NK1N60

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## N-Channel Enhancement Model MOSFET

Feature

- 600V/0.3A, RDS(on)=11.5Ω(MAX) @VGS=10V.
- Super high dense cell design for extremely low RDS(on).
- Reliable and Rugged.
- Fast switching.
- High thermal cycling performance.
- Low thermal resistance.

TO-252
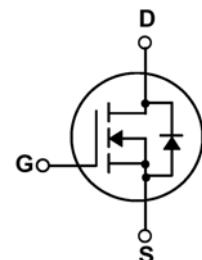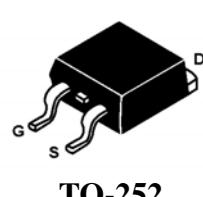
Application

- Switching regulators, Switching converters.
- Switch mode power supplies (SMPS).

Absolute Maximum Ratings (Tc=25℃, Unless Otherwise Noted)

Parameter	Symbol	Limit	Units
Drain-Source Voltage	VDS	600	V
Gate-Source Voltage	VGS	30	V
Drain-Current Continuous，VGS@10V	ID@TC=25℃	0.3	A
Drain-Current Continuous，VGS@10V	ID@TC=150℃	0.18	A

Electrical Characteristics (Tc=25℃, Unless Otherwise Noted)

Parameter	Symbol	Test Conditions	Min	Typ.	Max	Units
Off Characteristics						
Drain to Source Breakdown Voltage	BVDSS	VGS=0V, ID=250μA	600	-	-	V
Zero-Gate Voltage Drain Current	IDSS	VDS=600V, VGS=0V	-	-	100	μA
Gate Body Leakage Current	IGSS	VGS=30V, VDS=0V	-	-	100	nA
On Characteristics						
Gate Threshold Voltage	VGS(th)	VGS= VDS, ID=250μA	2	-	4	V
Static Drain-source On-Resistance	RDS(ON)	VGS =10V, ID =0.15A	-		11.5	Ω
Drain-Source Diode Characteristics and Maximum Ratings						
Drain-Source Diode Forward Voltage	VSD	VGS =0V, IS=0.3A			2	V

Typical Characteristics
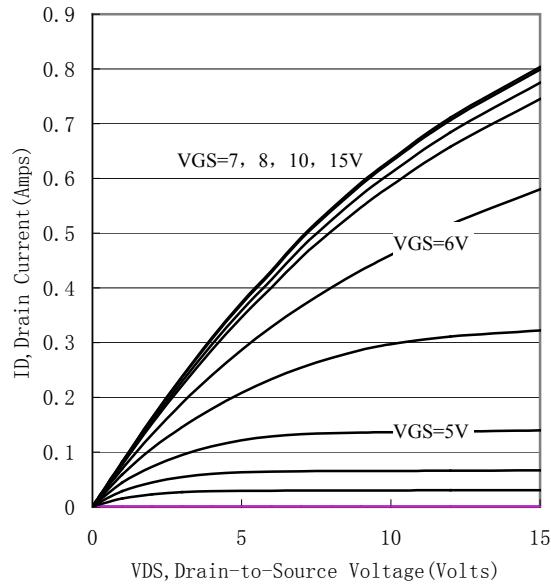
**Figure 1. Typital Output Characteristics，Tc＝25℃**
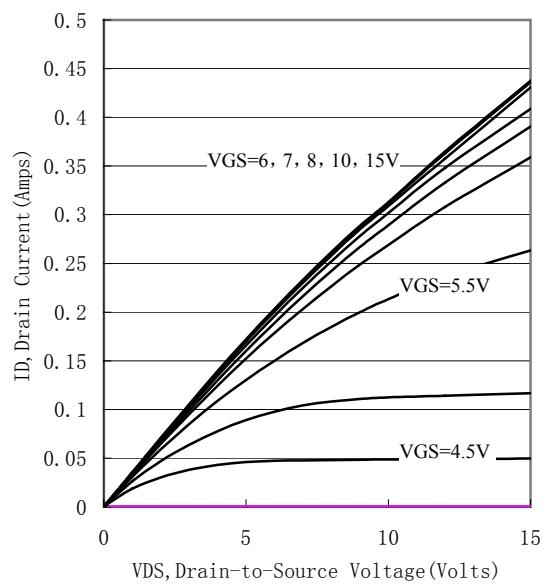
Figure 2. Typital Output Characteristics，Tc＝150℃
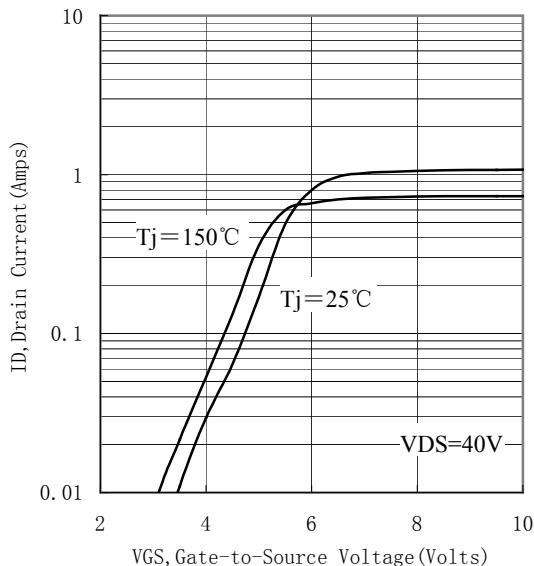

