

isc N-Channel MOSFET Transistor

STW60NM50N

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 0.043 \Omega$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

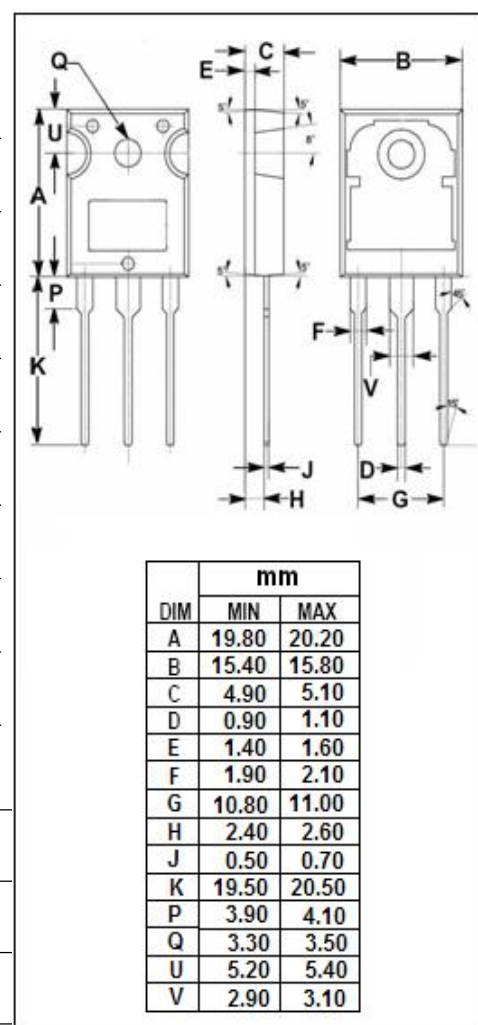
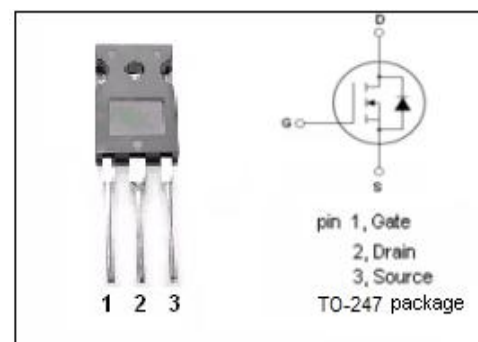
- Be suitable for the most demanding high efficiency converters.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	500	V
V_{GS}	Gate-Source Voltage	± 25	V
I_D	Drain Current-Continuous	68	A
I_{DM}	Drain Current-Single Pulsed	272	A
P_D	Total Dissipation @ $T_c=25^\circ\text{C}$	446	W
T_j	Max. Operating Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Channel-to-case thermal resistance	0.28	$^\circ\text{C/W}$
$R_{th(j-a)}$	Channel-to-ambient thermal resistance	50	$^\circ\text{C/W}$



isc N-Channel MOSFET Transistor**STW60NM50N****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=1mA$	500			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=250\mu A$	2		4	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=34A$			0.043	Ω
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 20V; V_{DS}=0V$			± 100	nA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=500V; V_{GS}=0V$			1	μA
		$V_{DS}=500V; V_{GS}=0V; T_j=125^{\circ}\text{C}$			100	
V_{SD}	Diode forward voltage	$I_S=68A, V_{GS}=0V$			1.6	V

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