

**isc N-Channel MOSFET Transistor**
**AOTF42S60L**
**• FEATURES**

- Drain Current  $-I_D = 39A @ T_C = 25^\circ C$
- Drain Source Voltage  
:  $V_{DSS} = 600V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 99m\Omega (\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• DESCRIPTION**

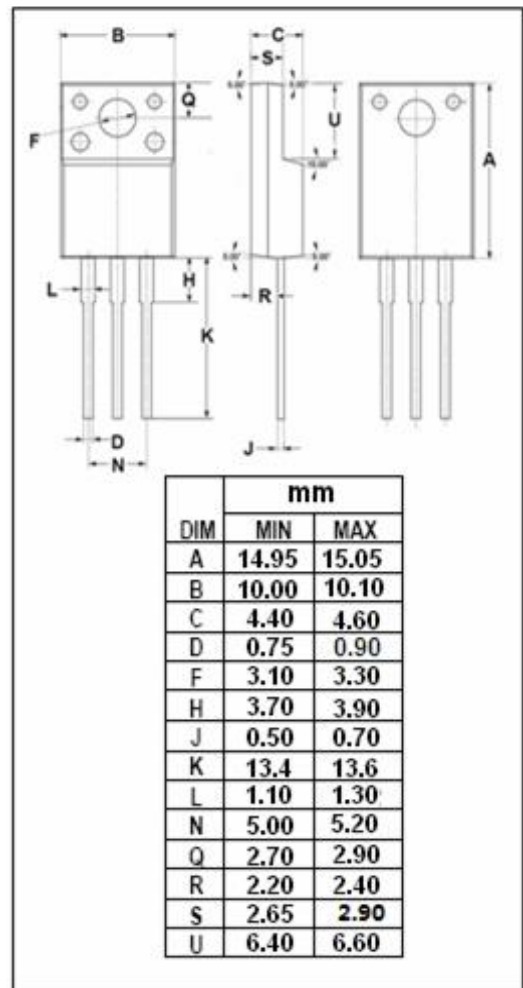
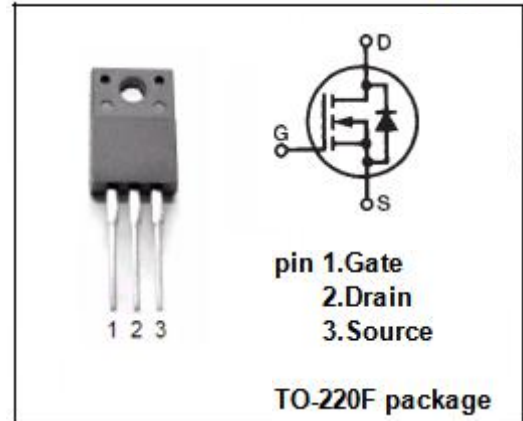
- Be suitable for synchronous rectification for server and general purpose applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	600	V
$V_{GS}$	Gate-Source Voltage	$\pm 30$	V
$I_D$	Drain Current-Continuous	39	A
$I_{DM}$	Drain Current-Single Pulsed	166	A
$P_D$	Total Dissipation @ $T_C = 25^\circ C$	37.9	W
$T_j$	Max. Operating Junction Temperature	-55~150	$^\circ C$
$T_{stg}$	Storage Temperature	-55~150	$^\circ C$

**• THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	3.3	$^\circ C/W$



## isc N-Channel MOSFET Transistor

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## ELECTRICAL CHARACTERISTICS

T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V; I <sub>D</sub> = 250 μ A	600			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = 5V; I <sub>D</sub> = 250 μ A	2.5		3.8	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> = 21A V <sub>GS</sub> = 10V; I <sub>D</sub> = 21A; T <sub>J</sub> = 150°C			99 280	mΩ
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±30V; V <sub>DS</sub> = 0V			±100	nA
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> = 600V; V <sub>GS</sub> = 0V V <sub>DS</sub> = 480V; V <sub>GS</sub> = 0V; T <sub>J</sub> = 150°C		10	1	μ A
V <sub>SD</sub>	Diode forward voltage	I <sub>S</sub> = 21A; V <sub>GS</sub> = 0V		0.84		V

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