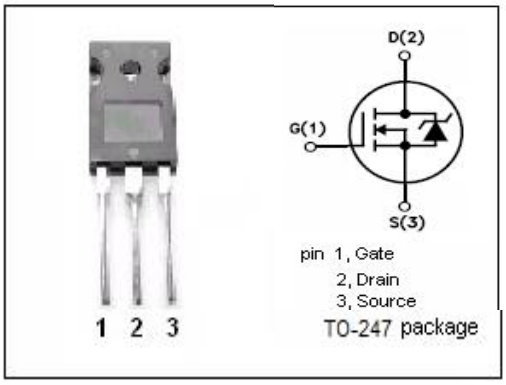
Isc N-Channel MOSFET Transistor STW20NM50FD

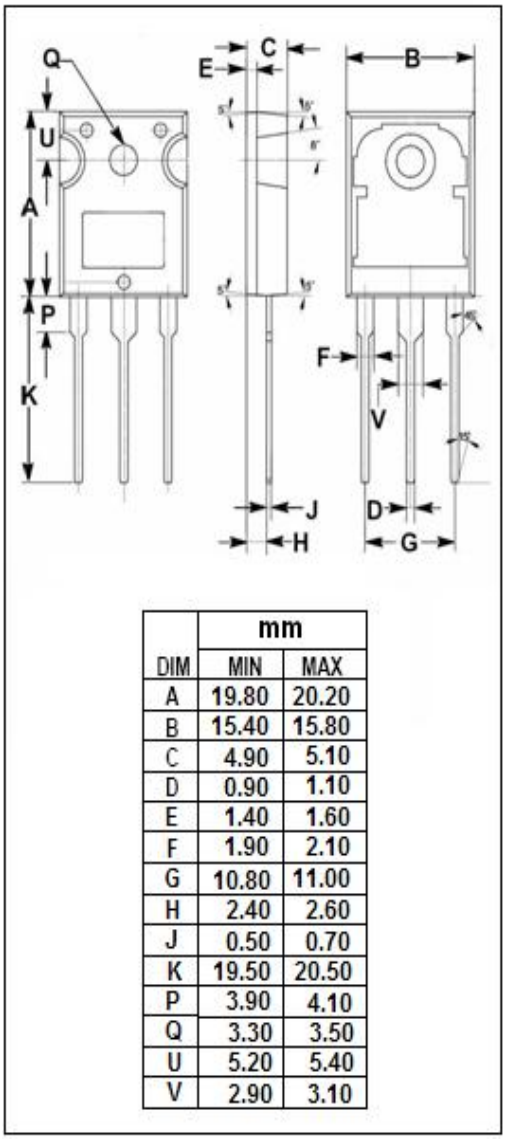


• FEATURES

- Low input capacitance and gate charge
- Low gate input resistance
- 100% avalanche tested
- Tight process control and high manufacturing yields
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

- Switching application



DIM	mm MIN	mm MAX
A	19.80	20.20
B	15.40	15.80
C	4.90	5.10
D	0.90	1.10
E	1.40	1.60
F	1.90	2.10
G	10.80	11.00
H	2.40	2.60
J	0.50	0.70
K	19.50	20.50
P	3.90	4.10
Q	3.30	3.50
U	5.20	5.40
V	2.90	3.10

• ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	500	V
V_{GSS}	Gate-Source Voltage	±30	V
I_D	Drain Current-Continuous@T_C=25℃ T_C=100℃	20 14	A
I_{DM}	Drain Current-Single Pulsed	80	A
P_D	Total Dissipation	214	W
T_j	Max. Operating Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65~150	℃

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
Rth(ch-c)	Channel-to-case thermal resistance	0.59	℃/W
Rth(ch-a)	Channel-to-ambient thermal resistance	30	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}=0V; I_D= 0.25mA	500			V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=±30V; I_D=0.25mA	3		5	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= 10V; I_D=10A		220	250	mΩ
I_{GSS}	Gate-Source Leakage Current	V_{GS}= ±30V;V_{DS}= 0V			±0.1	μA
I_{DSS}	Drain-Source Leakage Current	V_{DS}= 600V; V_{GS}= 0V; T_J=25℃ T_J=125℃			1 10	μA
V_{SDF}	Diode forward voltage	I_{SD}=20A, V_{GS} = 0 V			1.5	V