

**isc N-Channel MOSFET Transistor**
**IPA80R310CE**
**• FEATURES**

- With TO-220F packaging
- With low gate drive requirements
- Easy to drive
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• APPLICATIONS**

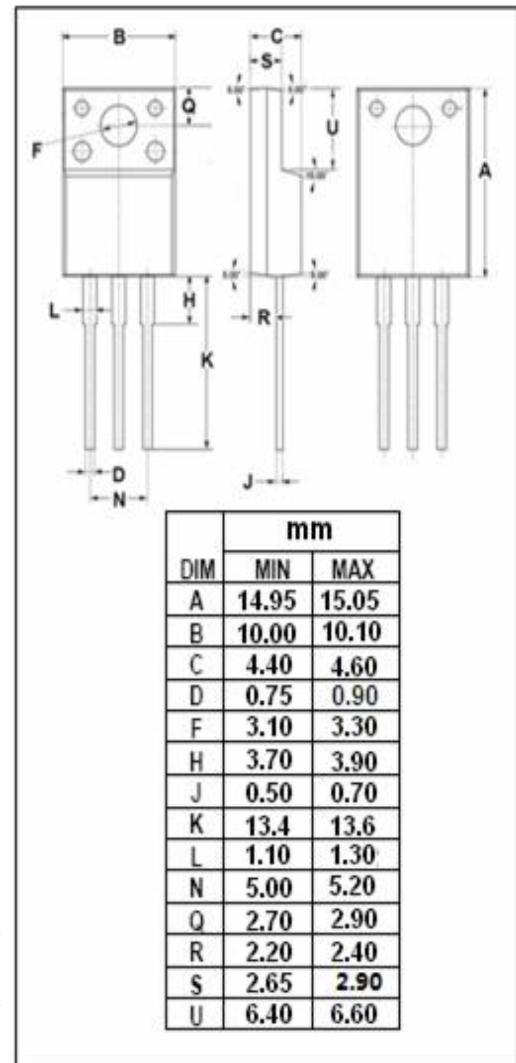
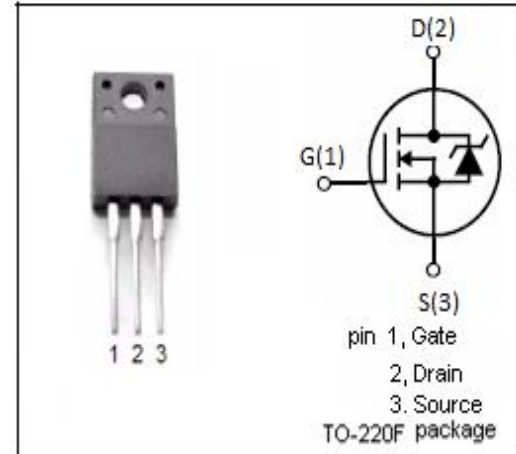
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	800	V
$V_{GSS}$	Gate-Source Voltage	$\pm 30$	V
$I_D$	Drain Current-Continuous; @ $T_c=25^{\circ}\text{C}$ $T_c=100^{\circ}\text{C}$	16.7 10.6	A
$I_{DM}$	Drain Current-Single Pulsed	51	A
$P_D$	Total Dissipation	35	W
$T_j$	Operating Junction Temperature	-40~150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-40~150	$^{\circ}\text{C}$

**• THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	3.6	$^{\circ}\text{C/W}$



**isc N-Channel MOSFET Transistor****IPA80R310CE****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> = 0.25mA	800			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> ; I <sub>D</sub> =1mA	2.1		3.9	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =11A		250	310	mΩ
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0V			±0.1	μA
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> = 800V; V <sub>GS</sub> = 0V; @T <sub>c</sub> =25°C T <sub>c</sub> =150°C			20 250	μA
V <sub>SDF</sub>	Diode forward voltage	I <sub>SD</sub> =16.7A, V <sub>GS</sub> = 0 V		1.0		V

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