

### **INCHANGE SEMICONDUCTOR**

## isc N-Channel MOSFET Transistor

## 60N06

### DESCRIPTION

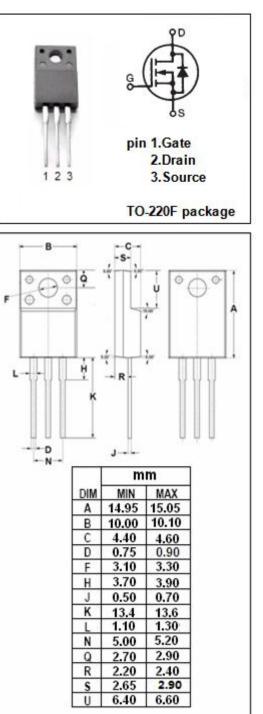
- Drain Current  $I_D = 60A@T_C = 25$  °C
- Static Drain-Source On-Resistance : R<sub>DS(on)</sub> = 18m Ω (Max)
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

#### APPLICATIONS

 General purpose power amplifier High current, high speed switching Solenoid and relay drivers

#### ABSOLUTE MAXIMUM RATINGS(Tc=25°C)

SYMBOL	ARAMETER	VALUE	UNIT				
V <sub>DSS</sub>	Drain-Source Voltage (V <sub>GS</sub> =0)	60	V				
V <sub>GS</sub>	Gate-Source Voltage	±20	V				
Ι <sub>D</sub>	Drain Current-continuous@ Tc=25 $^\circ\!\!\!\!{}^\circ\!\!\!{}^\circ\!\!\!{}^\circ$	60	A				
	Drain Current-continuous@ Tc=100℃	39					
I <sub>D(puls)</sub>	Pulse Drain Current	120	A				
P <sub>tot</sub>	Total Dissipation@T <sub>C</sub> =25℃	40	W				
Tj	Max. Operating Junction Temperature	150	°C				
T <sub>stg</sub>	Storage Temperature Range	-55~150	°C				
THERMAL CHARACTERISTICS							
SYMBOL	PARAMETER	MAX	UNIT				
R <sub>th j-c</sub>	Thermal Resistance, Junction to Case	3.125	°C/W				



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<sup>1</sup> *isc & iscsemi* is registered trademark



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### • ELECTRICAL CHARACTERISTICS (Tc=25°C)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	МАХ	UNIT
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> = 0; I <sub>D</sub> = 250µA	60			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	$V_{DS}$ = $V_{GS}$ ; $I_D$ =250 $\mu$ A	2.0		4.0	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =30A			18	mΩ
I <sub>GSS</sub>	Gate-Body Leakage Current	V <sub>GS</sub> = ±20V;V <sub>DS</sub> = 0			±100	nA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> = 60V; V <sub>GS</sub> = 0			1	μA
Vsd	Diode Forward On-Voltage	Is=60A ;V <sub>GS</sub> = 0			1.6	V



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