

## isc N-Channel MOSFET Transistor

5N80

## • DESCRIPTION

- Drain Current  $I_D = 5.5A @ T_C = 25^\circ C$
- Drain Source Voltage  
:  $V_{DSS} = 800V(\text{Min})$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • APPLICATIONS

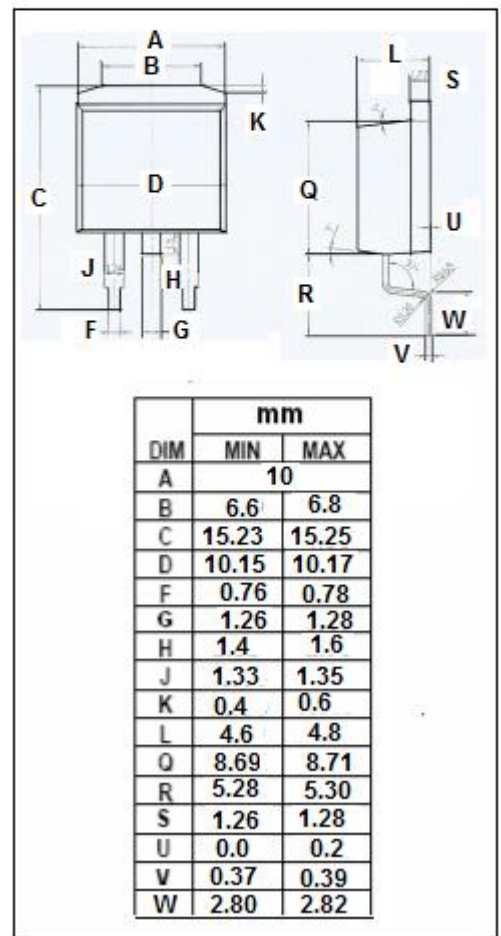
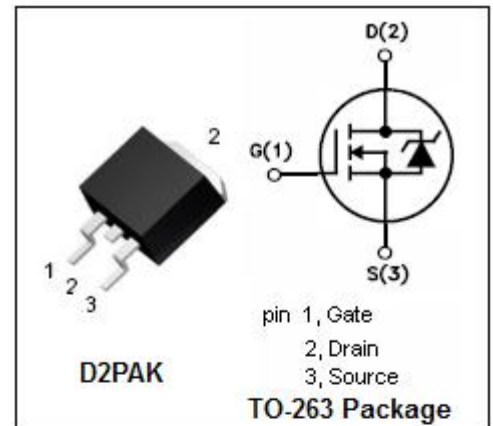
- Designed for high current, high speed switching, switch mode power supplies (SMPS), consumer and industrial lighting, DC-AC inverters for welding equipment and uninterruptible power supply(UPS)

ABSOLUTE MAXIMUM RATINGS( $T_C = 25^\circ C$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage ( $V_{GS}=0$ )	800	V
$V_{GS}$	Gate-Source Voltage	$\pm 30$	V
$I_D$	Drain Current-continuous@ $T_C = 25^\circ C$	5.5	A
$I_{D(puls)}$	Pulse Drain Current	20	A
$P_{tot}$	Total Dissipation@ $T_C = 25^\circ C$	125	W
$T_j$	Max. Operating Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ C$

## • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ C/W$



**isc N-Channel MOSFET Transistor****5N80****• ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C)**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> = 0; I <sub>D</sub> = 250μA	800			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> =250μA	2.0		4.0	V
V <sub>SD</sub>	Diode Forward On-Voltage	I <sub>S</sub> =5.5A; V <sub>GS</sub> = 0			1.5	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =2.5A			2.6	Ω
I <sub>GSS</sub>	Gate-Body Leakage Current	V <sub>GS</sub> = ±30V; V <sub>DS</sub> = 0			±100	nA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> = 800V; V <sub>GS</sub> = 0			250	μA

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