

isc N-Channel MOSFET Transistor

AOI296A

• FEATURES

- With TO-251(IPAK) packaging
- High speed switching
- Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

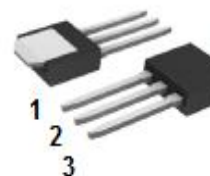
- Power supply
- DC-DC converters
- Motor control
- Switching applications

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

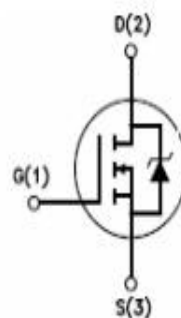
SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	100	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous	70 45	A
I_{DM}	Drain Current-Single Pulsed	195	A
P_D	Total Dissipation	89	W
T_j	Operating Junction Temperature	-50~150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-50~150	$^{\circ}\text{C}$

• THERMAL CHARACTERISTICS

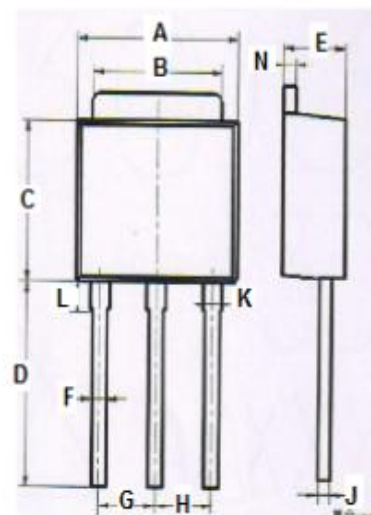
SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	1.4	$^{\circ}\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	50	$^{\circ}\text{C/W}$



IPAK



TO-251 Package



DIM	mm	
	MIN	MAX
A	6.40	6.48
B	5.10	5.50
C	5.80	6.20
D	9.20	9.60
E	2.20	2.40
F	0.50	0.70
G	2.09	2.49
H	2.09	2.49
J	0.40	0.60
K	0.70	0.90
L	1.60	2.00
N	0.40	0.60

isc N-Channel MOSFET Transistor**AOI296A****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D = 0.25mA	100			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =±20V; I _D =0.25mA	1.3		2.3	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =20A		6.8 12.2	8.3 14.8	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V; V _{DS} = 0V			±0.1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 100V; V _{GS} = 0V; T _J =25°C T _J =55°C			1 5	μA
V _{SDF}	Diode forward voltage	I _{SD} =1A, V _{GS} = 0 V			1.0	V

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