

# Isc N-Channel MOSFET Transistor

## IRLR8743

### • 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

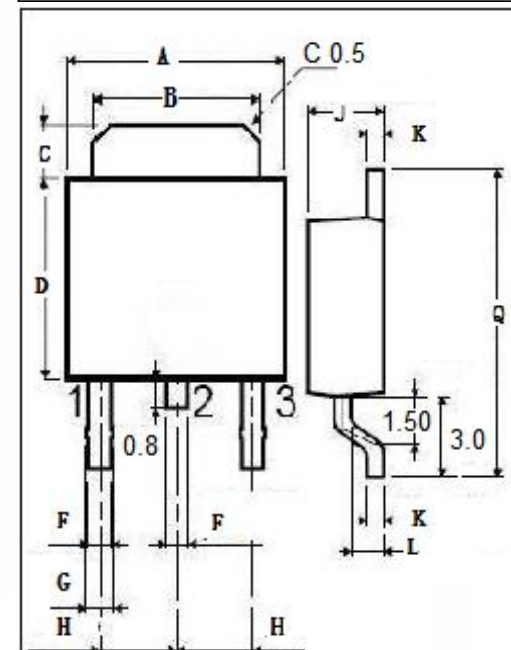
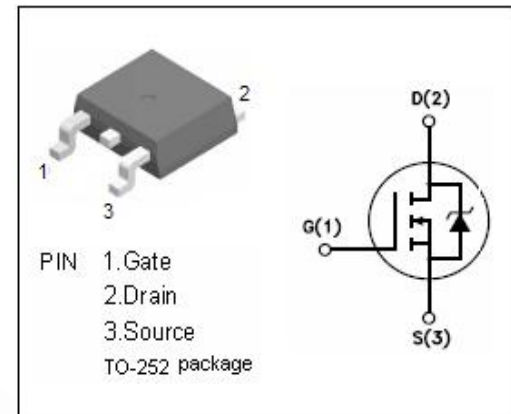
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DS}$	Drain-Source Voltage	30	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous $T_c=25^{\circ}\text{C}$ $T_c=100^{\circ}\text{C}$	160 113	A
$I_{DM}$	Drain Current-Single Pulsed	640	A
$P_D$	Total Dissipation @ $T_c=25^{\circ}\text{C}$	135	W
$T_{ch}$	Max. Operating Junction Temperature	175	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-55~175	$^{\circ}\text{C}$

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	1.11	$^{\circ}\text{C}/\text{W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	50	$^{\circ}\text{C}/\text{W}$



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****IRLR8743****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=0.25mA$	30			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=5V; I_D=0.1mA$	1.35		2.35	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=25A$		2.4	3.1	$m\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 20V; V_{DS}=0V$			$\pm 0.1$	$\mu A$
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=24V; V_{GS}=0V; T_j=25^{\circ}\text{C}$ $V_{DS}=24V; V_{GS}=0V; T_j=125^{\circ}\text{C}$			1 150	$\mu A$
$V_{SDF}$	Diode forward voltage	$I_{SD}=20A, V_{GS}=0V$			1.0	V