

# isc N-Channel MOSFET Transistor

## AOI444

## FEATURES

- Drain Current –I\_D= 12A@ T\_C=25 $^\circ\!\mathrm{C}$
- Drain Source Voltage-: V<sub>DSS</sub>= 60V(Min)
- Static Drain-Source On-Resistance
  : R<sub>DS(on)</sub> = 60m Ω (Max)
- 1000(on) 0011<sup>s2</sup> (Wax)
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### DESCRIPTION

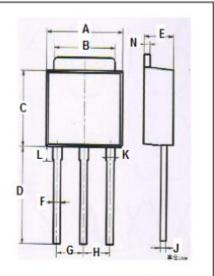
• Designed for use in switch mode power supplies and general purpose applications.

SYMBOL	PARAMETER	VALUE	UNIT		
V <sub>DSS</sub>	Drain-Source Voltage	60	v		
V <sub>GS</sub>	Gate-Source Voltage-Continuous	±20	V		
I <sub>D</sub>	Drain Current-Continuous	12	A		
I <sub>DM</sub>	Drain Current-Single Pluse	30	A		
P <sub>D</sub>	Total Dissipation @T <sub>c</sub> =25℃	20	W		
TJ	Max. Operating Junction Temperature -55~175		°C		
T <sub>stg</sub>	Storage Temperature	-55~175	°C		

## ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

# pin 1.Gate 2.Drain IPAK 3.Source

TO-251 package



	mm	
DIM	MIN	MAX
Α	6.40	6.48
В	5.10	5.50
С	5.80	6.20
D	9.20	9.60
E	2.20	2.40
F	0.50	0.70
G	2.09	2.49
Н	2.09	2.49
J	0.40	0.60
Κ	0.70	0.90
L	1.60	2.00
N	0.40	0.60

#### THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal Resistance, Junction to Case	7.5	°C/W



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## **ELECTRICAL CHARACTERISTICS**

#### $T_c=25^{\circ}C$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	МАХ	UNIT
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> = 0; I <sub>D</sub> = 0.25mA	60		V
V <sub>GS(th)</sub>	Gate Threshold Voltage	$V_{DS}$ = $V_{GS}$ ; $I_D$ = 0.25mA	1	3	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =12A V <sub>GS</sub> = 10V; I <sub>D</sub> =12A@T <sub>J</sub> =125℃		60 100	mΩ
lgss	Gate-Body Leakage Current	V <sub>GS</sub> = ±20V;V <sub>DS</sub> = 0		±100	nA
loss	Zero Gate Voltage Drain Current	V <sub>DS</sub> = 48V; V <sub>GS</sub> = 0 V <sub>DS</sub> = 48V; V <sub>GS</sub> = 0@T <sub>J</sub> =55℃		1 5	μA
V <sub>SD</sub>	Forward On-Voltage	I <sub>S</sub> = 1A; V <sub>GS</sub> = 0		1	V



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