

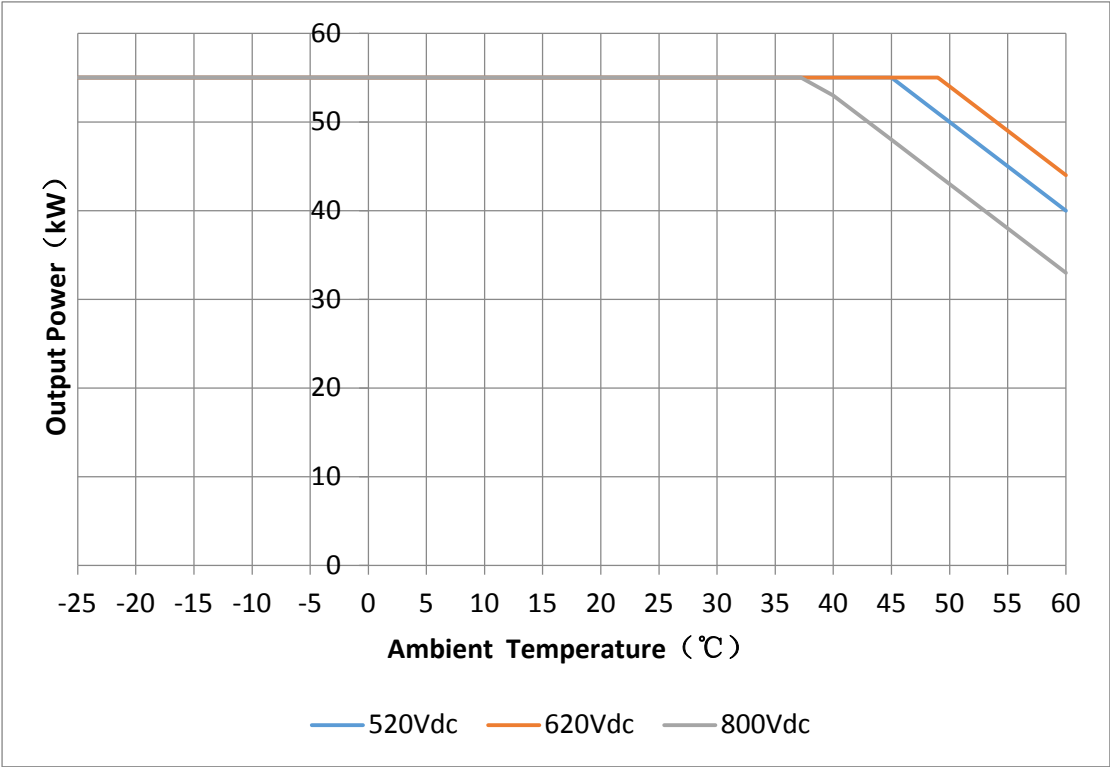
# **De-rating Behavior and P-Q Curve of Inverter SUN2000-50KTL-M0 (415Vac)**



