

Characteristics of a PV module

Manufacturer, model : **Hyundai, HIS-M218SG**

Availability : Prod. from 2009

Data source : Manufacturer 2011

STC power (manufacturer)	Pnom	218 Wp	Technology	Si-poly
Module size (W x L)	0.983 x 1.645	m2	Rough module area	Amodule 1.62 m2
Number of cells	1 x 60		Sensitive area (cells)	Acells 1.46 m2

Specifications for the model (manufacturer or measurement data)

Reference temperature	TRef	25 oC	Reference irradiance	GRef	1000 W/m2
Open circuit voltage	Voc	36.4 V	Short-circuit current	Isc	8.30 A
Max. power point voltage	Vmpp	28.9 V	Max. power point current	Impp	7.60 A
=> maximum power	Pmpp	219.6 W	Isc temperature coefficient	mulsc	4.7 mA/oC

One-diode model parameters

Shunt resistance	Rshunt	300 ohm	Diode saturation current	IoRef	105 nA
Serie resistance	Rserie	0.30 ohm	Voc temp. coefficient	MuVoc	-122 mV/oC
			Diode quality factor	Gamma	1.30
Specified Pmax temper. coeff.	muPMaxR	-0.43 %/oC	Diode factor temper. coeff.	muGamma	-0.000 1/oC

Model results for standard conditions (STC: T=25oC, G=1000 W/m2, AM=1.5)

Max. power point voltage	Vmpp	28.7 V	Max. power point current	Impp	7.64 A
Maximum power	Pmpp	219.7 Wc	Power temper. coefficient	muPmpp	-0.43 %/oC
Efficiency(/ Module area)	Eff_mod	13.6 %	Fill factor	FF	0.727
Efficiency(/ Cells area)	Eff_cells	15.0 %			

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