

isc N-Channel MOSFET Transistor

AOD242

FEATURES

- Drain Current $-I_D=54A@ T_C=25^{\circ}C$
- Drain Source Voltage-
: $V_{DSS}=40V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 5.8m\Omega (\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

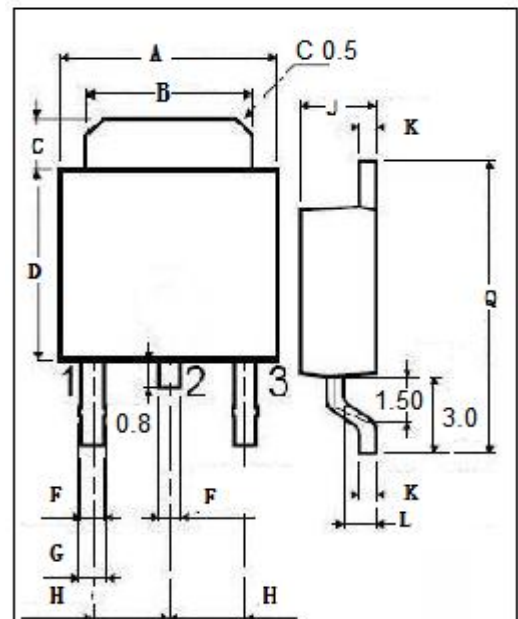
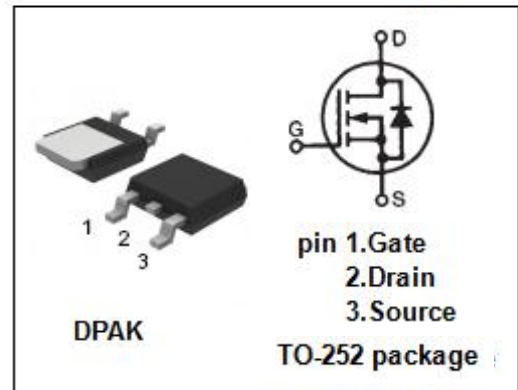
- Designed for use in switch mode power supplies and general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	40	V
V_{GS}	Gate-Source Voltage-Continuous	± 20	V
I_D	Drain Current-Continuous	54	A
I_{DM}	Drain Current-Single Pluse	165	A
P_D	Total Dissipation @ $T_C=25^{\circ}C$	53.5	W
T_J	Max. Operating Junction Temperature	-55~175	$^{\circ}C$
T_{stg}	Storage Temperature	-55~175	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	2.8	$^{\circ}C/W$



DIM	mm	
	MIN	MAX
A	6.40	6.60
B	5.20	5.40
C	1.15	1.35
D	5.70	6.10
F	0.65	
G	0.75	
H	2.10	2.50
J	2.10	2.40
K	0.40	0.60
L	0.90	1.10
Q	9.90	10.1

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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0$; $I_D=0.25\text{mA}$	40		V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}$; $I_D=0.25\text{mA}$	1.3	2.3	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}$; $I_D=20\text{A}$ $V_{GS}=10\text{V}$; $I_D=20\text{A}$; @ $T_J=125^{\circ}\text{C}$		5.8 9.5	$\text{m}\Omega$
I_{GSS}	Gate-Body Leakage Current	$V_{GS}=\pm 20\text{V}$; $V_{DS}=0$		± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=40\text{V}$; $V_{GS}=0$ $V_{DS}=40\text{V}$; $V_{GS}=0$ @ $T_J=55^{\circ}\text{C}$		1 5	μA
V_{SD}	Forward On-Voltage	$I_S=1\text{A}$; $V_{GS}=0$		1	V

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