

XND19-V30P

PV bypass switched circuit

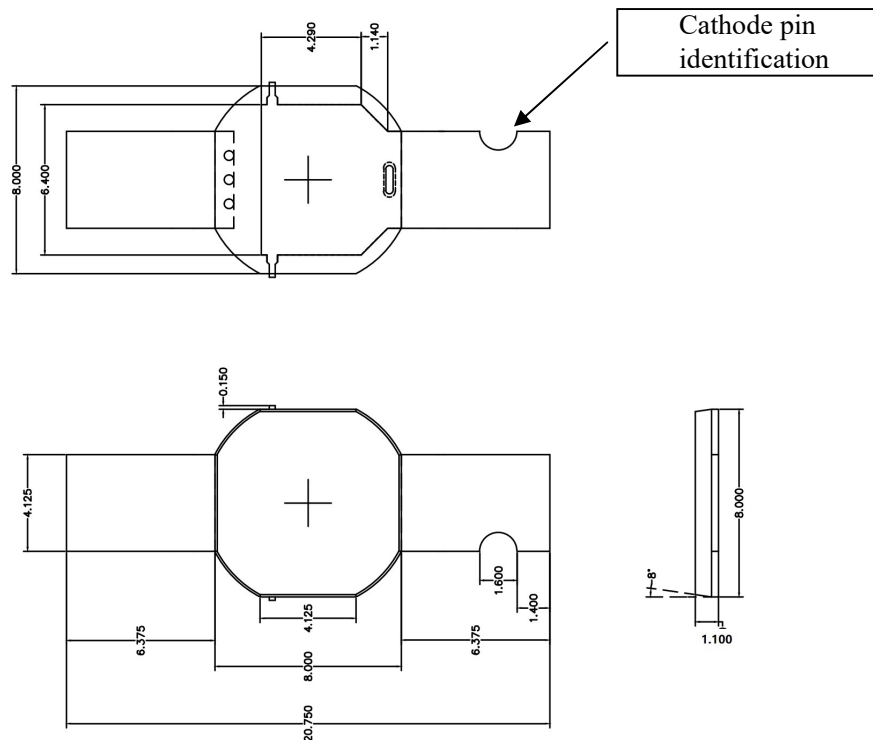
Voltage | 30V | Current | 40A

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
- It can be embedded in photovoltaic module, very low cost

Device characteristic

- Lead end welding: $T=260^{\circ}\text{C}\pm 5^{\circ}\text{C}$, $10\text{S}\pm 1\text{S}$
- Overall dimension (Unit: mm)

