Panasonic

Photovoltaic module HIT[®] VBHN330SJ47/ VBHN325SJ47

19.7% module efficiency

Enables reaching a higher output and lower specific installation and balance-of-system costs than with the same number of standard 60-cell modules.



100% Panasonic, 100% HIT°

Proudly featuring Panasonic's original invention, the heterojunction solar cell. With over 1 billion cells produced commercially over 18 years, 25 years after the breakthrough in the development and looking back to over 40 years of experience in solar, Panasonic really offers you a 25-year guarantee you can trust.

solar business since ?	975
	heterojunction technology since 1990
	HIT [®] mass-production since 1997
75	

More energy, higher profit!

Helping you reach a higher final profit with your PV system!





High Efficiency

Iris Hellas



High Performance

at High Temperatures

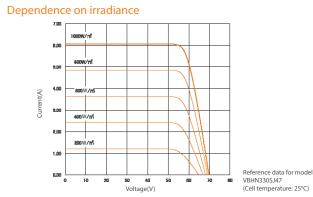
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N 330

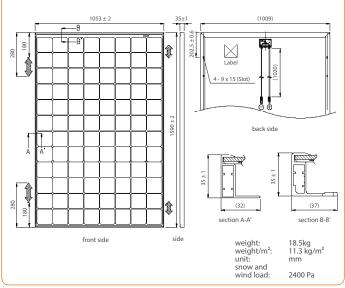
N 325



Maximum power at delivery.emperature characteristicsTemperature (NOCT) [°C]44.0Temp. coefficient of Pmax [%/°C]-0.258Temp. coefficient of Voc [V/°C]-0.164Temp. coefficient of Isc [mA/°C]3.34Temp. coefficient of Isc [mA/°C]56.3Short voltage (Von) [V]56.3Short circuit current (Isc) [A]4.89Coefficient of Isc [Imp: Air mass 1.5; Irradiance = 800Wr ² ; Irrediver 20°C; wind speed 1 m/s	ectrical data (at STC)	VBHN330SJ47	VBHN325SJ47
Max. power current (Imp) [A]5.705.65Open circuit voltage (Voc) [V]69.769.6Short circuit current (Isc) [A]6.076.03Max. over current rating [A]1515Power tolerance [%] *+10/-0+10/-0Max. system voltage [V]10001000Solar panel efficiency [%]19.719.4Max. system voltage [V]19.719.4Max. system voltage [V]10001000Solar panel efficiency [%]19.719.4Max. power delivery.19.719.4Max. power tolerance [%] *-0.164-0.164Temperature characteristics-0.258-0.258Temp. coefficient of Pmax [%/°C]-0.164-0.164Temp. coefficient of Voc [V/°C]-0.1643.32Max. power (Pmax) [W]251.9249.3Max. power (Pmax) [W]256.356.1Max. power current (Imp) [A]4.544.52Open circuit voltage (Voc) [V]65.865.9Short circuit current (Isc) [A]4.894.88Max. power (Pmax) [W]63.562.3Max. power (Pmax) [W]63.562.3Max. power voltage (Vmp) [V]57.056.4Max. power voltage (Vmp) [V]57.056.4Max. power voltage (Vmp) [V]57.056.4Max. power voltage (Vmp) [A]1.121.11Max. power voltage (Vmp) [A]1.121.11Max. power voltage (Vmp) [A]65.665.3	Max. power (Pmax) [W]	330	325
Open circuit voltage (Voc) [V] 69.7 69,6 Short circuit current (Isc) [A] 6.07 6,03 Max. over current rating [A] 15 15 Power tolerance [%] * +10/-0 +10/-0 Max. system voltage [V] 1000 1000 Solar panel efficiency [%] 19.7 19,4 Idet: Standard Test Conditions: Air mass 1.5; Irradiance = 1000W/r; cell temp.25°C 70.258 -0.258 Temperature characteristics -0.258 -0.258 -0.258 Temp. coefficient of Pmax [%/°C] -0.164 -0.164 -0.164 Temp. coefficient of Voc [V/°C] -0.164 -0.164 3.32 At NOCT (Normal Operating Conditions) 3.34 3.32 At NOCT (Normal Operating Conditions) 56.3 56.1 Max. power (Pmax) [W] 251.9 249.3 Max. power current (Imp) [A] 4.54 4.52 Open circuit voltage (Voc) [V] 65.8 65.9 Short circuit current (Isc) [A] 4.89 4.88 At Source Vormal Operating Cell Temp. Air mass 1.5; Irradiance = 800W/r ³ ; You 56.4 <tr< td=""><td>Max. power voltage (Vmp) [V]</td><td>58.0</td><td>57,6</td></tr<>	Max. power voltage (Vmp) [V]	58.0	57,6
