



Solar Panel Back Contact MSBC



Key Features

High Reliability

- Cell type HPBC (Hybrid Passivated Back Contact)

High Efficiency

- Cell efficiency 24.5~25.4%

High Durability

- Power tolerance $\pm 3\%$
- 25-years performance guarantee 85%
- Power degradation first year 1.5%
- Power degradation subsequent year 0.55%

Product Specifications

Electrical parameters at standard test conditions

STC 1.000W/m²

Cells Temperature 25°C

AM=1.5

Specifications

Item	MSBC-110	MSBC-130	MSBC-150	MSBC-170	MSBC-190	MSBC-220	MSBC-250	MSBC-300
Max Power (Pmax)	110W	130W	150W	170W	190W	220W	250W	300W
Max voltage (Vmp)	20.88V	24.36V	26.10V	20.88V	17.40V	20.88V	23.56V	22.94V
Max current (Imp)	5.27A	5.34A	5.75A	8.15A	10.92A	10.54A	10.62A	13.08A
Open circuit voltage (Voc)	23.76V	27.72V	29.70V	23.76V	20.10V	23.40V	27.36V	26.64V
Short circuit current (Isc)	5.59A	5.66A	6.10A	8.64A	9.64A	11.17A	11.26A	13.87A
Max system voltage	DC 1000V							
Maximum Series Fuse Rating	20A							

Electrical parameters at NMOT test conditions

NMOT Irradiance 800W/m²

Ambient Temperature 20°C

AM=1.5

Wind Speed 1 m/s

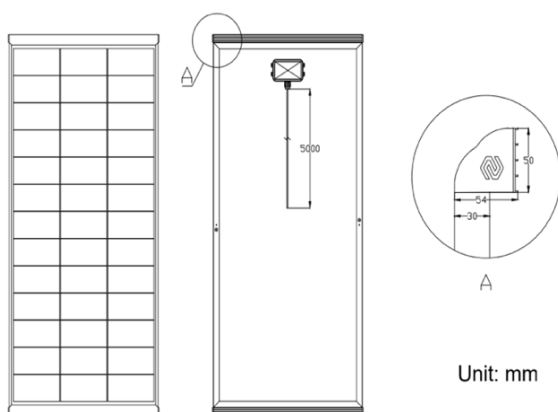
Specifications

Item	MSBC-110	MSBC-130	MSBC-150	MSBC-170	MSBC-190	MSBC-220	MSBC-250	MSBC-300
Max Power (Pmax)	88W	104W	120W	136W	152W	176W	200W	240W
Max voltage (Vmp)	20.88V	24.36V	26.10V	20.88V	17.40V	20.88V	23.56V	22.94V
Max current (Imp)	4.22A	4.27A	4.60A	6.52A	8.74A	8.43A	8.50A	10.46A
Open circuit voltage (Voc)	23.42V	27.37V	29.41V	23.42V	19.87V	23.08V	27.01V	26.30V
Short circuit current (Isc)	4.47A	4.53A	4.88A	6.91A	7.71A	8.94A	9.01A	11.10A

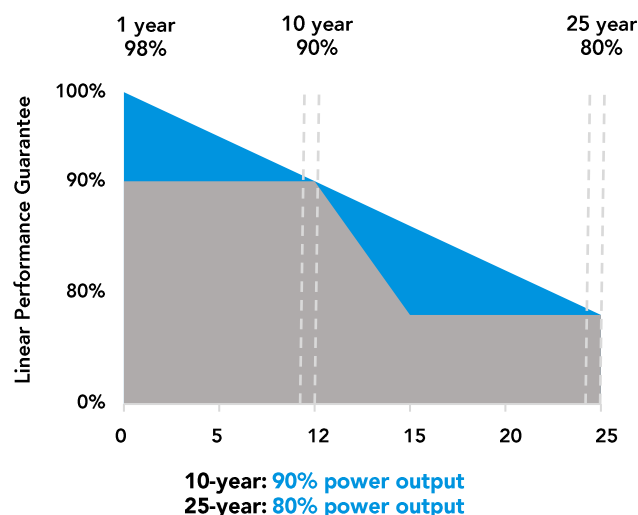
Mechanical Data

Item	MSBC-110	MSBC-130	MSBC-150	MSBC-170	MSBC-190	MSBC-220	MSBC-250	MSBC-300
L*W*H (mm)	1155*515*54	1325*515*54	1410*515*54	1665*515*54	1410*680*54	1665*680*54	1740*680*54	1695*885*54
Number of cells	36 (3*12)	42 (3*14)	45 (3*15)	108 (3*36)	60 (4*15)	72 (4*18)	76 (4*19)	185 (5*37)
Cell Dimension (HPBC)	160*85mm	160*85mm	160*85mm	160*42.5mm	160*85mm	160*85mm	160*85mm	160*42.5mm
Solar Module efficiency	20.24%	20.6%	22.23%	21.09%	21.33%	20.67%	22.41%	21.25%
Output cables	2X2.5mm ² HORN-7 single cable, 5 meters							
Connectors	N/A							
Glass	3.2mm, High Transmission, AR Coated Strengthened Glass							
Weight	7.1kg	8.2kg	8.8kg	10.1 kg	11.2kg	12.9kg	13.9kg	16.6kg
Color	Full Black							

Engineering Drawing



Performance Guarantee



Temperature Characteristics

Electrical parameters at standard test conditions

STC ☀️ 1.000W/m² 🌡️ Cells Temperature 25°C ☁️ AM=1.5

Specifications

Item	Specification
Temp.Coeff.of I _{sc} (I _{sc})	+0.05%/°C
Temp.Coeff.of V _{oc} (V _{oc})	- 0.29%/°C
Temp.Coeff.of P _{maxf} (P _{max})	- 0.34%/°C
Operating temperature	- 40-+85°C
Normal operating cell temperature	44±2°C

Test, Certifications and Warranties

- ✓ System certifications ISO 9001
- ✓ Certifications CE, ECE-R10
- ✓ Extreme wind and snow load testing: Withstand extreme wind load (2400 Pascal) and snow load (5400 Pascal)
- ✓ Junction box IP67
- ✓ Warranty 10 years products warranty and 25 years 80% of power



1) Measurement Tolerances: P_{max} (± 3%), I_{sc} & V_{oc} (± 3%) - Module Type 0/+5W

2) STC (Standard Testing Condition): Irradiance 1000W/m². Cell Temperature 25°C. AM 1.5

3) NMOT (Nominal Operating Module Temperature): Irradiance 800W/m². NMOT. Ambient Temperature 20°C. AM 1.5. Wind Speed 1m/s

4) Item numbers 1519400/1519410/1519420/1519430/1519440/1519450/1519460/1519470

*The application of our layer adds 15/20 more watts compared to the standard cell.

Specifications included in this datasheet are subject to change without notice. Mestic reserves the right of final interpretation.