

Rectifier Module

R4875G5



Introduction

R4875G5 is a high power density, high efficiency digital rectifier module with power up to 4000W and maximum efficiency up to 97%. The module supports input of 85VAC - 300VAC or 85VDC - 420VDC, and output -42VDC to -58VDC (adjustable) or -57VDC constant. The module has the features of soft start, hot swappable and low noise, and adopts the latest power monitoring technology to realize real-time monitoring of the rectifier module and the load.



Overview of R4875G5

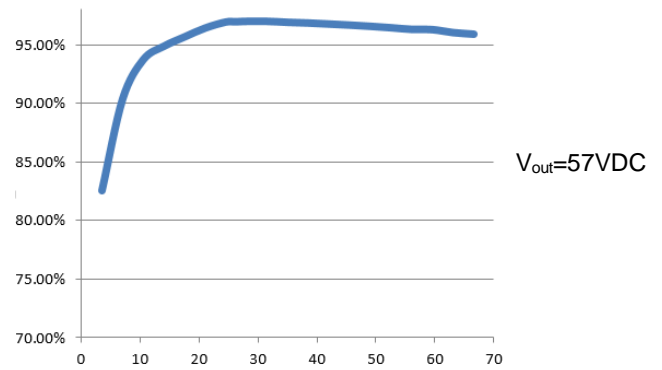
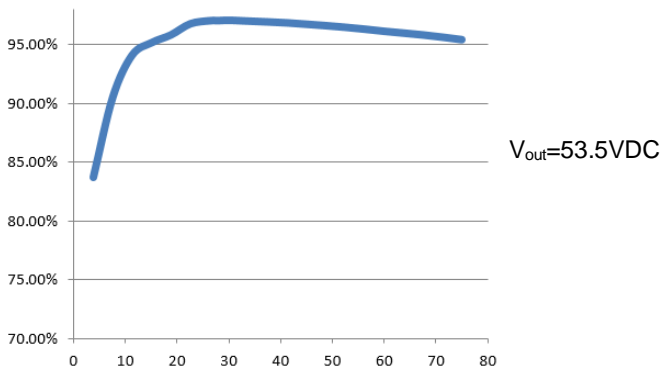
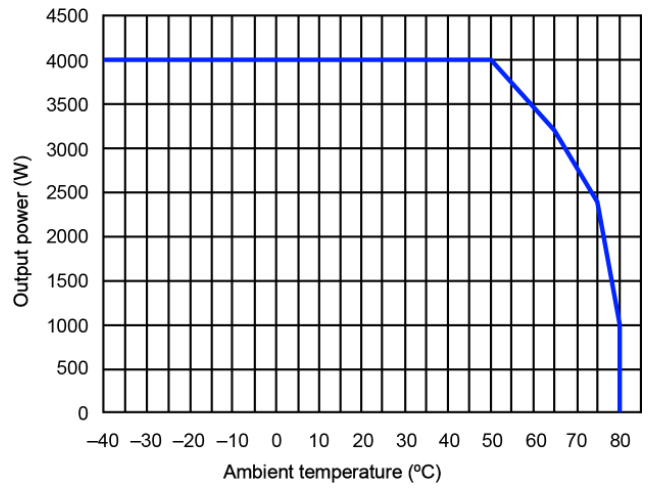
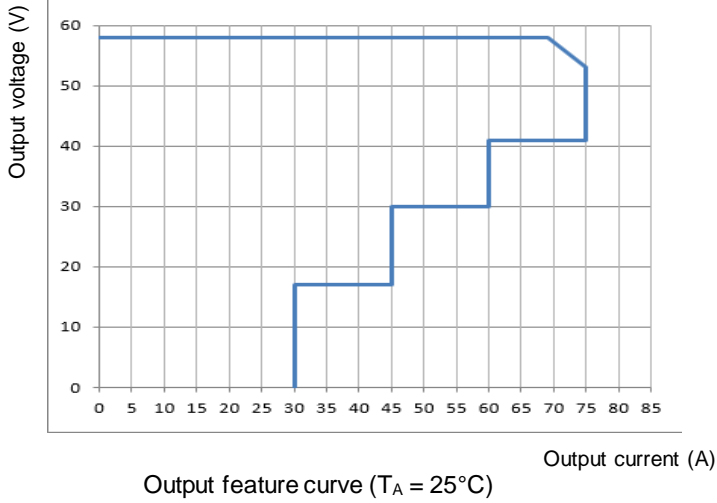
Features

