

# Isc N-Channel MOSFET Transistor

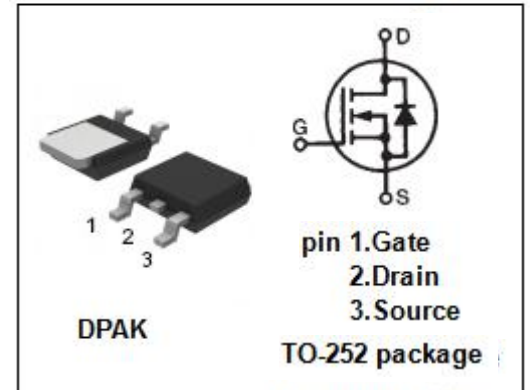
# STD130N6F7

### • FEATURES

- With TO-252(DPAK) package
- Low input capacitance and gate charge
- Low gate input resistance
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

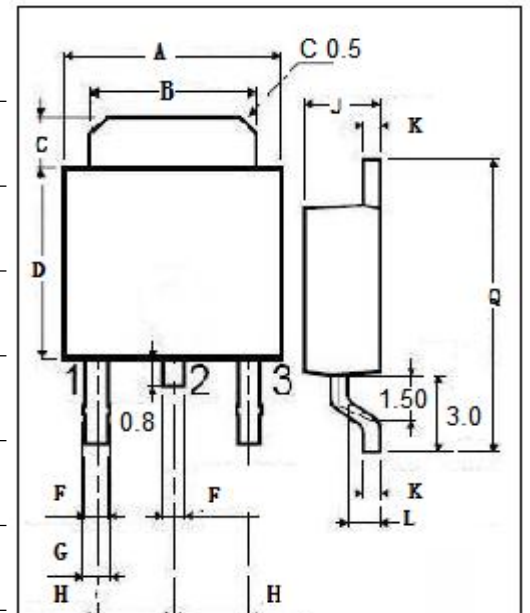
### • APPLICATIONS

- Switching applications



### • ABSOLUTE MAXIMUM RATINGS( $T_a=25^{\circ}\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	60	V
$V_{GSS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous $T_c=25^{\circ}\text{C}$	80	A
$I_{DM}$	Drain Current-Single Pulsed	320	A
$P_D$	Total Dissipation @ $T_c=25^{\circ}\text{C}$	134	W
$T_{ch}$	Max. Operating Junction Temperature	-55~175	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-55~175	$^{\circ}\text{C}$



DIM	mm	
	MIN	MAX
A	6.40	6.60
B	5.20	5.40
C	1.15	1.35
D	5.70	6.10
F	0.65	
G	0.75	
H	2.10	2.50
J	2.10	2.40
K	0.40	0.60
L	0.90	1.10
Q	9.90	10.1

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{thj-case}$	Thermal resistance junction-case	1.12	$^{\circ}\text{C/W}$

**Isc N-Channel MOSFET Transistor****STD130N6F7****ELECTRICAL CHARACTERISTICS**T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V; I <sub>D</sub> = 1.0mA	60			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> ; I <sub>D</sub> =0.25mA	2.0		4.0	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =40A			5	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;			1	μA
V <sub>SDF</sub>	Diode forward voltage	I <sub>SD</sub> = 80A, V <sub>GS</sub> = 0 V			1.2	V

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