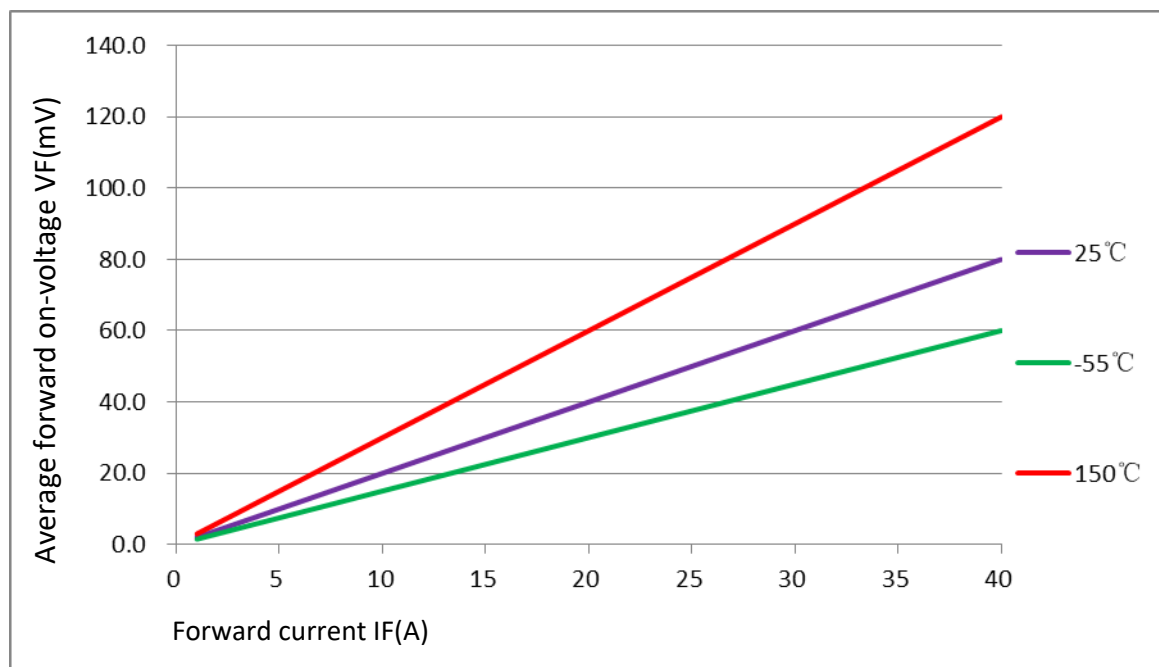


Maximum absolute rating and electrical characteristics

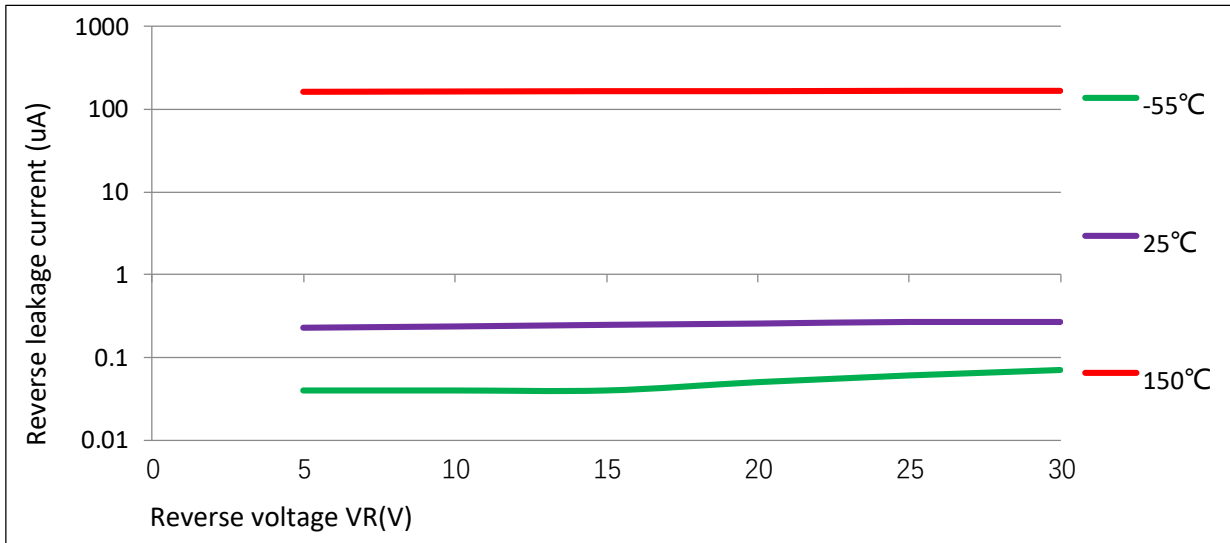
Unless otherwise specified $T_j=25^{\circ}\text{C}$

Parameters	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) $T_j=25^{\circ}\text{C}$			110	mV
Max average forward on-voltage (IF=40A) $T_j=25^{\circ}\text{C}$			135	mV
Max average forward on-voltage (IF=30A) $T_j=125^{\circ}\text{C}$			140	mV
Max average forward on-voltage (IF=40A) $T_j=125^{\circ}\text{C}$			160	mV
Maximum reverse leakage current ($V_R=30\text{V}$)	I_R		100	μA
Thermal resistance	R_{RthJC}		2	$^{\circ}\text{C}/\text{W}$
Operating junction temperature range	T_J	-55	150	$^{\circ}\text{C}$
Storage temperature	T_{STG}	-55	150	$^{\circ}\text{C}$

Parameter curve



XND19-V30P Average forward on-voltage curve



XND19-V30P Reverse leakage current curve

Note:

1. The maximum reverse withstand voltage of XND19-V30P is 30V. During the assembly and use of the circuit, it is strictly prohibited to apply the reverse voltage exceeding 30V to the circuit. The reverse voltage exceeding 30V will damage XND19-V30P.
2. Avoid mechanical damage to the circuit caused by external stress during assembly and use of xnd19-v30p.
3. The maximum junction temperature of xnd19-v30p shall not exceed 150 °C during application.