

XND19-V30

Embedded photovoltaic bypass switch circuit

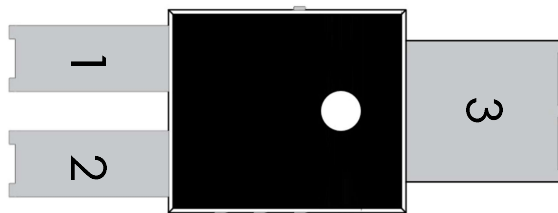
Voltage | 30V | Current | 25A

Features

- Small package can be embedded inside the PV module
- Low power dissipation, low loss, high efficiency
- Very low average forward voltage
- High anti-surge capacity
- High ESD protection capability
- Special device for solar bypass
- 25 years life qualification testing
- Lead-free product

Mechanical data

- Plastic package PD56
- Lead terminal soldering: $T=260^{\circ}\text{C}\pm 5^{\circ}\text{C}$, $10\text{S}\pm 1\text{S}$
- Port polarity:



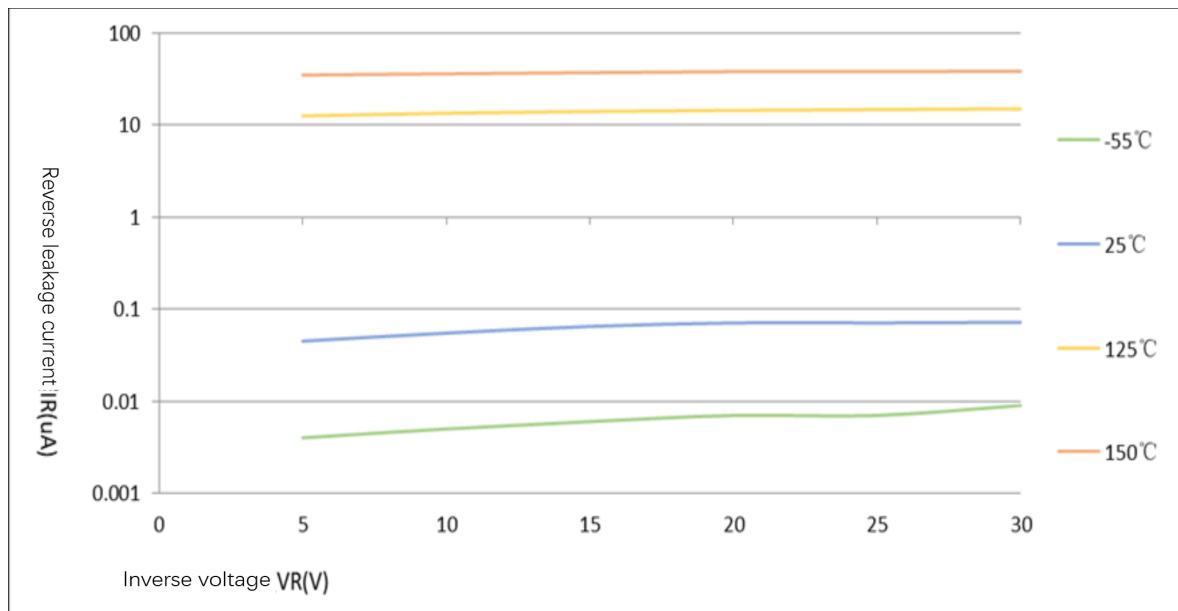
Pin number	Symbol	Description
1	A	Anode
2	A	Anode
3	K	Cathode