- Maximum efficiency up to 97%, saving energy
- Wide input voltage range: 85VAC - 300VAC or 85VDC - 420VDC
- Wide operating temperature range: -40°C to +75°C (full output up to 55°C)
- Total harmonic distortion (THD) : $\leq 3\%$ (load rate $\geq 50\%$)
- Hot-swappable
- Digital control
- CAN communication
- Supporting voltage, current regulation and current balancing
- Certified by TUV, CE and UL, and got CB certification

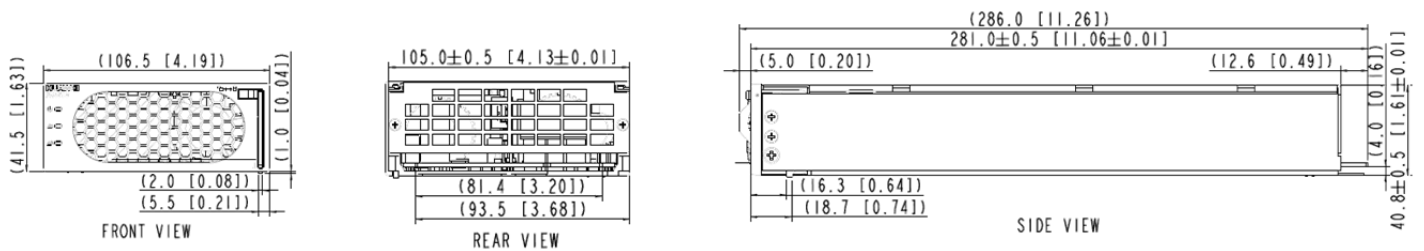
Scenarios

- Access network
- Transmission network
- Communication network of enterprises

Feature Curve



Dimension Drawings



Specifications

Product Type		R4875G5	
Basic Specifications		105mm × 281mm × 40.8mm	
	Weight	≤ 2.2kg	
	Cooling	Forced air cooling (Built-in fan)	
Input Feature	Input Mode	AC: 220VAC single-phase (or 110VAC dual-live lines)	DC
	Input Voltage	85VAC - 300VAC	85VDC - 420VDC
	Frequency	45Hz - 66Hz, rated: 50/60 Hz	-
	Rated Input Current	< 21A	
	Power Factor	≥ 0.99 (load ≥ 50%)	-
	THD	≤ 3% (load ≥ 50%)	-
Output Feature	Efficiency	97% Max ≥96% (230VAC, 30% - 80% load)	
	Output Voltage	42VDC - 58 VDC, rated voltage: 53.5VDC / 57VDC	
	Output Power	4000W (176VAC - 300VAC) , 1600W (85VAC - 175VAC linear derating)	
	Ripple and Noise	≤ 200mVp-p (bandwidth ≤ 20 MHz)	
	Hold-up Time	> 10ms	
	Output Regulated Voltage Precision	≤ 0.6% Vo from no load to full load	
	Current Share	±5% output rated current from 10% to 100% load	
Environmental Specifications	Operating Temperature	-40°C to +75°C	
	Storage Temperature	-40°C to +75°C (without packaging)	
	Relative Humidity	5% - 95% RH (non-condensing)	
	Altitude Range	0 - 5000m (When the altitude ranges from 2000m to 5000m, the operating temperature decreases by 1°C for each additional 200m)	
Protection	Input Overvoltage Protection	AC protection threshold: > 300VAC DC protection threshold: > 420VDC	
	Input Under-voltage Protection	AC protection threshold: < 80VAC DC protection threshold: < 80VDC	
	Output Over-voltage Protection	Protection range: 56VDC - 60VDC (can be set on the monitoring module)	
	Output Short Circuit Protection	A long term short circuit is allowed. After the fault disappears, the rectifier is restored to a healthy state automatically	
	Over-temperature Protection	The rectifier protects against over-temperature	
Reliability	MTBF	≥ 500,000 hours	
Audible Noises	Specification	≤ 55dB (40°C, full load)	
Safety/EMC/ Lightening Protection	Safety Certification	TUV, CE, and UL, CB certificate Complies with UL60950-1, IEC60950-1, CAN/CSA C22.2 No. 60950-1, and EN60950-1.	
	EMC	EN55032 Class B; EN55024; EN61000-3-2; EN61000-3-3; ETSI EN300386 ITU-T K.20	
	Lightening protection	5kA	

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Shenzhen 518129, P.R. China

Tel: +86-755-28780808

www.huawei.com