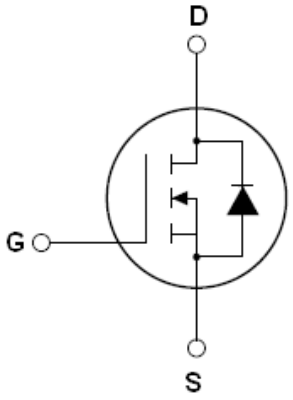
N-Channel Super Junction Power MOSFET Ⅲ

General Description

The series of devices use advanced trench gate super junction technology and design to provide excellent $R_{DS(ON)}$ with low gate charge. This super junction MOSFET fits the industry's AC-DC SMPS requirements for PFC, AC/DC power conversion, and industrial power applications.

V_{DS}	700	V
$R_{DS(ON)TYP.}$	1100	mΩ
I_D	4	A



Schematic diagram

Features

- New technology for high voltage device
- Low on-resistance and low conduction losses
- Small package
- Ultra Low Gate Charge cause lower driving requirements
- 100% Avalanche Tested
- ROHS compliant

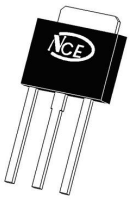
Application

- Power factor correction（PFC）
- Switched mode power supplies(SMPS)
- Uninterruptible Power Supply（UPS）

Package Marking And Ordering Information

Device	Device Package	Marking
NCE70T1K2I	TO-251	NCE70T1K2I
NCE70T1K2K	TO-252	NCE70T1K2K

TO-252



TO-251

Table 1. Absolute Maximum Ratings (T_C=25℃)

Parameter	Symbol	Value	Unit
Drain-Source Voltage (V_{GS}=0V)	V_{DS}	700	V
Gate-Source Voltage (V_{DS}=0V) ,AC (f>1 Hz)	V_{GS}	±30	V
Continuous Drain Current at Tc=25°C	$I_{D\ (DC)}$	4	A
Continuous Drain Current at Tc=100°C	$I_{D\ (DC)}$	2.5	A
Pulsed drain current **(Note 1)**	$I_{DM\ (pluse)}$	16	A
Maximum Power Dissipation(Tc=25℃) Derate above 25°C	P_D	41 0.328	W W/°C
Single pulse avalanche energy **(Note2)**	E_{AS}	27	mJ
Avalanche current **(Note 1)**	I_{AR}	0.7	A
Repetitive Avalanche energy , t_{AR} limited by T_{jmax} **(Note 1)**	E_{AR}	0.1	mJ