

Isc N-Channel MOSFET Transistor

SPB21N50C3

• FEATURES

- With TO-263(D² PAK) packaging
- High speed switching
- Low gate input resistance
- Standard level gate drive
- Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

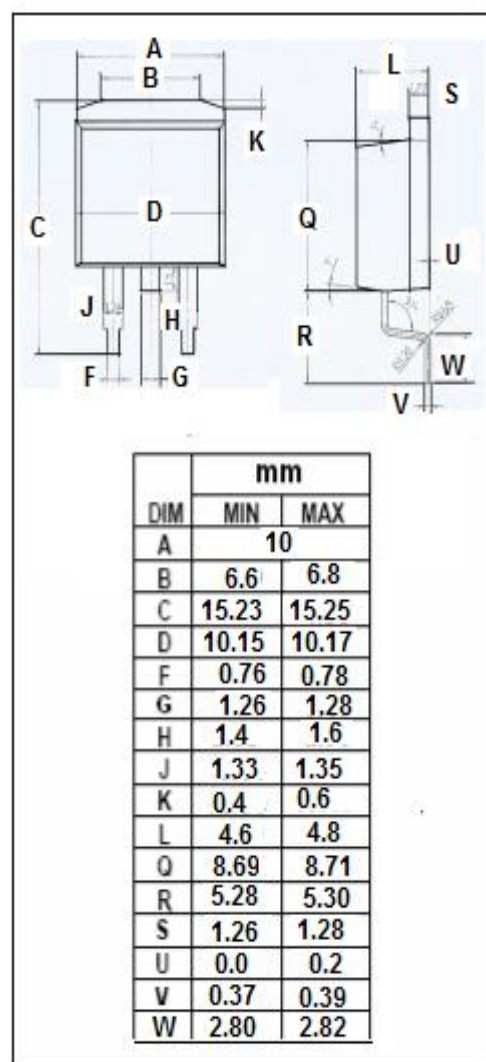
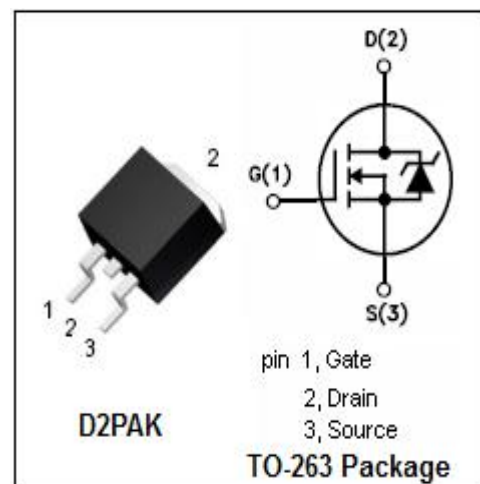
- Power supply
- Switching applications

• 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	± 20	V
I_D	Drain Current-Continuous	21	A
P_D	Total Dissipation @ $T_c=25^{\circ}\text{C}$	34.5	W
T_j	Max. Operating Junction Temperature	-55~175	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~175	$^{\circ}\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Channel-to-case thermal resistance	0.6	$^{\circ}\text{C/W}$



Isc N-Channel MOSFET Transistor**SPB21N50C3****ELECTRICAL CHARACTERISTICS****T_c=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D = 250uA	500			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} ; I _D = 1mA	2.1	3	3.9	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 13.1A		160	190	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V; V _{DS} = 0V			± 100	nA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 500V; V _{GS} = 0V		0.1	1	μA
V _{SD}	Diode forward voltage	I _s = 21A, V _{GS} = 0V		1	1.2	V

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