

isc N-Channel MOSFET Transistor
AOY516
FEATURES

- Drain Current $-I_D = 50A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 30V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 5.0m\Omega (\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

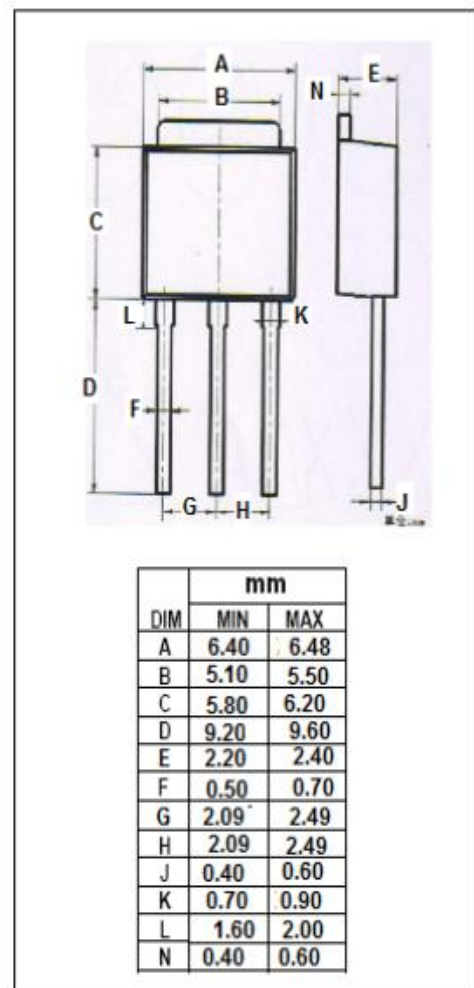
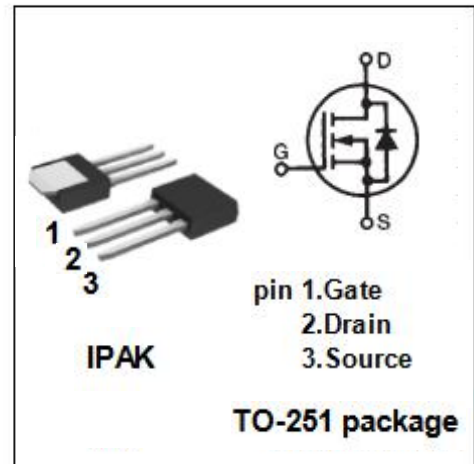
- Designed for use in switch mode power supplies and general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	30	V
V_{GS}	Gate-Source Voltage-Continuous	± 20	V
I_D	Drain Current-Continuous	50	A
I_{DM}	Drain Current-Single Pluse	170	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	50	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	3.0	$^\circ C/W$



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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	$V_{GS}=0; I_D=0.25\text{mA}$	30		V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.25\text{mA}$	1.6	2.4	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}; I_D=20\text{A}$ $V_{GS}=10\text{V}; I_D=20\text{A}@T_J=125^\circ\text{C}$		5.0 6.8	$\text{m}\Omega$
I_{GSS}	Gate-Body Leakage Current	$V_{GS}=\pm 20\text{V}; V_{DS}=0$		± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=30\text{V}; V_{GS}=0$ $V_{DS}=30\text{V}; V_{GS}=0@T_J=55^\circ\text{C}$		1 5	μA
V_{SD}	Forward On-Voltage	$I_S=1\text{A}; V_{GS}=0$		1	V

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