Short circuit current (lsc) [A] 6.07 6.03 Max. over current rating [A] 15 15 Power tolerance [%] * +10/-0 +10/-0 Max. system voltage [V] 1000 1000 Solar panel efficiency [%] 19.7 19,4 Vote: Standard Test Conditions: Air mass 1.5; Irradiance = 1000W/r; cell temp. 25°C Femperature characteristics remperature characteristics -0.258 -0.258 Temp. coefficient of Pmax [%/°C] -0.164 -0.164 Temp. coefficient of Voc [V/°C] -0.164 -0.164 Temp. coefficient of lsc [mA/°C] 3.34 3.32 Max. power (Pmax) [W] 251.9 249.3 Max. power voltage (Vmp) [V] 56.3 56.1 Max. power voltage (Vmp) [V] 56.3 56.1 Max. power current (Imp) [A] 4.54 4.52 Open circuit voltage (Voc) [V] 65.8 65.9 Short circuit current (lsc) [A] 4.89 4.88 Max. power voltage (Imp.: Air mass 1.5; Irradiance = 800/m²; Vir temperature 20°C; wind speed 1 m/s 57.0 56.4 Max. power (Pmax) [W]	Max. power current (Imp) [A]	5.70	5,65
Max. over current rating [A] 15 15 Power tolerance [%] * +10/-0 +10/-0 Max. system voltage [V] 1000 1000 Solar panel efficiency [%] 19.7 19,4 Maximum power at delivery. 19.7 19,4 Vote: Standard Test Conditions: Air mass 1.5; Irradiance = 1000WUW; cell temp. 25°C Femperature characteristics Temperature characteristics -0.258 -0.258 Temp. coefficient of Pmax [%/°C] -0.164 -0.164 Temp. coefficient of Voc [V/°C] -0.164 -0.164 Temp. coefficient of ls [mA/°C] 3.34 3.32 At NOCT (Normal Operating Conditions) 251.9 249.3 Max. power (Pmax) [W] 256.3 56.1 Max. power voltage (Vmp) [V] 56.3 56.1 Max. power current (Imp) [A] 4.54 4.52 Open circuit voltage (Voc) [V] 65.8 65.9 Short circuit current (lsc) [A] 4.89 4.88 Max. power (Pmax) [W] 63.5 62.3 Max. power (Pmax) [W] 57.0 56.4 Max.	Open circuit voltage (Voc) [V]	69.7	69,6
Number of element retaining (s) 1.0 1.0 Power tolerance (%) * +10/-0 +10/-0 Max. system voltage [V] 1000 1000 Solar panel efficiency (%) 19.7 19,4 Jote: Standard Test Conditions: Air mass 1.5; Irradiance = 1000WW*; cell temp. 25°C Temperature characteristics Temperature characteristics -0.258 -0.258 Temp. coefficient of Pmax (%/°C) -0.164 -0.164 Temp. coefficient of Voc (V/°C) -0.164 -0.164 Temp. coefficient of lsc [mA/°C] 3.34 3.32 At NOCT (Normal Operating Conditions) 251.9 249.3 Max. power voltage (Vmp) [V] 56.3 56.1 Max. power voltage (Vmp) [V] 56.3 56.1 Max. power voltage (Voc) [V] 65.8 65.9 Short circuit voltage (Voc) [V] 65.8 65.9 Short circuit current (lsc) [A] 4.89 4.88 Idve: Normal Operating Cell Temp: Air mass 1.5; Irradiance = 800W**; Strue 63.5 Max. power (Pmax) [W] 63.5 62.3 Max. power voltage (Vmp) [V] 57.0	Short circuit current (lsc) [A]	6.07	6,03
