

isc P-Channel MOSFET Transistor

A0D4185

FEATURES

- Drain Current $-I_D = -20A @ T_C = 25^\circ C$
- Drain Source Voltage $-V_{DS} = -40V(\text{Min})$
- Static Drain-Source On-Resistance
 $-R_{DS(on)} = 15m\Omega(\text{Max}) @ V_{GS} = -10V$

DESCRIPTION

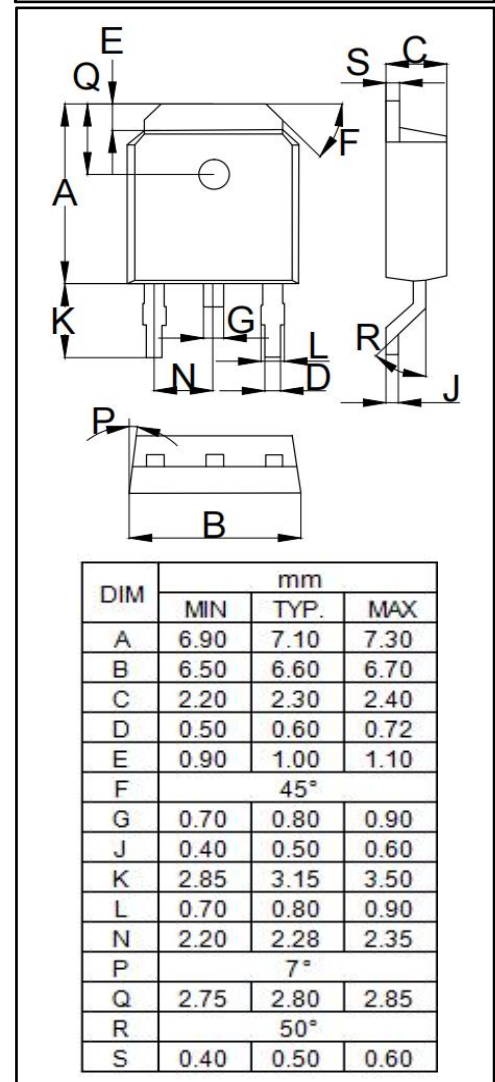
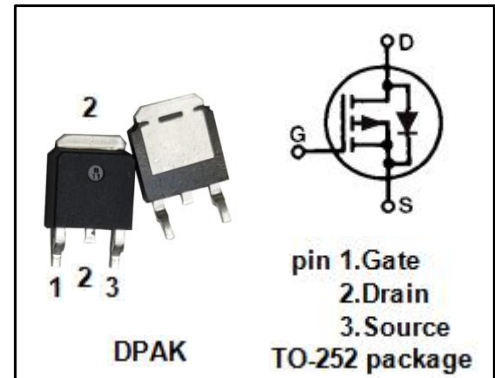
- Motor drive, DC-DC converter, power switch and solenoid drive.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	-40	V
V_{GS}	Gate-Source Voltage-Continuous	± 20	V
I_D	Drain Current-Continuous	-40	A
I_{DM}	Drain Current-Single Pulse	-115	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	62.5	W
T_J	Max. Operating Junction Temperature	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	2.4	$^\circ C/W$



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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
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=-40\text{V}$; $V_{GS}=0\text{V}$	--	-1	μA
I_{GSS}	Gate-Body Leakage Current	$V_{GS}=\pm 20\text{V}$; $V_{DS}=0\text{V}$	--	± 100	nA
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}$; $I_D=-0.25\text{mA}$	-1.7	-3.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=-10\text{V}$; $I_D=-20\text{A}$	--	15	$\text{m}\Omega$
V_{SD}	Forward On-Voltage	$I_S=-20\text{A}$; $V_{GS}=0\text{V}$	--	-1.0	V

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