

**isc N-Channel MOSFET Transistor**

**IRF640N, IIRF640N**

**• FEATURES**

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 150m\Omega$
- Enhancement mode
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• DESCRIPTION**

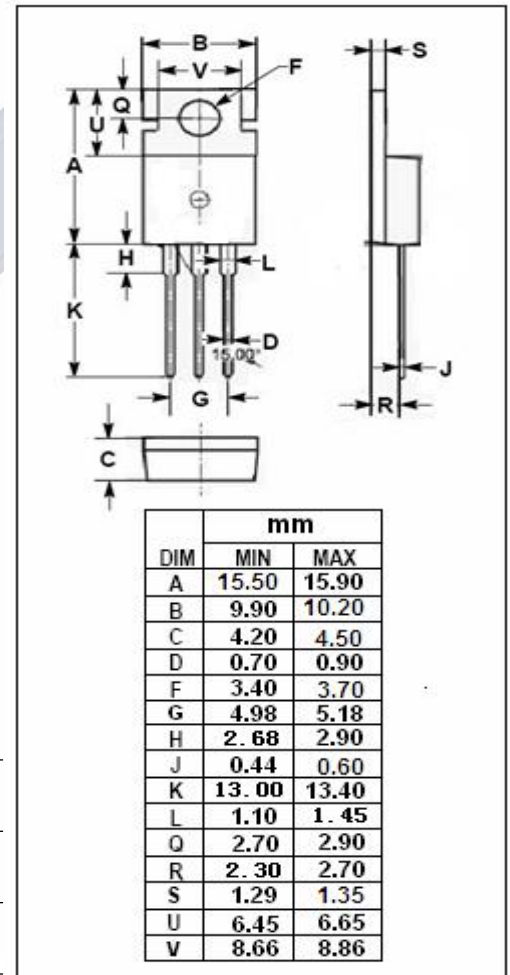
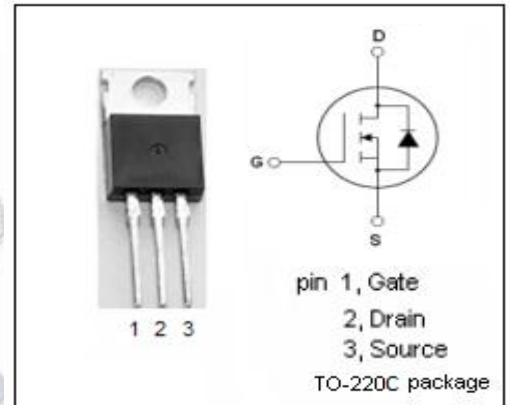
- Efficient and reliable device for use in a wide variety of applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>DSS</sub>	Drain-Source Voltage	200	V
V <sub>GS</sub>	Gate-Source Voltage	±20	V
I <sub>D</sub>	Drain Current-Continuous	18	A
I <sub>DM</sub>	Drain Current-Single Pulsed	72	A
P <sub>D</sub>	Total Dissipation @T <sub>c</sub> =25°C	150	W
T <sub>j</sub>	Max. Operating Junction Temperature	175	°C
T <sub>stg</sub>	Storage Temperature	-55~175	°C

**• THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th(ch-c)</sub>	Channel-to-case thermal resistance	1	°C/W
R <sub>th(ch-a)</sub>	Channel-to-ambient thermal resistance	62	°C/W



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**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> =250 μ A	200			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> ; I <sub>D</sub> =250 μ A	2		4	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> =10V; I <sub>D</sub> =11A			150	mΩ
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±20V			±0.1	μ A
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> =200V; V <sub>GS</sub> = 0V			25	μ A
V <sub>SD</sub>	Diode forward voltage	I <sub>F</sub> =11A; V <sub>GS</sub> = 0V			1.3	V