

# Isc N-Channel MOSFET Transistor

# IRLR014A

### • 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

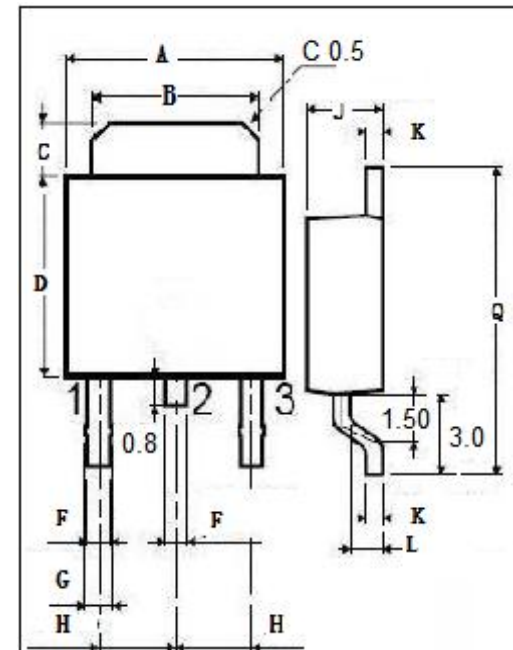
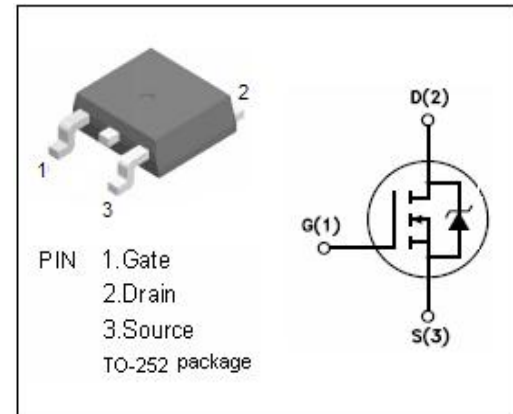
- Switching applications

### • ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>DSS</sub>	Drain-Source Voltage	50	V
V <sub>GSS</sub>	Gate-Source Voltage	±10	V
I <sub>D</sub>	Drain Current-Continuous T <sub>c</sub> =25°C T <sub>c</sub> =100°C	7.7 4.9	A
I <sub>DM</sub>	Drain Current-Single Pulsed	31	A
P <sub>D</sub>	Total Dissipation @T <sub>c</sub> =25°C	25	W
T <sub>ch</sub>	Max. Operating Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55~150	°C

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th(ch-c)</sub>	Channel-to-case thermal resistance	5.0	°C/W
R <sub>th(ch-a)</sub>	Channel-to-ambient thermal resistance	50	°C/W



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

**Isc N-Channel MOSFET Transistor****IRLR014A****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=0.25mA$	50			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=5V; I_D=0.25mA$	1.0		2.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=5V; I_D=4.6A$			200	$m\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 10V; V_{DS}=0V$			$\pm 0.1$	$\mu A$
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=60V; V_{GS}=0V; T_j=25^{\circ}\text{C}$ $V_{DS}=48V; V_{GS}=0V; T_j=125^{\circ}\text{C}$			25 250	$\mu A$
$V_{SDF}$	Diode forward voltage	$I_{SD}=7.7A, V_{GS}=0V$			1.6	V

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