**Huawei Technologies Co., Ltd.**

| Version | Created by | Date       | Remarks |
|---------|------------|------------|---------|
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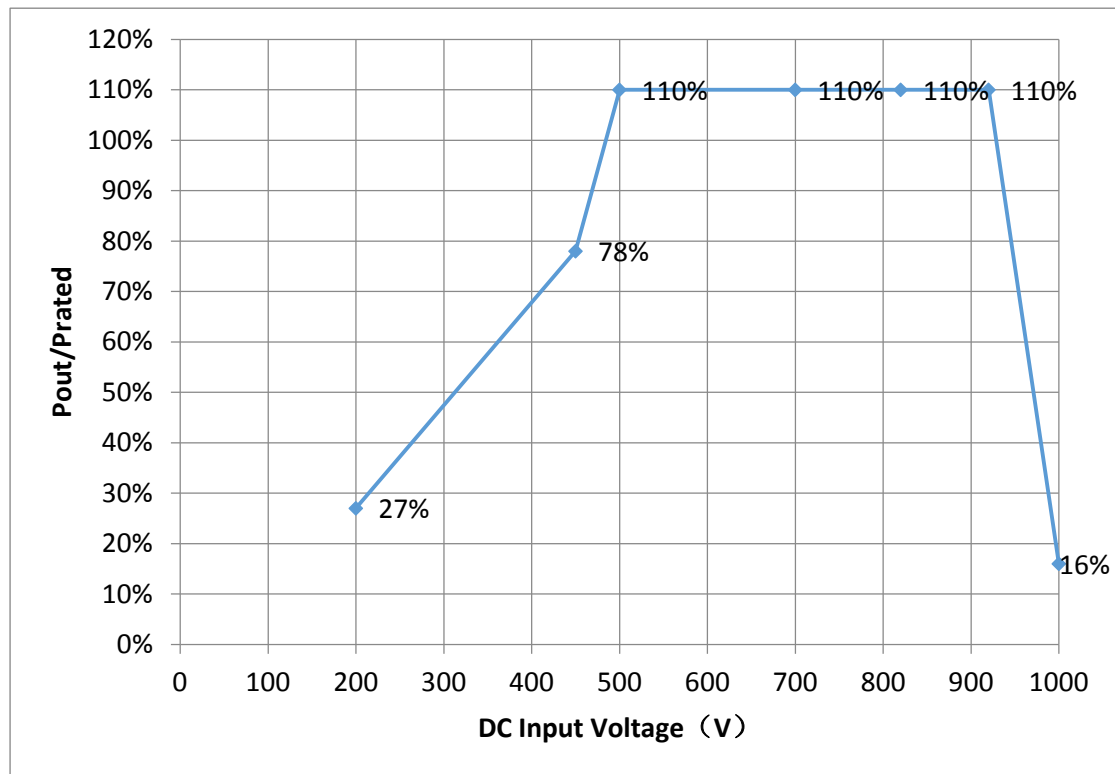
1. Temperature De-rating Curve of SUN2000-50KTL-M0 (415Vac)



Air speed: 0.5m/s ,PF=1

| Model            | MPPT Input | -25℃ | 15℃  | 30℃  | 40℃  | 50℃  | 60℃  |
|------------------|------------|------|------|------|------|------|------|
| SUN2000-50KTL-M0 | 520 Vdc    | 55kW | 55kW | 55kW | 55kW | 50kW | 40kW |
|                  | 620 Vdc    | 55kW | 55kW | 55kW | 55kW | 54kW | 44kW |
|                  | 800 Vdc    | 55kW | 55kW | 55kW | 53kW | 43kW | 33kW |

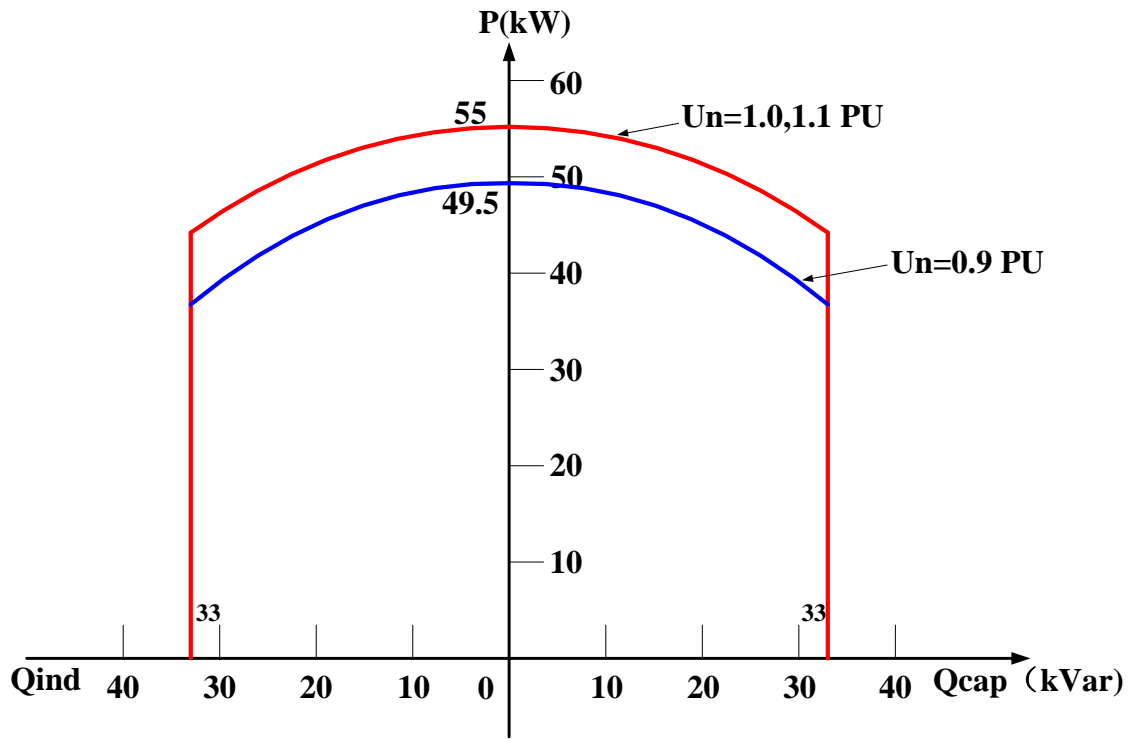
## 2. PV Input voltage De-rating Curve of SUN2000-50KTL-M0 (415Vac)



