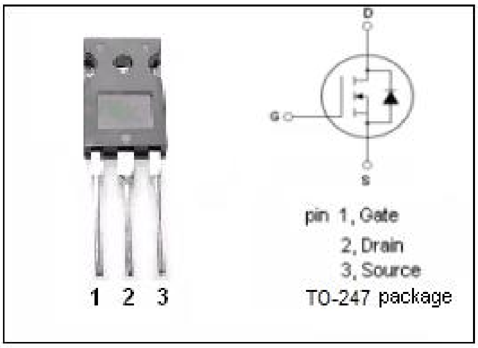
INCHANGE SEMICONDUCTOR

isc N-Channel MOSFET Transistor

SPW21N50C3

ISPW21N50C3



• FEATURES

- Static drain-source on-resistance:
  $R_{DS}(on)$≤190mΩ
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRITION

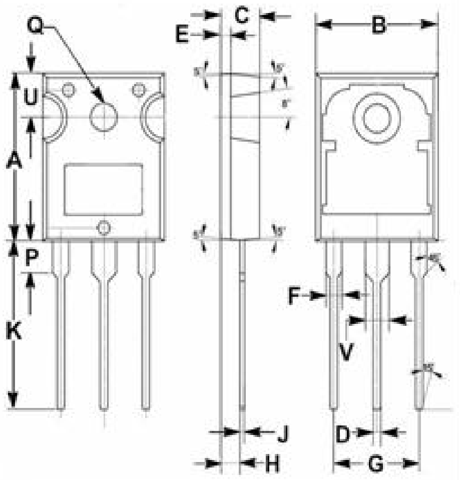
- Improved Transconductance

• ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	500	V
V_{GS}	Gate-Source Voltage	±20	V
I_D	Drain Current-Continuous	21	A
I_{DM}	Drain Current-Single Pulsed	63	A
P_D	Total Dissipation @T_C=25℃	208	W
T_j	Max. Operating Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~150	℃

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
Rth(j-c)	Channel-to-case thermal resistance	0.6	℃/W
Rth(j-a)	Channel-to-ambient thermal resistance	62	℃/W



	mm	
DIM	MIN	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

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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}=V_{GS}; I_D=1000μA	2.1		3.9	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}=10V; I_D=13.1A			190	mΩ
I_{GSS}	Gate-Source Leakage Current	V_{GS}= 20V; V_{DS}= 0V			0.1	μA
I_{DSS}	Drain-Source Leakage Current	V_{DS}=500V; V_{GS}= 0V			1	μA
V_{SD}	Diode forward voltage	I_F=Is, V_{GS} = 0V			1.2	V

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