SH3.0~6.0RS

Characteristics Curves

SUNGROW

Version 1.0

EN

1.Introduction

This document describes characteristics curves of SH3.0RS, SH3.6RS, SH4.0RS,SH5.0RS and SH6.0RS inverters, including temperature dependent ,DC voltage dependent derating and AC voltage dependent derating behaviors.

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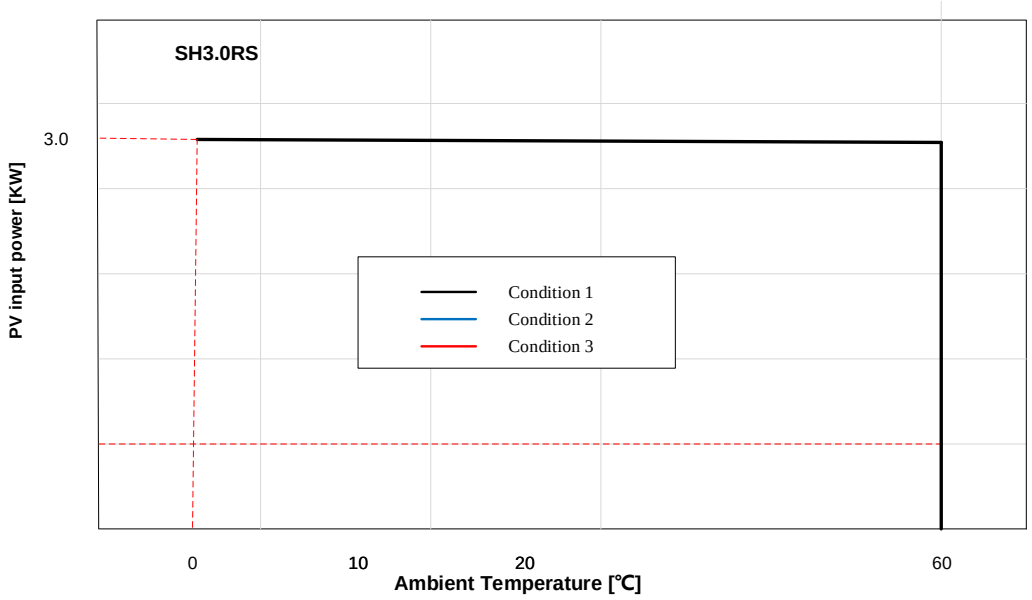
2.Characteristics Curves

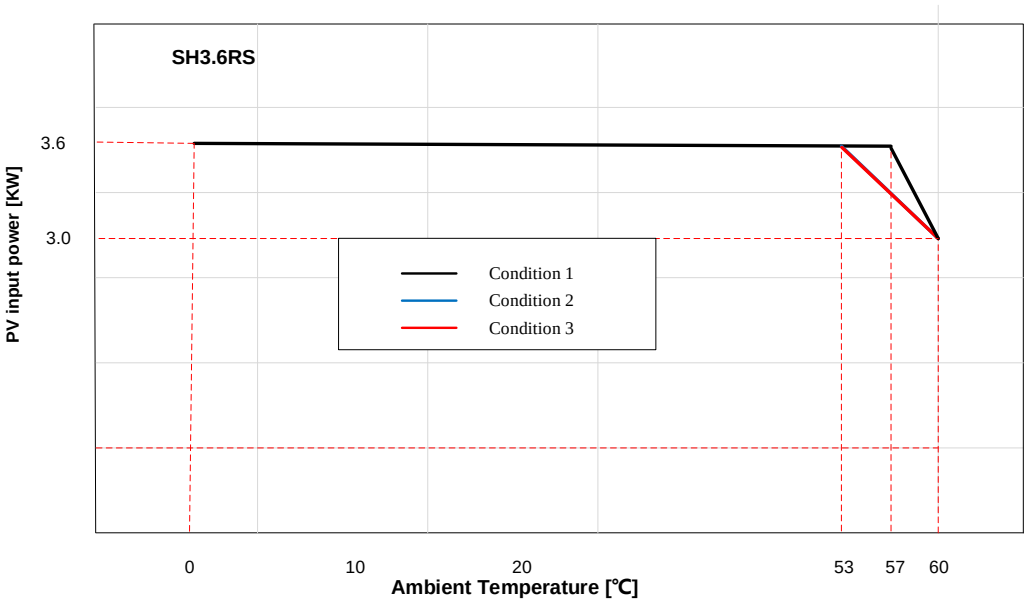
2.1. Temperature Derating Curve



Condition1：With PV input: 360V/1600W, battery discharge: 200V/1600W; AC:230V/3000W

