

isc N-Channel MOSFET Transistor

IRFS820A

FEATURES

- Avalanche Rugged Technology
- Rugged Gate Oxide Technology
- Lower Input Capacitance
- Improved Gate Charge
- Extended Safe Operating Area

DESCRIPTION

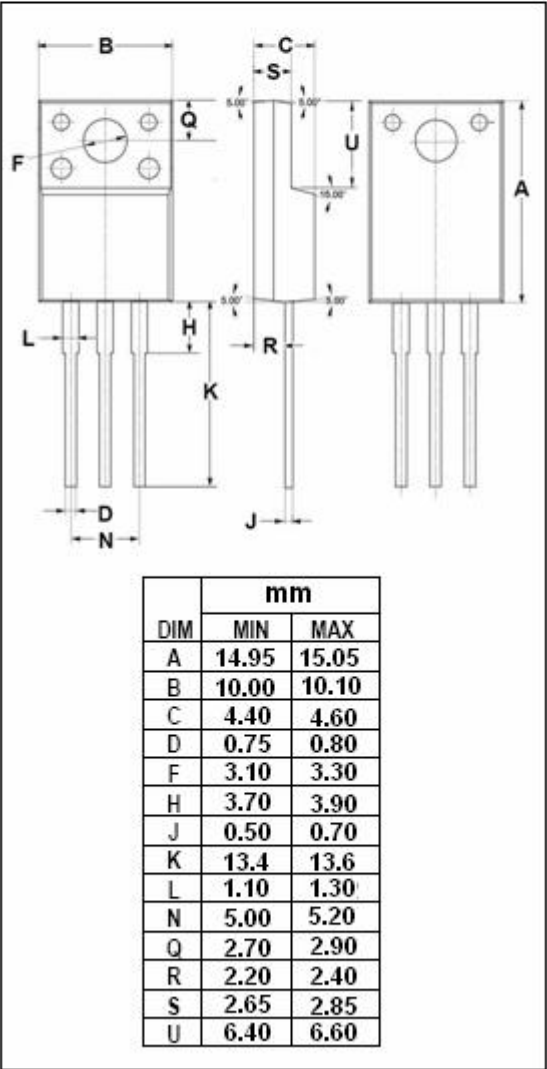
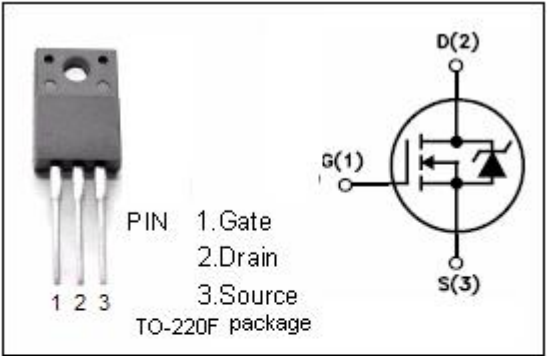
- Designed for use in switch mode power supplies and general purpose applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{DSS}	Drain-Source Voltage	500	V
V _{GS}	Gate-Source Voltage-Continuous	± 30	V
I _D	Drain Current-Continuous	2.1	A
I _{DM}	Drain Current-Single Pluse	8	A
P _D	Total Dissipation @T _C =25°C	33	W
T _J	Max. Operating Junction Temperature	-55~150	°C
T _{stg}	Storage Temperature	-55~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	3.74	°C/W
R _{th j-a}	Thermal Resistance, Junction to Ambient	62.5	°C/W



isc N-Channel MOSFET Transistor**IRFS820A****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0$; $I_D=0.25\text{mA}$	500		V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}$; $I_D=0.25\text{mA}$	2	4	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}$; $I_D=1.05\text{A}$		3	Ω
I_{GSS}	Gate-Body Leakage Current	$V_{GS}=\pm 20\text{V}$; $V_{DS}=0$		± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=500\text{V}$; $V_{GS}=0$ $V_{DS}=400\text{V}$; $V_{GS}=0$; $T_J=125^{\circ}\text{C}$		10 100	μA
V_{SD}	Forward On-Voltage	$I_S=2.1\text{A}$; $V_{GS}=0$		1.4	V