

# XND38-V30P

PV bypass switched circuit

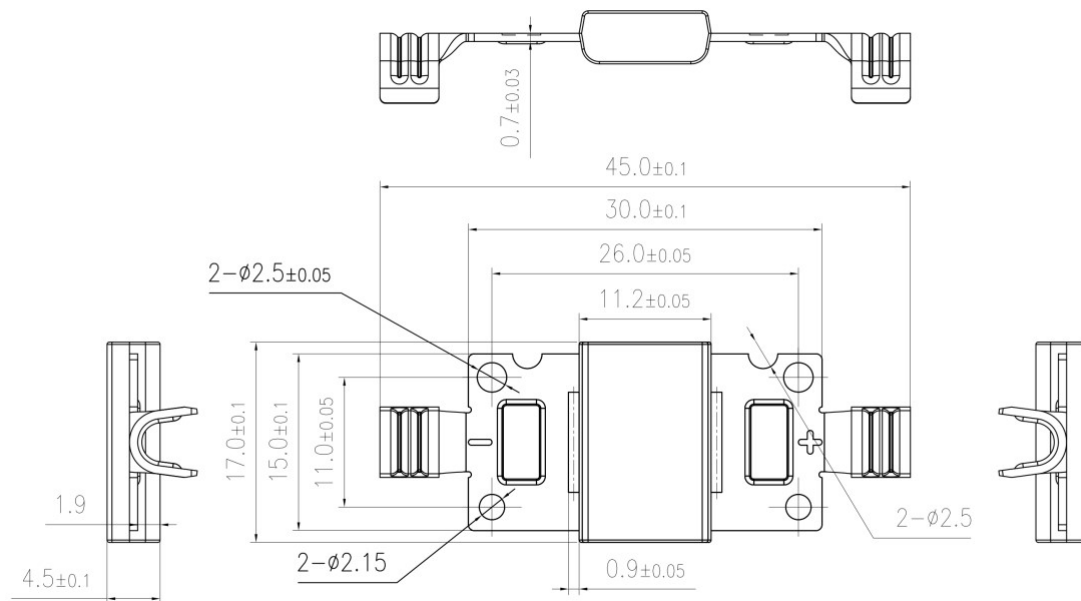
Voltage | 30V | Current | 40A

## Features

- Low power dissipation, low loss, high efficiency
- Very low average forward voltage, very low reverse leakage current
- High anti-surge capacity
- High ESD protection capability
- Special device for solar junction box bypass
- Integrated package, directly installed in the junction box, saving the cost of the scheme

## Device characteristic

- Lead end welding:  $T=260^{\circ}\text{C}\pm 5^{\circ}\text{C}$ ,  $10\text{S}\pm 1\text{S}$
- Dimension:

