

isc N-Channel MOSFET Transistor

AOT416

• FEATURES

- Drain Current $-I_D = 42A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 100V (Min)$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 37m\Omega (Max)$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

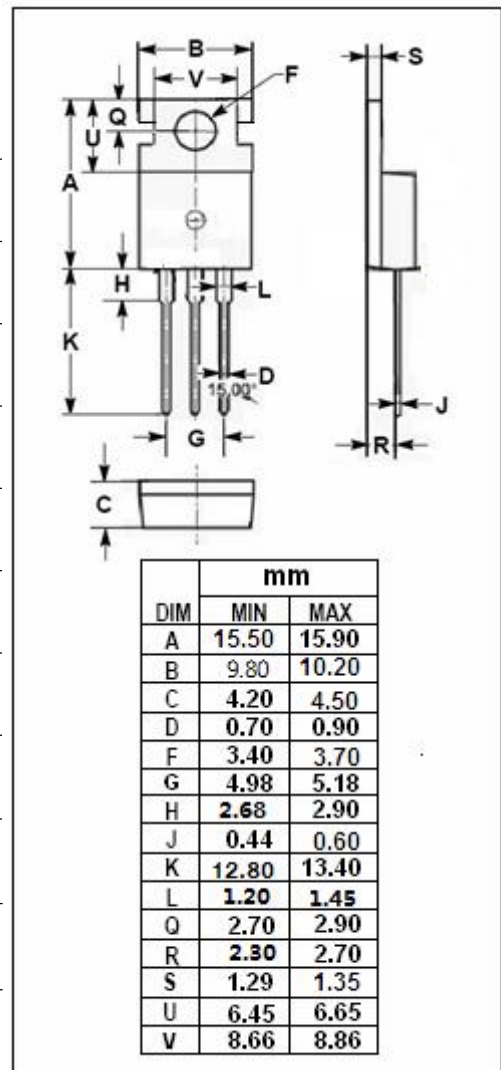
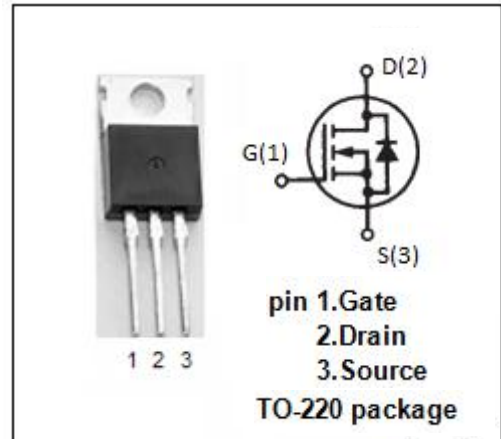
- Be suitable for synchronous rectification for server and general purpose applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	100	V
V_{GS}	Gate-Source Voltage	± 25	V
I_D	Drain Current-Continuous	42	A
I_{DM}	Drain Current-Single Pulsed	110	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	150	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
$R_{th(ch-c)}$	Channel-to-case thermal resistance	1	$^\circ C/W$



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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D = 250 μ A	100		V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D = 250 μ A	2.8	4	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 20A V _{GS} = 10V; I _D = 20A; T _J = 125°C		37 66	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±25V; V _{DS} = 0V		±100	nA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 100V; V _{GS} = 0V V _{DS} = 100V; V _{GS} = 0V; T _J = 55°C		10 50	μ A
V _{SD}	Diode forward voltage	I _S = 1A; V _{GS} = 0V		1	V

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