**Note:** The PV input voltage de-rating curve works under condition that PF=1.0.

| DC Input Voltage (V) | 200 | 450 | 500  | 700  | 820  | 920  | 1000 |
|----------------------|-----|-----|------|------|------|------|------|
| Pout/Prated          | 27% | 78% | 110% | 110% | 110% | 110% | 16%  |

### 3. PQ Curve of SUN2000-60KTL-M0 @ 1.0 p.u. voltage (415Vac)



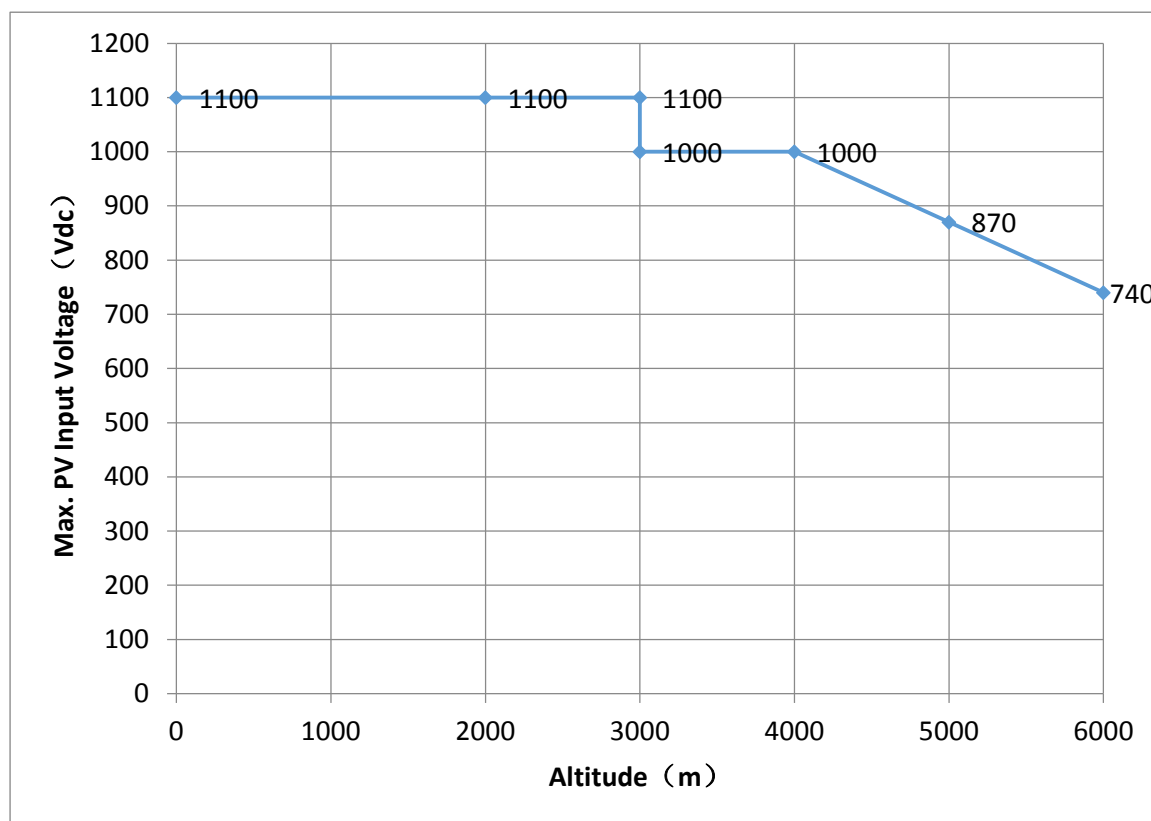
#### Note:

When SUN2000-50KTL-M0 is in the condition that it operates at rated and 1.1 rated output voltage, it can output 55kW (when PF=1) or 55kVA at most.

