

isc N-Channel MOSFET Transistor

AOD514

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 5.9m\Omega$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

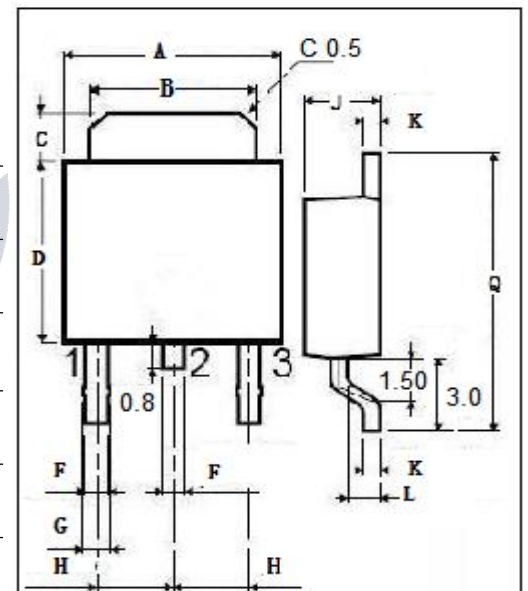
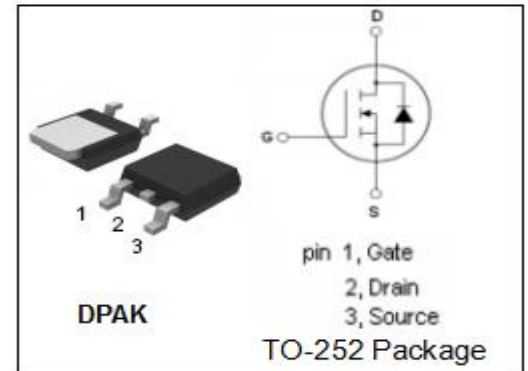
- DC/DC Converters in Computing
- Isolated DC/DC Converters in Telecom and Industrial

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	30	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous	46	A
I_{DM}	Drain Current-Single Pulsed	163	A
P_D	Total Dissipation @ $T_c=25^\circ\text{C}$	50	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
$R_{th(j-c)}$	Channel-to-case thermal resistance	3.0	$^\circ\text{C/W}$



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

isc N-Channel MOSFET Transistor**AOD514****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=250\ \mu A$	30			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=250\ \mu A$	1.6		2.4	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=20A$			5.9	$m\Omega$
I_{GSS}	Gate-Source Leakage Current	$V_{GS}= \pm 20V$			± 100	nA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}= 30V; V_{GS}= 0V$			1	μA
		$V_{DS}= 30V; V_{GS}= 0V; T_c=55^{\circ}\text{C}$			5	μA
V_{SD}	Diode forward voltage	$I_S= 20A, V_{GS}= 0V$			1	V

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