Condition 2：With PV input: 360V/4500W; battery charge: 220V/1300W; AC:230V/3000W

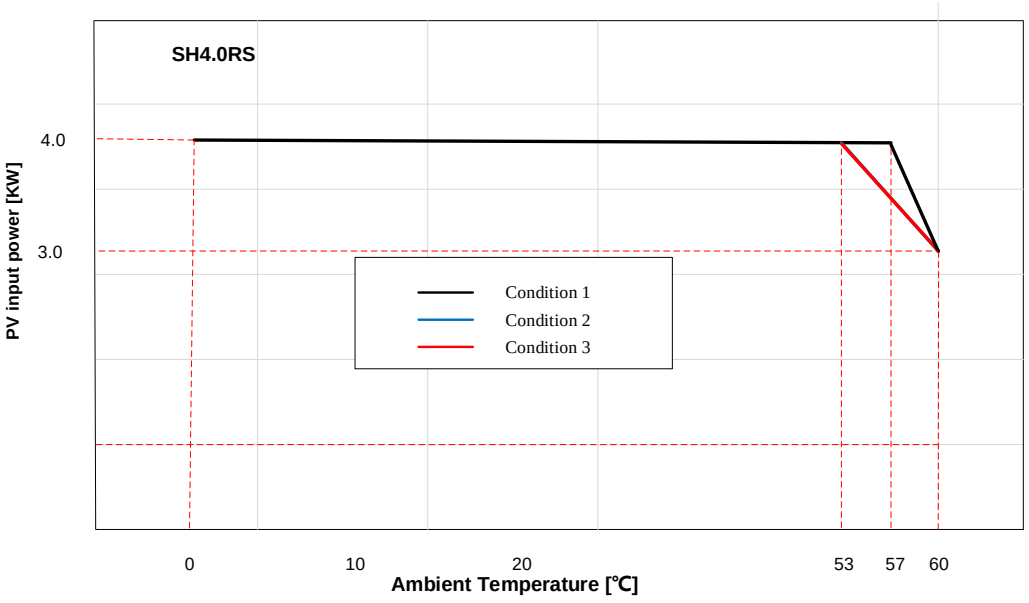
Condition 3：With PV input: 360V/4500W; battery charge: 220V/4300W ;Self-consumption,AC:230V/0W



Condition1：With PV input: 360V/2000W, battery discharge: 200V/2000W; AC:230V/3680W

