

**isc N-Channel MOSFET Transistor**
**IPI051N15N5**
**• FEATURES**

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 5.1m\Omega$
- Enhancement mode
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• DESCRIPTION**

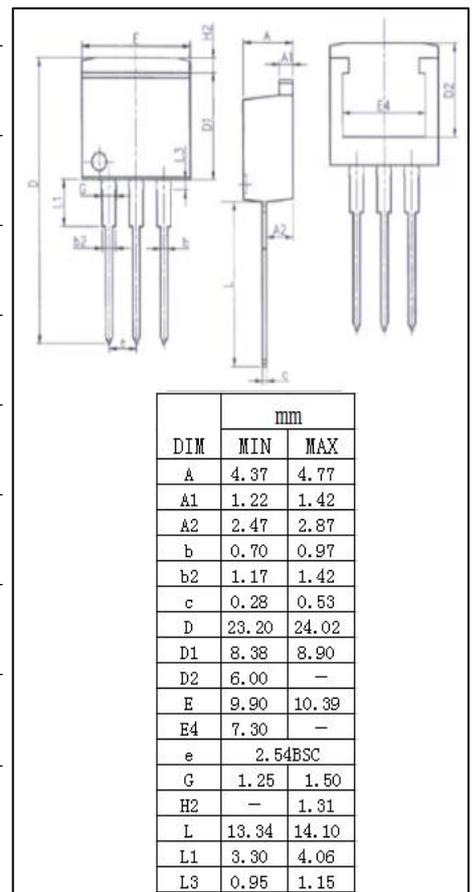
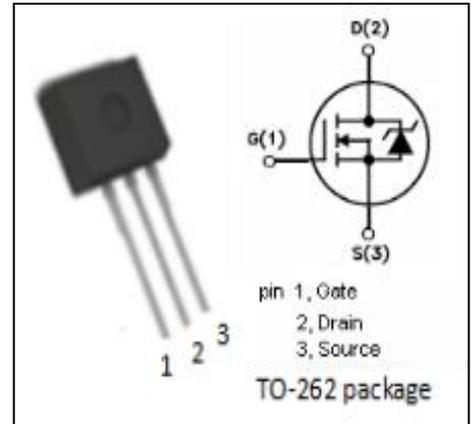
- Ideal for high-frequency switching and synchronous rectification

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	150	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous	120	A
$I_{DM}$	Drain Current-Single Pulsed	480	A
$P_D$	Total Dissipation @ $T_c=25^\circ\text{C}$	300	W
$T_j$	Max. Operating Junction Temperature	175	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~175	$^\circ\text{C}$

**• THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.5	$^\circ\text{C/W}$



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## ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=1mA$	150			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=264\mu A$	3		4.6	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=60A$			5.1	$m\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=20V; V_{DS}=0V$			0.1	$\mu A$
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=120V; V_{GS}=0V$			1	$\mu A$
$V_{SD}$	Diode forward voltage	$I_F=60A; V_{GS}=0V$			1.1	V

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