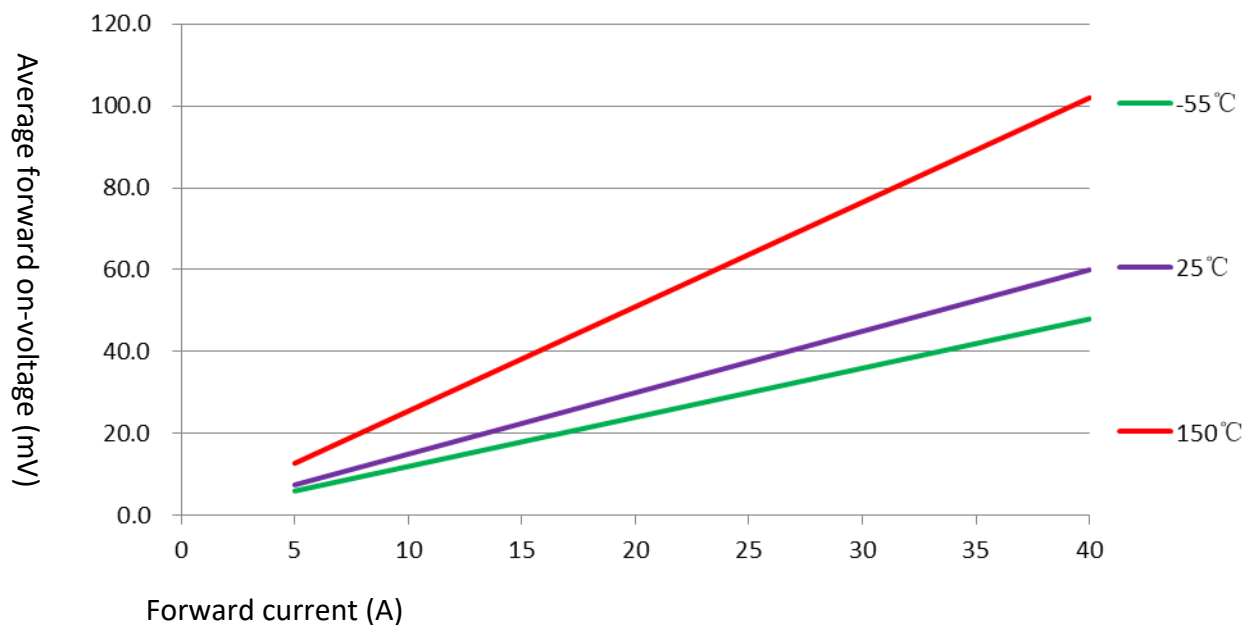


## Maximum absolute rating and electrical characteristics

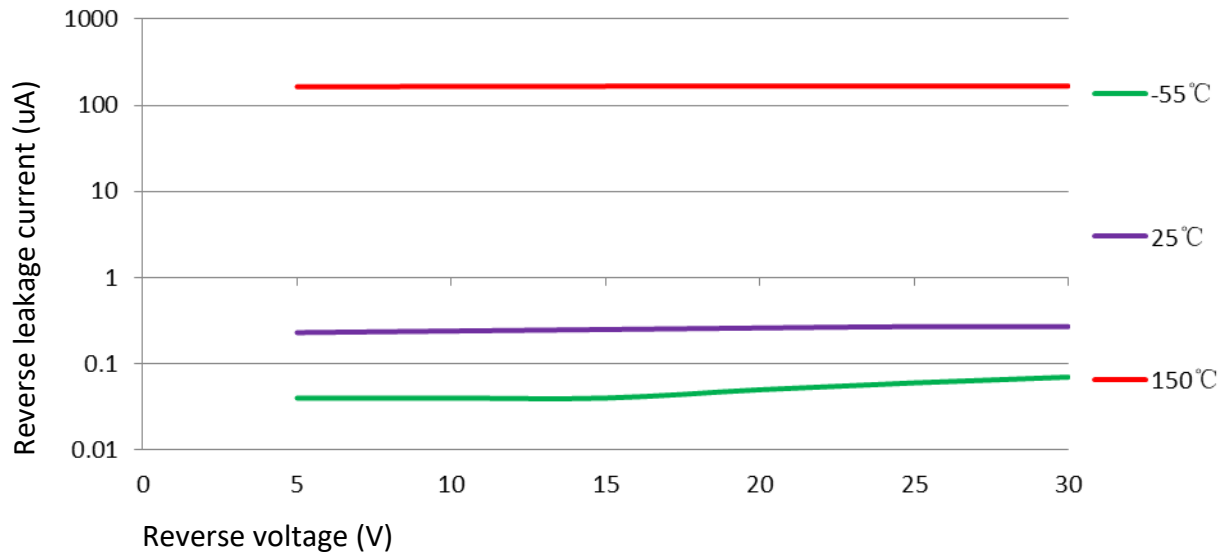
Unless otherwise specified,  $T_j=25^\circ\text{C}$ .

Parameter	Symbol	Parameter value		Unit
		Minimum	Maximum	
Maximum reverse voltage	$V_R$		30	V
Maximum forward current	$I_F (AV)$		40	A
Surge forward current (50Hz half-sinusoid/8.3ms)	$I_{FSM}$		500	A
ESD (HBM)		30		KV
Max average forward on-voltage (IF=30A) $T_j=25^\circ\text{C}$			100	mV
Max average forward on-voltage (IF=40A) $T_j=25^\circ\text{C}$			120	mV
Max average forward on-voltage (IF=30A) $T_j=125^\circ\text{C}$			130	mV
Max average forward on-voltage (IF=40A) $T_j=125^\circ\text{C}$			150	mV
Maximum reverse leakage current (VR=30V)	$I_R$		100	$\mu\text{A}$
Thermal resistance	$R_{RthJC}$		2	$^\circ\text{C}/\text{W}$
Operating junction temperature range	$T_j$	-55	175	$^\circ\text{C}$
Storage temperature	$T_{STG}$	-55	175	$^\circ\text{C}$

## Parameter curve



XND18-V30P Average forward on-voltage curve



XND18-V30P Reverse leakage current curve

### Note:

The maximum reverse withstand voltage of XND38-V30P is 30V. During the production of junction box and solar panel, it is strictly prohibited to apply more than 30V reverse voltage to both ends of the circuit. If the maximum withstand voltage exceeds 30V, XND38-V30P may be damaged.