Max. system voltage [V] 1000 Solar panel efficiency [%] 19.7 19,4 Solar panel efficiency [%] 44.0 44.0 Temperature characteristics -0.258 -0.258 Temp. coefficient of Pmax [%/°C] -0.164 -0.164 Temp. coefficient of lsc [mA/°C] 3.34 3.32 At NOCT (Normal Operating Conditions) 251.9 249.3 Max. power (Pmax) [W] 56.3 56.1 Max. power voltage (Vmp) [V] 56.3 56.9 Short circuit voltage (Voc) [V] 65.8 65.9 Short circuit current (lsc) [A] 4.89 4.88 Vet Iow irradiance (20%) Max. power (Pmax) [W] 63.5 62.3 Max. power voltage (Vmp) [V] <t< td=""><td>Max. over current rating [A]</td><td>15</td><td>15</td></t<>	Max. over current rating [A]	15	15
Numer protect of lage (1)InfectionSolar panel efficiency [%]19.719,4lote: standard Test Conditions: Air mass 1.5; Irradiance = 1000W/m²; cell temp. 25°CMaximum power at delivery.temperature characteristics44.044.0Temperature (NOCT) [°C]44.044.0Temp. coefficient of Pmax [%/°C]-0.258-0.258Temp. coefficient of Voc [V/°C]-0.164-0.164Temp. coefficient of lsc [mA/°C]3.343.32At NOCT (Normal Operating Conditions)251.9249.3Max. power (Pmax) [W]56.356.1Max. power voltage (Vmp) [V]56.356.1Max. power current (Imp) [A]4.544.52Open circuit voltage (Voc) [V]65.865.9Short circuit current (Isc) [A]4.894.88vote: Normal Operating Cell Temp: Air mass 1.5; Irradiance = 800U/Urit irradiance (20%)57.056.4Max. power voltage (Vmp) [V]57.056.4Max. power voltage (Vmp) [V]57.056.4Max. power current (Imp) [A]1.121.11Open circuit voltage (Voc) [V]65.662.3Max. power voltage (Vmp) [V]57.056.4Max. power voltage (Vmp) [V]57.056.4Max. power current (Imp) [A]1.121.11Open circuit voltage (Voc) [V]65.665.3	Power tolerance [%] *	+10/-0	+10/-0
Advance 1000000000000000000000000000000000000	Max. system voltage [V]	1000	1000
Maximum power at delivery.Temperature characteristicsTemperature (NOCT) [°C]44.044.0Temp. coefficient of Pmax [%/°C]-0.258-0.258Temp. coefficient of Voc [V/°C]-0.164-0.164Temp. coefficient of Isc [mA/°C]3.343.32At NOCT (Normal Operating Conditions)251.9249.3Max. power (Pmax) [W]56.356.1Max. power voltage (Vmp) [V]56.356.1Max. power current (Imp) [A]4.544.52Open circuit voltage (Voc) [V]65.865.9Short circuit current (Isc) [A]4.894.88Ide: Normal Operating Cell Temp: Air mass 1.5; Irradiance = 800Urradiance 2000Urradiance 2000Urradiance 100Urradiance 2000Urradiance 200Urradiance 200Urrad	Solar panel efficiency [%]	19.7	19,4
Temperature (NOCT) [°C] 44.0 44.0 Temp. coefficient of Pmax [%/°C] -0.258 -0.258 Temp. coefficient of Voc [V/°C] -0.164 -0.164 Temp. coefficient of lsc [mA/°C] 3.34 3.32 Temp. coefficient of lsc [mA/°C] 3.34 3.32 At NOCT (Normal Operating Conditions) 251.9 249.3 Max. power (Pmax) [W] 256.3 56.1 Max. power voltage (Vmp) [V] 56.3 56.1 Max. power current (Imp) [A] 4.54 4.52 Open circuit voltage (Voc) [V] 65.8 65.9 Short circuit current (Isc) [A] 4.89 4.88 Max. power (Pmax) [W] 63.5 62.3 Max. power (Pmax) [W] 63.5 62.3 Max. power voltage (Vmp) [V] 57.0 56.4 Max. power current (Imp) [A] 1.12 1.11 Open circuit voltage (Voc) [V] 65.6 65.3		000W/m²; cell temp. 25°C	