When SUN2000-50KTL-M0 is in the condition that it operates at 0.9 rated output voltage, it can output 49.5kW (when PF=1) or 49.5kVA at most.

#### 4. Max. PV Input Voltage vs. Altitude of SUN2000-50KTL-M0

(415Vac)



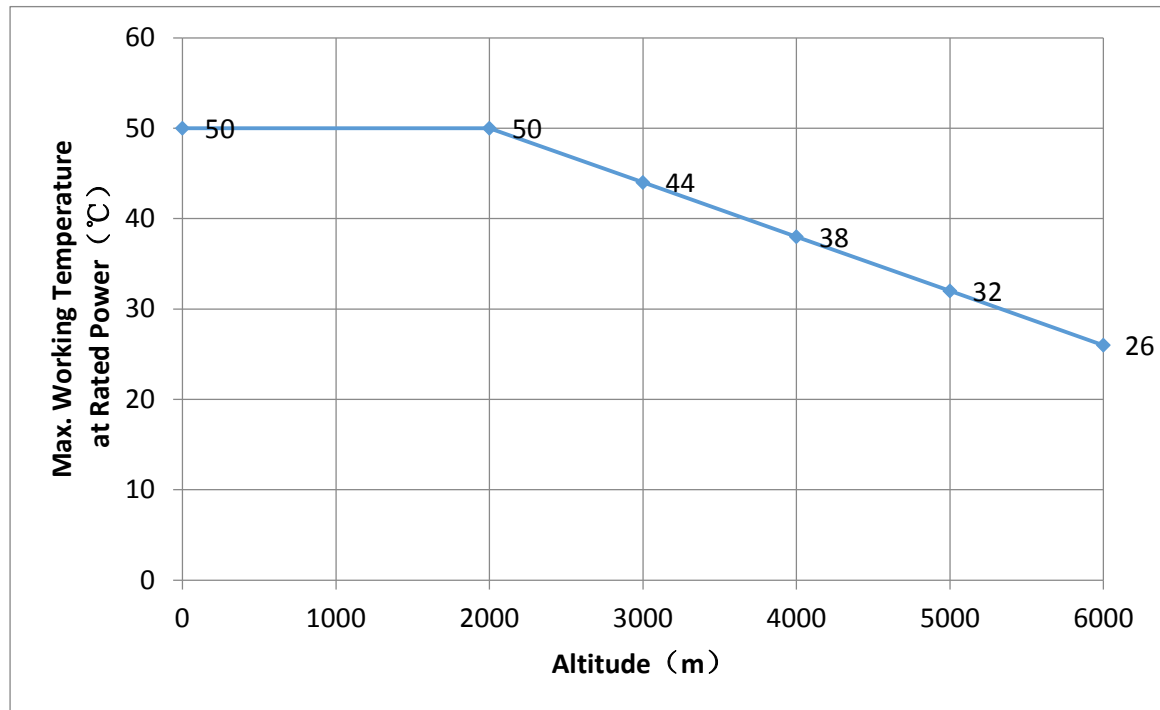
##### Note:

SUN2000 inverter design safety distance in accordance with running at the altitude of 4000m and below to avoid power de-rating. As altitude increases above 4000m, DC voltage de-rating of SUN2000 should be taken into consideration and DC voltage drop in accordance with 13V/100m.

For SUN2000 inverter, the rated AC voltage will not be affected by the altitude.

## 5. Maximum Working Temperature vs. Altitude of

SUN2000-50KTL-M0 (415Vac)



### Note:

The maximum working temperature is the ambient temperature below which SUN2000 can output rated power without de-rating.

When the altitude rises, the cooling capacity of the inverters de-rates. So the internal temperature of inverters in the high altitude area will be higher and severer than that in the low altitude area.

When altitude > 2000m, the maximum working temperature of SUN2000 should de-rate by altitude, and it de-rates in accordance with 6°C/1000m.

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