Figure 3. Typital Transfer Characteristics
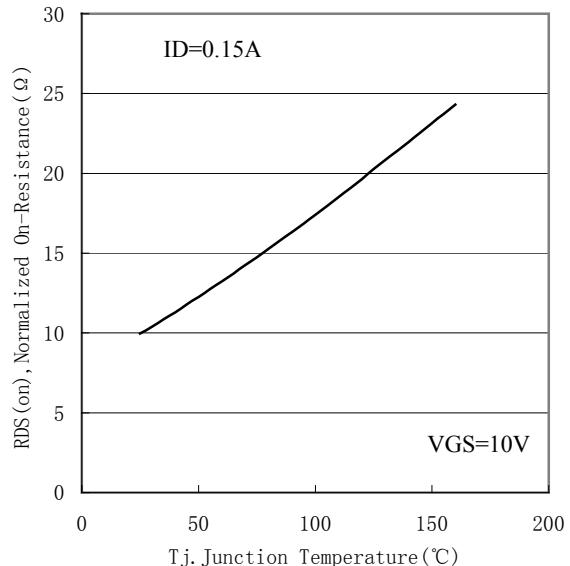

Figure 4. On-Resistance Variation Vs. Temperature

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## Typical Characteristics
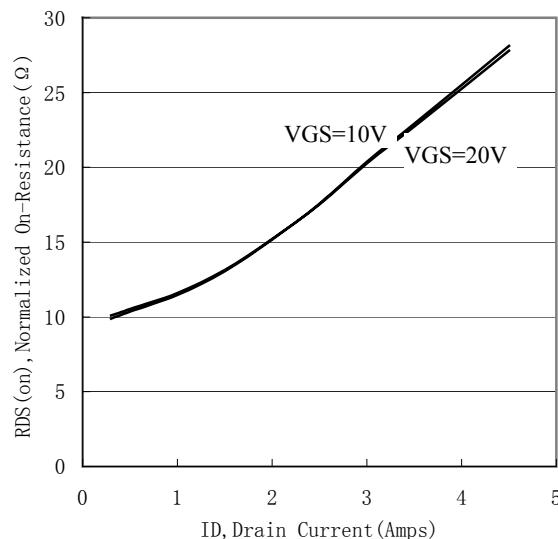
**Figure 5. On-Resistance Variation   Vs.
        Drain Current and Gate Voltage**
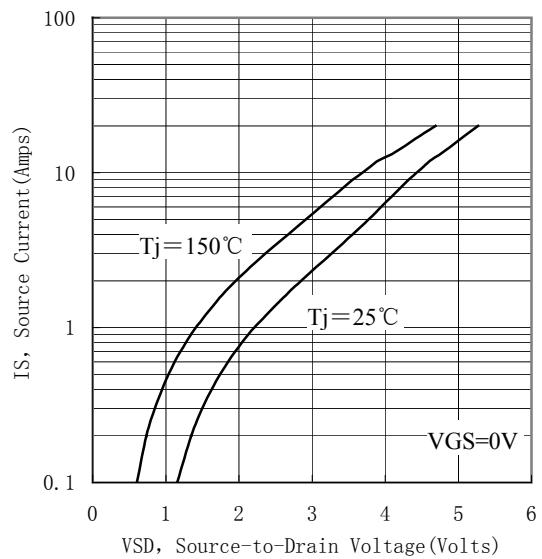
**Figure 6. Typital Source-Drain Diode
        Forward Voltage**