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Temp. coefficient of Voc [V/°C] -0.164 -0.164 Temp. coefficient of Isc [mA/°C] 3.34 3.32 At NOCT (Normal Operating Conditions) 3.34 3.32 Max. power (Pmax) [W] 251.9 249.3 Max. power voltage (Vmp) [V] 56.3 56.1 Max. power voltage (Voc) [V] 65.8 65.9 Open circuit voltage (Voc) [V] 65.8 65.9 Short circuit current (Isc) [A] 4.89 4.88 Iote: Normal Operating Cell Temp: Air mass 1.5; Irradiance = 800U/m²; Sir temperature 20°C; wind speed 1 m/s 63.5 62.3 Max. power (Pmax) [W] 63.5 62.3 56.4 Max. power voltage (Vmp) [V] 57.0 56.4 Max. power current (Imp) [A] 1.12 1.11 Open circuit voltage (Voc) [V] 65.6 65.3			
Temp. coefficient of lsc [mA/°C] 3.34 3.32 At NOCT (Normal Operating Conditions) 251.9 249.3 Max. power (Pmax) [W] 56.3 56.1 Max. power voltage (Vmp) [V] 56.3 56.1 Max. power current (Imp) [A] 4.54 4.52 Open circuit voltage (Voc) [V] 65.8 65.9 Short circuit current (lsc) [A] 4.89 4.88 Vote: Normal Operating Cell Temp: Air mass 1.5; Irradiance = 800WWr*; stremperature 20°C; wind speed 1 m/s 63.5 62.3 Max. power (Pmax) [W] 63.5 62.3 64.3 Max. power voltage (Vmp) [V] 57.0 56.4 1.11 Max. power current (Imp) [A] 1.12 1.11 0			
At NOCT (Normal Operating Conditions)Max. power (Pmax) [W]251.9249.3Max. power voltage (Vmp) [V]56.356.1Max. power voltage (Vmp) [V]56.356.1Max. power current (Imp) [A]4.544.52Open circuit voltage (Voc) [V]65.865.9Short circuit current (Isc) [A]4.894.88Note: Normal Operating Cell Temp: Air mass 1.5; Irradiance = 800W/m²; sir temperature 20°C; wind speed 1 m/s63.562.3Max. power (Pmax) [W]63.562.362.3Max. power voltage (Vmp) [V]57.056.4Max. power current (Imp) [A]1.121.11Open circuit voltage (Voc) [V]65.665.365.365.3			
Max. power (Pmax) [W] 251.9 249.3 Max. power voltage (Vmp) [V] 56.3 56.1 Max. power voltage (Vmp) [A] 4.54 4.52 Open circuit voltage (Voc) [V] 65.8 65.9 Short circuit current (lsc) [A] 4.89 4.88 Iote: Normal Operating Cell Temp: Air mass 1.5; Irradiance = 800W/m ² ; tir temperature 20°C; wind speed 1 m/s 63.5 62.3 Max. power (Pmax) [W] 63.5 62.3 56.4 Max. power voltage (Vmp) [V] 57.0 56.4 Max. power current (Imp) [A] 1.12 1.11 Open circuit voltage (Voc) [V] 65.6 65.3	Temp. coefficient of lsc [mA/°C]	3.34	3.32
Max. power voltage (Vmp) [V]56.356.1Max. power current (Imp) [A]4.544.52Open circuit voltage (Voc) [V]65.865.9Short circuit current (Isc) [A]4.894.88Jote: Normal Operating Cell Temp: Air mass 1.5; Irradiance = 800W/m²; kir temperature 20°C; wind speed 1 m/s63.562.3Max. power (Pmax) [W]63.562.3Max. power voltage (Vmp) [V]57.056.4Max. power current (Imp) [A]1.121.11Open circuit voltage (Voc) [V]65.665.3	At NOCT (Normal Operating Conditions)		
Max. power current (Imp) [A]4.544.52Open circuit voltage (Voc) [V]65.865.9Short circuit current (Isc) [A]4.894.88Iote: Normal Operating Cell Temp: Air mass 1.5; Irradiance = 800W/m²; kir temperature 20°C; wind speed 1 m/s4.89At low irradiance (20%)63.562.3Max. power (Pmax) [W]63.562.3Max. power voltage (Vmp) [V]57.056.4Max. power current (Imp) [A]1.121.11Open circuit voltage (Voc) [V]65.665.3	Max. power (Pmax) [W]	251.9	249.3