Condition 2：With PV input: 360V/5500W; battery charge: 200V/1700W; AC:230V/3680W

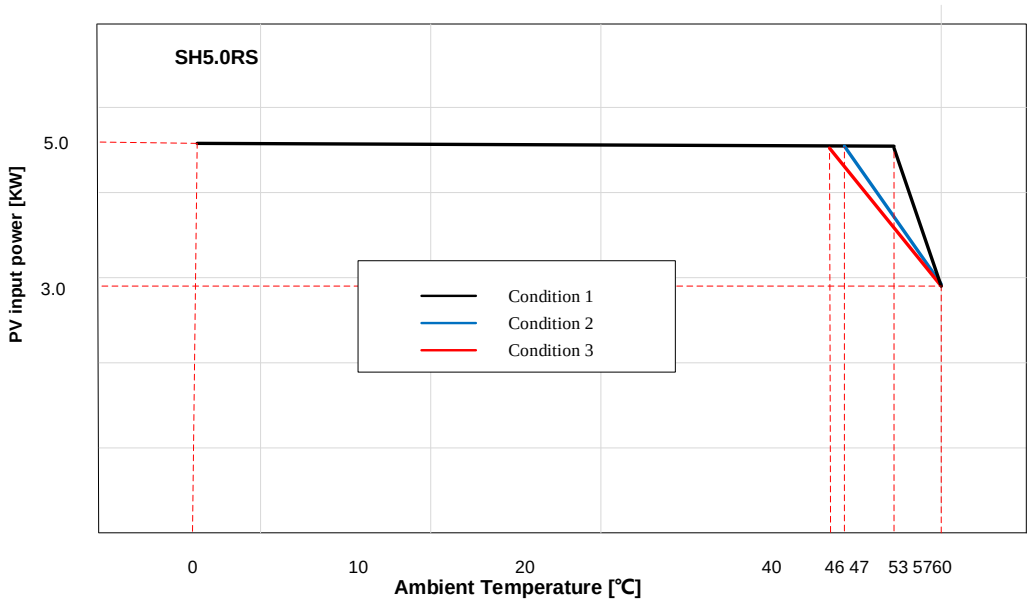
Condition 3：With PV input: 360V/5500W; battery charge: 200V/5300W ;AC:230V/0W



Condition1：With PV input: 360V/2100W, battery discharge: 200V/2100W; AC:230V/4000W

Condition 2：With PV input: 360V/6000W; battery charge: 200V/1800W; AC:230V/4000W

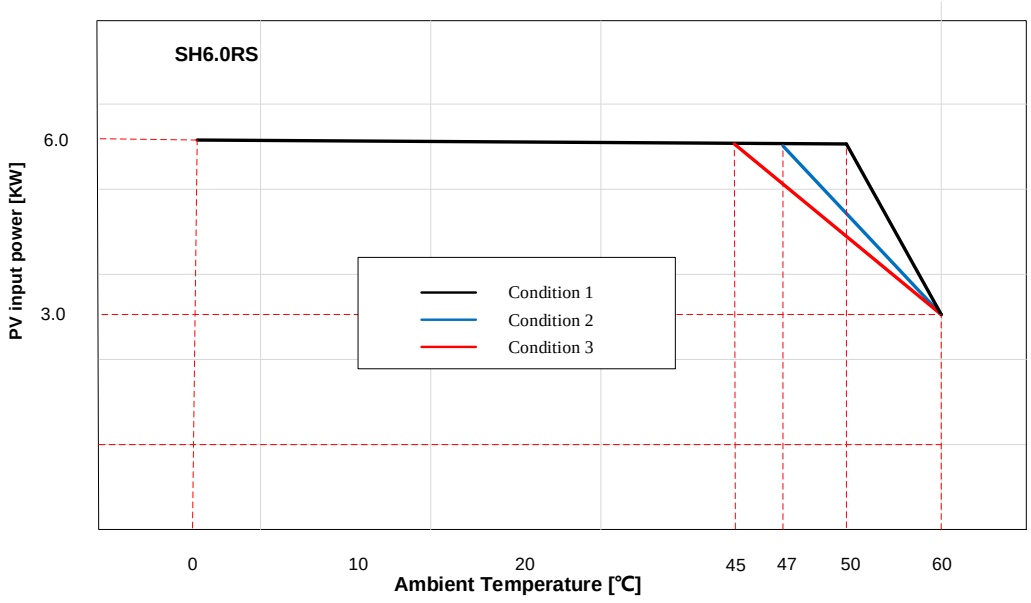
Condition 3：With PV input: 360V/6000W; battery charge: 220V/5800W ;AC:230V/0W



Condition 1：With PV input: 360V/2600W, battery discharge: 200V/2600W; AC:230V/5000W

Condition 2：With PV input: 360V/7500W; battery charge: 200V/1300W; AC:230V/6000W

Condition 3：With PV input: 360V/7500W; battery charge: 220V/6600W ;AC:230V/700W



Condition1：With PV input: 360V/3150W, battery discharge: 200V/3150W; AC:230V/6000W

Condition 2：With PV input: 360V/9000W; battery charge: 200V/2700W; AC:230V/6000W

Condition 3：With PV input: 360V/9000W; battery charge: 220V/6600W ;AC:230V/2100W

Fig-1 SH3.0~6.0RS Temperature Dependent Power Derating Curve

2.2. DC Voltage Derating Curve

Figure below is their DC voltage derating curve.

