

## isc N-Channel MOSFET Transistor

# SPW52N50C3 ISPW52N50C3

#### • FEATURES

- Static drain-source on-resistance: R<sub>DS</sub>(on)≤70mΩ
- Enhancement mode:
- · 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### DESCRITION

• Improved Transconductance

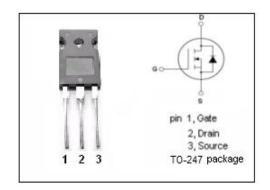


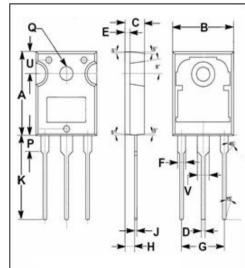
### • ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT	
V <sub>DSS</sub>	Drain-Source Voltage	500	V	
V <sub>GS</sub>	Gate-Source Voltage	±20	V	
I <sub>D</sub>	Drain Current-Continuous	52	А	
I <sub>DM</sub>	Drain Current-Single Pulsed	156	А	
P <sub>D</sub>	Total Dissipation @Tc=25°C	417	W	
Tj	Max. Operating Junction Temperature	150	°C	
T <sub>stg</sub>	Storage Temperature	-55~150	$^{\circ}$ C	

#### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
Rth(j-c)	Channel-to-case thermal resistance	0.3	°C/W
Rth(j-a)	Channel-to-ambient thermal resistance	62	°C/W





	mm		
DIM	MIN	MAX	
Α	19.80	20.20	
В	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	
Н	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	
٧	2.90	3.10	



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#### **ELECTRICAL CHARACTERISTICS**

T<sub>C</sub>=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V; I <sub>D</sub> =0.25mA	500			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	VDS=VGS; I <sub>D</sub> =2700 µ A	2.1		3.9	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> =10V; I <sub>D</sub> =30A			70	mΩ
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = 20V; V <sub>DS</sub> = 0V			0.1	μА
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> =500V; V <sub>GS</sub> = 0V			25	μ <b>А</b>
V <sub>SD</sub>	Diode forward voltage	I <sub>F</sub> =I <sub>S</sub> , V <sub>GS</sub> = 0V			1.2	V

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