Open circuit voltage (Voc) [V]65.865.9Short circuit current (Isc) [A]4.894.88Note: Normal Operating Cell Temp: Air mass 1.5; Irradiance = 800W/m²; Vir temperature 20°C; wind speed 1 m/s63.562.3Max. power (Pmax) [W]63.562.3Max. power voltage (Vmp) [V]57.056.4Max. power current (Imp) [A]1.121.11Open circuit voltage (Voc) [V]65.665.3	Max. power voltage (Vmp) [V]	56.3	56.1
Short circuit current (lsc) [A]4.894.88Short circuit current (lsc) [A]4.894.88Jote: Normal Operating Cell Temp: Air mass 1.5; Irradiance = 800W/m²; Kir temperature 20°C; wind speed 1 m/s63.562.3Max. power (Pmax) [W]63.562.3Max. power voltage (Vmp) [V]57.056.4Max. power current (Imp) [A]1.121.11Open circuit voltage (Voc) [V]65.665.3	Max. power current (Imp) [A]	4.54	4.52
Note: Normal Operating Cell Temp: Air mass 1.5; Irradiance = 800W/m²; Vir temperature 20°C; wind speed 1 m/s At low irradiance (20%) Max. power (Pmax) [W] 63.5 62.3 Max. power voltage (Vmp) [V] 57.0 56.4 Max. power current (Imp) [A] 1.12 1.11 Open circuit voltage (Voc) [V] 65.6 65.3	Open circuit voltage (Voc) [V]	65.8	65.9
Max. power (Pmax) [W]63.562.3Max. power voltage (Vmp) [V]57.056.4Max. power current (Imp) [A]1.121.11Open circuit voltage (Voc) [V]65.665.3	Short circuit current (Isc) [A]	4.89	4.88
Max. power (Pmax) [W] 63.5 62.3 Max. power voltage (Vmp) [V] 57.0 56.4 Max. power current (Imp) [A] 1.12 1.11 Open circuit voltage (Voc) [V] 65.6 65.3		e = 800W/m ² ;	
Max. power voltage (Vmp) [V] 57.0 56.4 Max. power current (Imp) [A] 1.12 1.11 Open circuit voltage (Voc) [V] 65.6 65.3			
Max. power current (Imp) [A] 1.12 1.11 Open circuit voltage (Voc) [V] 65.6 65.3			
Open circuit voltage (Voc) [V] 65.6 65.3			
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Short circuit current (lsc) [A]1.221.21			
	Short circuit current (Isc) [A]	1.22	1.21



Dimensions and weight



Guarantee

UNI 9174

UNI 9177

Guarantee					
Power output:	,	(90% of Pmin)			
Product workmanship:	25 years www.eu-	25 years (80% of Pmin) 25 years (registration necessary on www.eu-solar.panasonic.net, otherwise 15 years apply based on guarantee document)			
Materials					
Cell material:	5 inch pł	5 inch photovoltaic cells			
Glass material:		AR coated tempered glass Black anodized aluminium			
Frame materials:	Black and				
Connectors type:	SMK				
Certificates	JËT	RoHS	APPROVED PRODUCT		
CLASS UNO	htw.jet.or.if	COMPLIANT	Certificate No. MCS PV0034 Photovoltaic System		
By TÜV Rheinland UNI 8457 IEC	61215				

Electrical Protectio n

Please consult your local dealer for more information

IEC61730-1 IEC61730-2

Iris Hellas Technology Innovations

A CAUTION! Please read the installation manual carefully before using the products.

Used electrical and electronic products must not be mixed with general household waste. For proper treatment, recovery and recycling of old products, please take them to applicable collection points in accordance with your national legislation.

Panasonic Eco Solutions Europe Panasonic Electric Works Europe AG

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