

Isc N-Channel MOSFET Transistor

IRF3007S

• FEATURES

- With To-263(D2PAK) 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

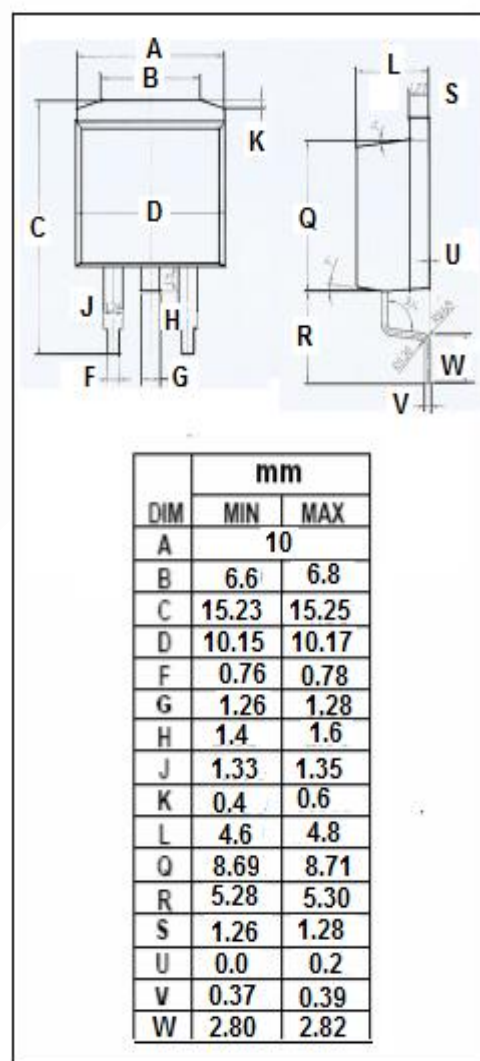
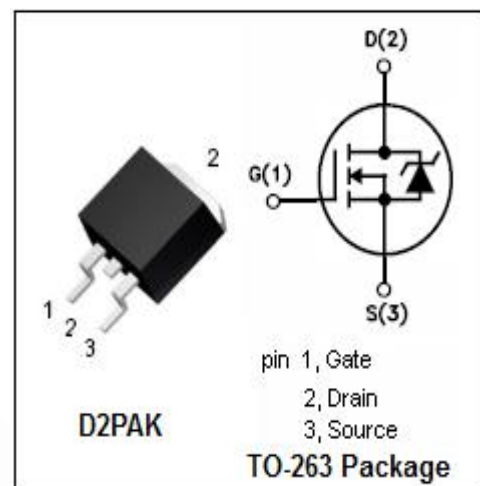
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	75	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous $T_c=25^{\circ}\text{C}$ $T_c=100^{\circ}\text{C}$	62 44	A
I_{DM}	Drain Current-Single Pulsed	320	A
P_D	Total Dissipation @ $T_c=25^{\circ}\text{C}$	120	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	1.25	$^{\circ}\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	62	$^{\circ}\text{C/W}$



Isc N-Channel MOSFET Transistor**IRF3007S****ELECTRICAL CHARACTERISTICS** **$T_c=25^{\circ}\text{C}$ unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=0.25mA$	75			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.25mA$	2.0		3.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=48A$		10.5	12.6	$m\Omega$
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 20V; V_{DS}=0V$			± 0.2	μA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=75V; V_{GS}=0V; T_j=25^{\circ}\text{C}$ $V_{DS}=60V; V_{GS}=0V; T_j=125^{\circ}\text{C}$			20 250	μA
V_{SDF}	Diode forward voltage	$I_{SD}=48A, V_{GS}=0V$			1.3	V