

isc N-Channel MOSFET Transistor

AOK42S60L

• FEATURES

- With TO-247 packaging
- With low gate drive requirements
- Low switching loss
- Low on-state resistance
- Easy to drive
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

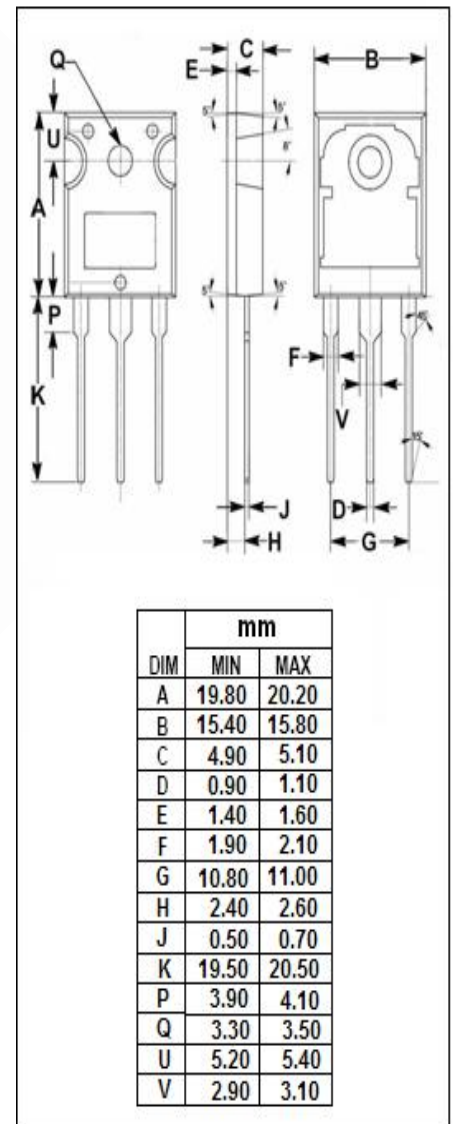
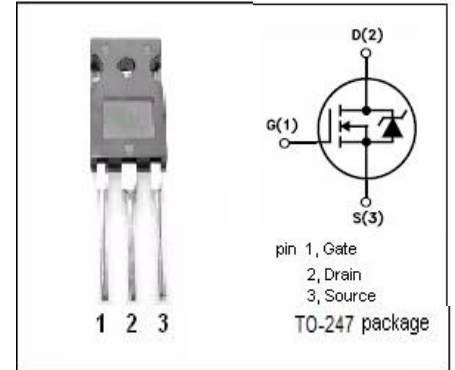
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	600	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-Continuous@ $T_c=25^{\circ}\text{C}$ $T_c=100^{\circ}\text{C}$	39 25	A
I_{DM}	Drain Current-Single Pulsed	166	A
P_D	Total Dissipation	417	W
T_j	Operating Junction Temperature	-55~150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~150	$^{\circ}\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.3	$^{\circ}\text{C/W}$



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ELECTRICAL CHARACTERISTICS
 $T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=0.25mA$	600			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=5V; I_D=0.25mA$	2.5		3.8	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=21A$		85	99	$m\Omega$
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 30V; V_{DS}=0V$			± 0.1	μA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=600V; V_{GS}=0V; @T_c=25^{\circ}\text{C}$ $V_{DS}=600V; V_{GS}=0V; T_c=125^{\circ}\text{C}$			1 100	μA
V_{SDF}	Diode forward voltage	$I_{SD}=21A, V_{GS}=0V$		0.84		V

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