

## isc N-Channel MOSFET Transistor

## R6030ENZ1

## • FEATURES

- With TO-247 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

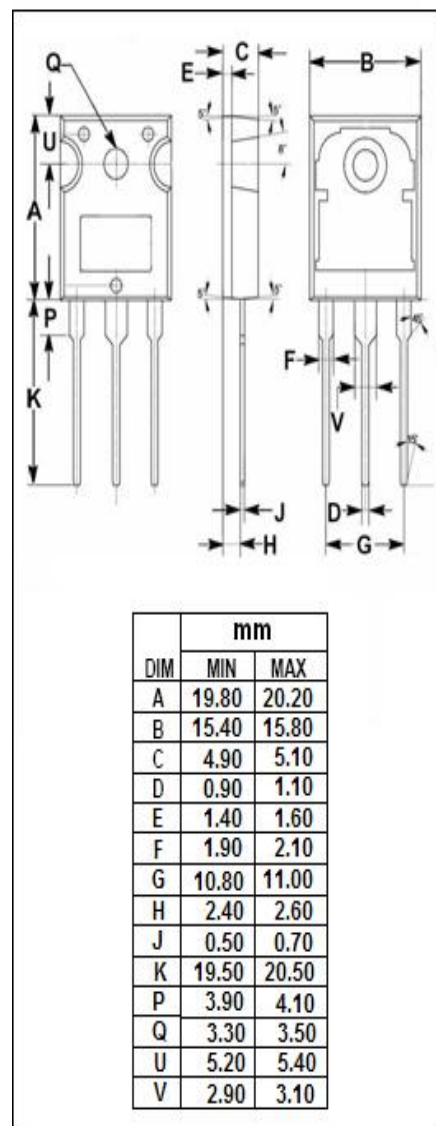
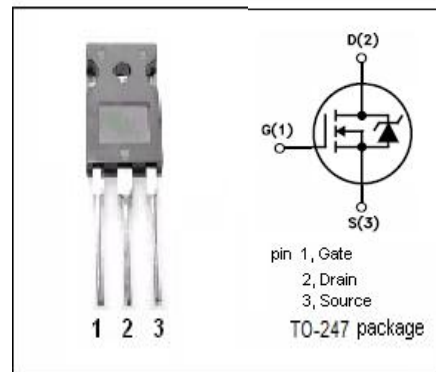
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DS}$	Drain-Source Voltage	600	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous; @ $T_c=25^{\circ}\text{C}$ $T_c=100^{\circ}\text{C}$	30 16.3	A
$I_{DM}$	Drain Current-Single Pulsed	80	A
$P_D$	Total Dissipation	120	W
$T_j$	Operating Junction Temperature	$-55\sim 150$	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	$-55\sim 150$	$^{\circ}\text{C}$

## • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	1.04	$^{\circ}\text{C/W}$



**isc N-Channel MOSFET Transistor****R6030ENZ1****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=1mA$	600			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=1mA$	2.0		4.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=14.5A$		115	130	$m\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 20V; V_{DS}=0V$			$\pm 0.1$	$\mu A$
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=600V; V_{GS}=0V; @T_c=25^{\circ}\text{C}$ $T_c=125^{\circ}\text{C}$			100 1000	$\mu A$
$V_{SDF}$	Diode forward voltage	$I_{SD}=30A, V_{GS}=0V$			1.5	V

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