

SZSSTH

RSM144H-166M-9BB 425-455W

High Efficiency Low LID Mono PERC with Half-cut Technology

Positive power tolerance (0 ~ +5W) guaranteed

High module conversion efficiency (up to 20.48%)

Slower power degradation enabled by Low LID Mono PERC technology:

first year <2.5%, 0.56% year 2-25

Solid PID resistance ensured by solar cell process optimization and careful module BOM selection

Reduced resistive loss with lower operating current

Higher energy yield with lower operating temperature

Reduced hot spot risk with optimized electrical design and lower operating current

Complete System and Product Certifications

IEC 61215, IEC 61730

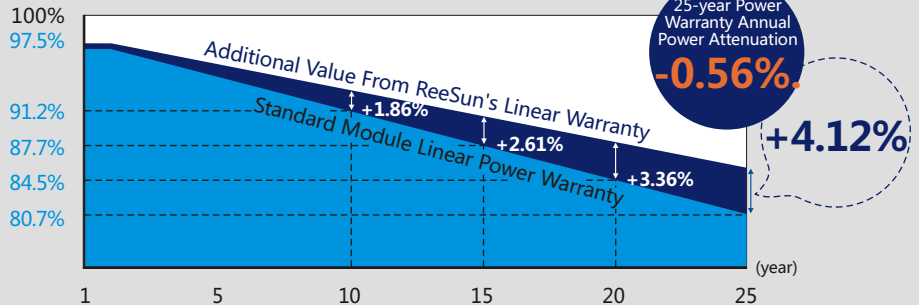
ISO 9001:2015: ISO Quality Management System

ISO 14001:2015: ISO Environment Management System

ISO 45001:2018 Occupational Health and Safety

* Specifications subject to technical changes and tests.
ReeSuna solar reserves the right of interpretation.

12-year Warranty for Materials and Processing; 25-year Warranty for Extra Linear Power Output.



Shenzhen ShengShi TianHe Electronic Technology Co.,Ltd
Add: 7th Floor, Building B5, Xiufeng industrial zone, Gankeng community
Jihua Street, Longgang district, Shenzhen City, Guangdong Province, China.

Tel: 86-0755-28284592 E-mail: info@ssthpower.com

Website: www.ssthpower.com



Shenzhen SZSSTH Company is a high-tech PV enterprise dedicated to research, development, production, sales & after sales service, mainly engaged in crystalline silicon solar cells, solar panels, photovoltaic systems, PV applications. Our product specifications are compatible with 158-210 size battery cells, adopting German TUV quality control standards, and realizing the whole process quality traceability from auxiliary materials to finished components.



RSM144H-166M-9BB

425-455W

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Electrical Characteristics

Model Number	
Testing Condition	
Maximum Power (Pmax/W)	
Voltage at Maximum Power (Vmp/V)	
Current at Maximum Power (Imp/A)	
Open Circuit Voltage (Voc/V)	
Short Circuit Current (Isc/A)	
Module Efficiency (%)	

Electrical Characteristics

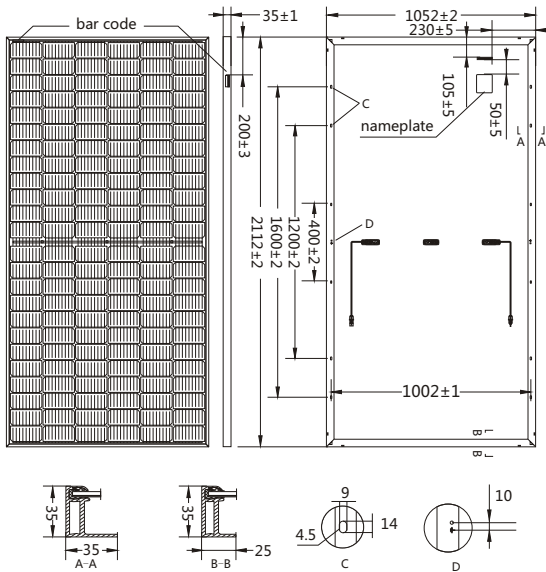
Test uncertainty for Pmax: ±3%

	425W		430W		435W		440W		445W		450W		455W	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	425	317.4	430	321.1	435	324.9	440	328.6	445	332.3	450	38.6	455	339.8
Voltage at Maximum Power (Vmp/V)	40.5	37.7	40.7	37.9	40.9	38.1	41.1	38.3	41.3	38.5	41.5	8.70	41.7	38.8
Current at Maximum Power (Imp/A)	10.50	8.42	10.57	8.47	10.64	8.53	10.71	8.59	10.78	8.64	10.85	336.1	10.92	8.75
Open Circuit Voltage (Voc/V)	48.3	45.3	48.5	45.5	48.7	45.7	48.9	45.8	49.1	46.0	49.3	46.2	49.5	46.4
Short Circuit Current (Isc/A)	11.23	9.08	11.31	9.15	11.39	9.21	11.46	9.27	11.53	9.33	11.60	9.38	11.66	9.43
Module Efficiency (%)	19.13		19.36		19.58		19.81		20.03		20.26		20.48	

STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25°C, Spectra at AM1.5

NOCT (Nominal Operating Cell Temperature): Irradiance 800W/m², Ambient Temperature 20°C, Spectra at AM1.5, Wind at 1m/S

Design (mm)



Mechanical & Operating Parameters

Cell Orientation	144 (6×24)
Junction Box	IP68, three diodes
Output Cable	4mm ² , 300mm in length, length can be customized
Glass	Single glass 3.2mm coated tempered glass
Frame	Anodized aluminum alloy frame
Weight	25kg
Dimension	2112×1052×35mm
Packaging	31pcs/pallet 682pcs/40'HC
Operational Temperature	-40°C ~ +85°C
Power Output Tolerance	0~+5 W
Voc and Isc Tolerance	±3%
Maximum System Voltage	DC1500V (IEC/UL)
Maximum Series Fuse Rating	20A
Nominal Operating Cell Temperature	45±2°C
Safety Class	Class II
Fire Rating	Class C

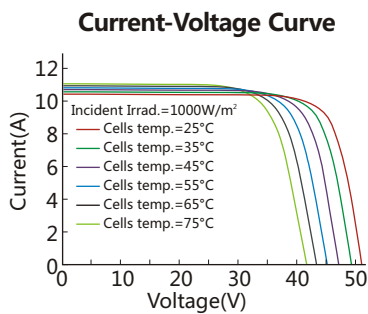
Temperature Ratings (STC)

Temperature Coefficient of Isc	+0.048%/°C
Temperature Coefficient of Voc	-0.270%/°C
Temperature Coefficient of Pmax	-0.350%/°C

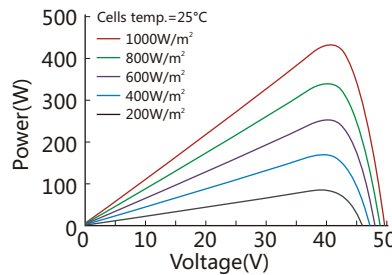
Mechanical Loading

Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

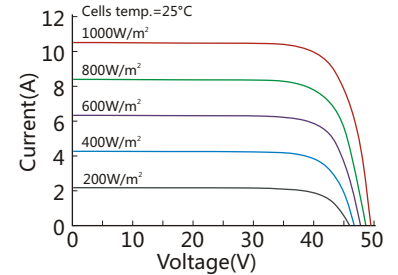
I-V Curve (RSM144H-166M-440W)



Power-Voltage Curve



Current-Voltage Curve



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