

### INCHANGE SEMICONDUCTOR

# isc N-Channel MOSFET Transistor

# NVD3055L170

#### • FEATURES

- With TO-251(IPAK) packaging
- High speed switching
- · Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

#### APPLICATIONS

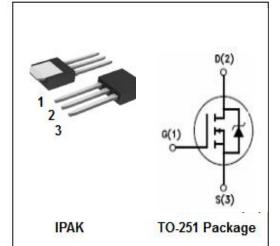
- Power supply
- DC-DC converters
- Motor control
- Switching applications

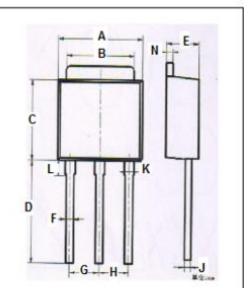
• ABSOLUTE MAXIMUM RATINGS(Ta=25°C)					
SYMBOL	PARAMETER VALUE		UNIT		
V <sub>DSS</sub>	Drain-Source Voltage	60	V		
V <sub>GSS</sub>	Gate-Source Voltage	±20	V		
ID	Drain Current-Continuous	9	A		
I <sub>DM</sub>	Drain Current-Single Pulsed	27	А		
PD	Total Dissipation	28.5	W		
Tj	Operating Junction Temperature	-55~175	°C		
T <sub>stg</sub>	Storage Temperature	-55~175	°C		

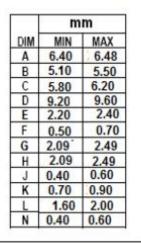
#### THERMAL CHARACTERISTICS

SYMBOL	PARAMETER		UNIT	
Rth(ch-c)	Channel-to-case thermal resistance	5.2	°C <b>/W</b>	
Rth(ch-a)	Channel-to-ambient thermal resistance	71.4	°C <b>/W</b>	

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#### isc website: www.iscsemi.cn

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#### ELECTRICAL CHARACTERISTICS

 $T_{\text{C}}\text{=}25^\circ\!\!\mathbb{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	ТҮР	МАХ	UNIT
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V; I <sub>D</sub> = 0.25mA	60			v
V <sub>GS</sub> (th)	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> ; I <sub>D</sub> =0.1mA	1.0		2.0	v
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 5V; I <sub>D</sub> =4.5A		153	170	mΩ
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±20V;V <sub>DS</sub> = 0V			±0.1	μA
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> = 60V; V <sub>GS</sub> = 0V;Tj=25℃ V <sub>DS</sub> = 60V; V <sub>GS</sub> = 0V;Tj=150℃			1 10	μA
V <sub>SDF</sub>	Diode forward voltage	I <sub>SD</sub> =9A, V <sub>GS</sub> =0V		0.98	1.25	v



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