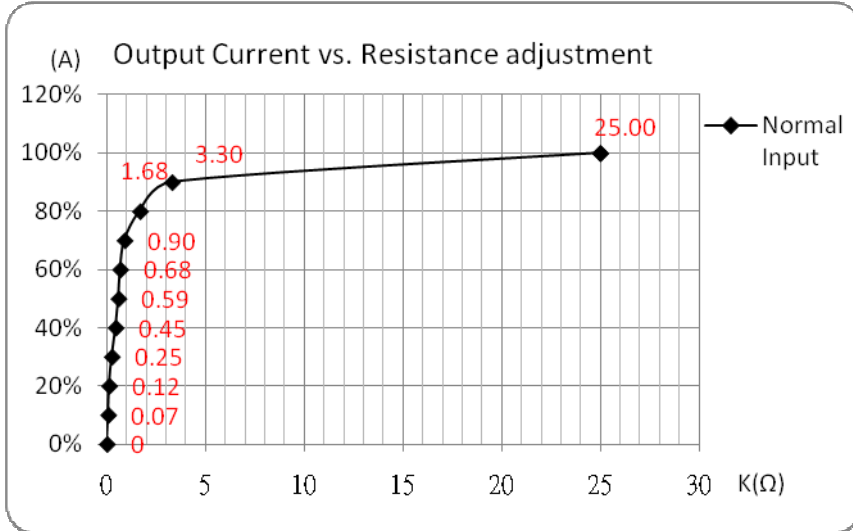
Output Current vs. Radj

AMER120-50250AZ

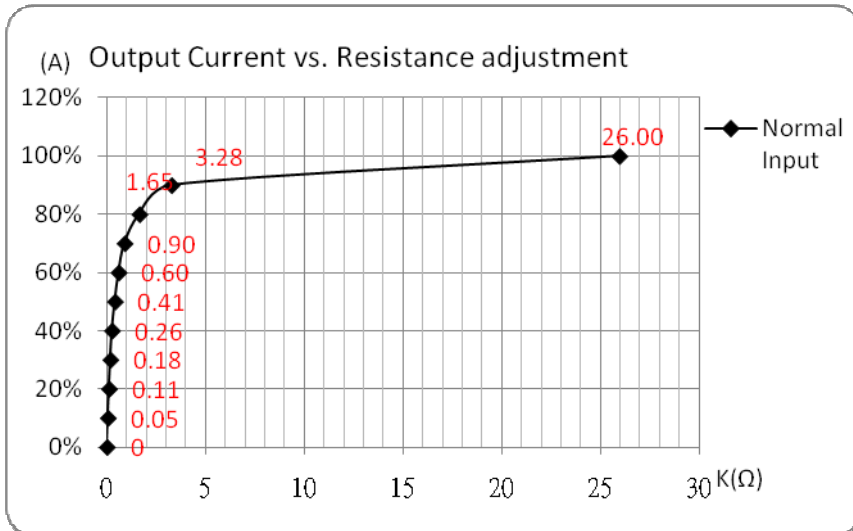


Output Current vs. Radj
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AMER120-36340AZ



AMER120-24500AZ



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