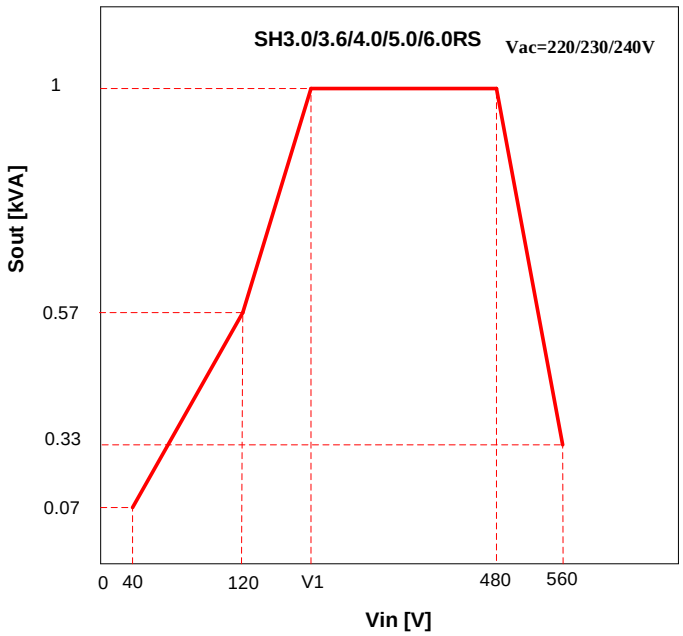


Fig-2 DC Voltage Dependent Output Power Derating Curve

Note:

Values of V1 for different inverter type are shown as below.

Inverter Type	V1
SH3.0RS	140V
SH3.6RS	170V
SH4.0RS	190V
SH5.0RS	235V
SH6.0RS	285V

2.3. AC Voltage Derating Curve

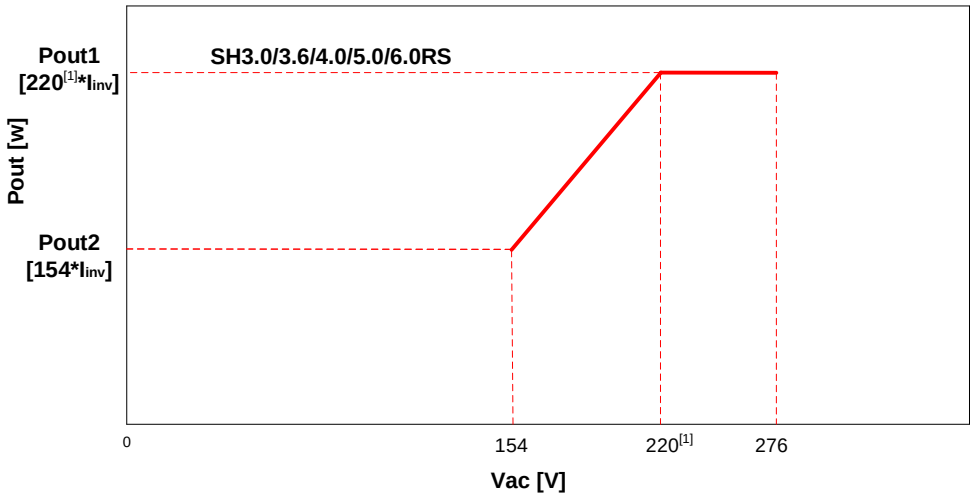


Fig-3 AC Voltage Dependent Derating Curve

Note:

Values of Pout1, Pout2 and Iinv for different Inverter type are shown as below.

Inverter Type	Iinv	Pout 1(W)	Pout 2(W)
SH3.0RS	13.7	3014	2109.8
SH3.6RS	16	3680[1]	2464
SH4.0RS	18.2	4004	2802.8
SH5.0RS	22.8	5016	3511.2
SH6.0RS	27.3	6006	4204.2

[1] :Vac=230V,Pout1=230*Iinv;