Absolute maximum rating and electrical parameters

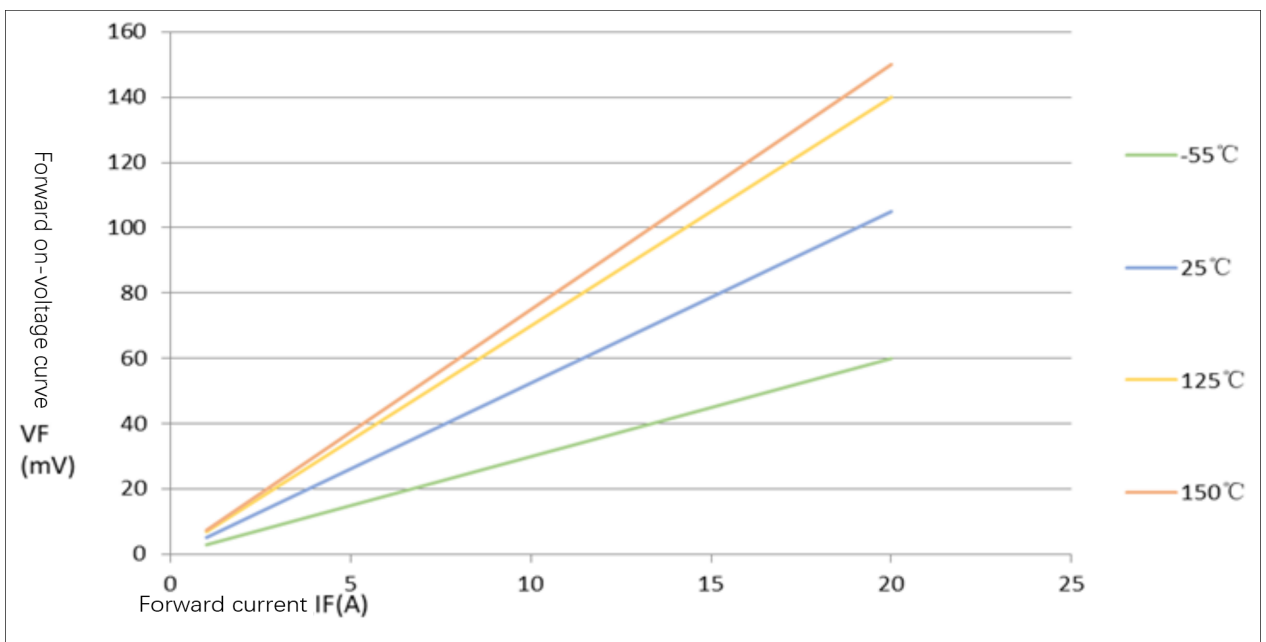
Unless otherwise specified, $T_j=25^{\circ}\text{C}$.

Parameters	Symbol	Parameter value	Unit
Maximum reverse voltage	V_R	30	V
Maximum forward current	$I_F(AV)$	25	A
Surge forward current (50Hz half-sinusoid /8.3ms)	I_{FSM}	300	A
ESD (HBM)		30	KV
Max average forward on-voltage (IF=16.5A)	$V_{F(AVG)}$	≤ 85	mV
Max average forward on-voltage (IF=25A)		≤ 130	mV
Maximum reverse leakage current (VR=30V)	I_R	≤ 50	μA
Thermal resistance	R_{RthJC}	2	$^{\circ}\text{C}/\text{W}$
Working junction temperature range	T_j	-55~ +175	$^{\circ}\text{C}$
Storage temperature	T_{STG}	-55~ +175	$^{\circ}\text{C}$

Parameter curve



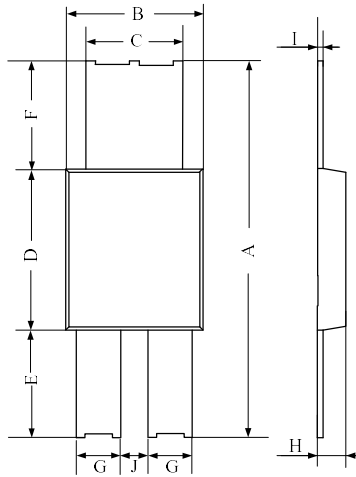
XND19-V30 Average forward on-voltage curve



XND19-V30 Reverse leakage current curve

Note: the data above is obtained by soldering XND19-V30 on a 45cm² PCB board (FR4 board, thickness 1.5mm), under ambient temperature.

Package size



Unit: mm

Size symbol	Value			Size symbol	Value		
	Min	Nominal	Max		Min	Nominal	Max
A	12.7	13.15	14.2	F	3.55	3.85	4.15
B	4.7	4.9	5.1	G	1.37	1.57	1.77
C	3.21	3.41	3.61	H	--	1	1.05
D	5.60	5.75	5.90	I	0.15	0.02	0.30
E	3.55	3.85	4.15	J	0.77	0.97	1.17