

# Isc N-Channel MOSFET Transistor

# SPB16N50C3

### • FEATURES

- With TO-263( D<sup>2</sup> 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

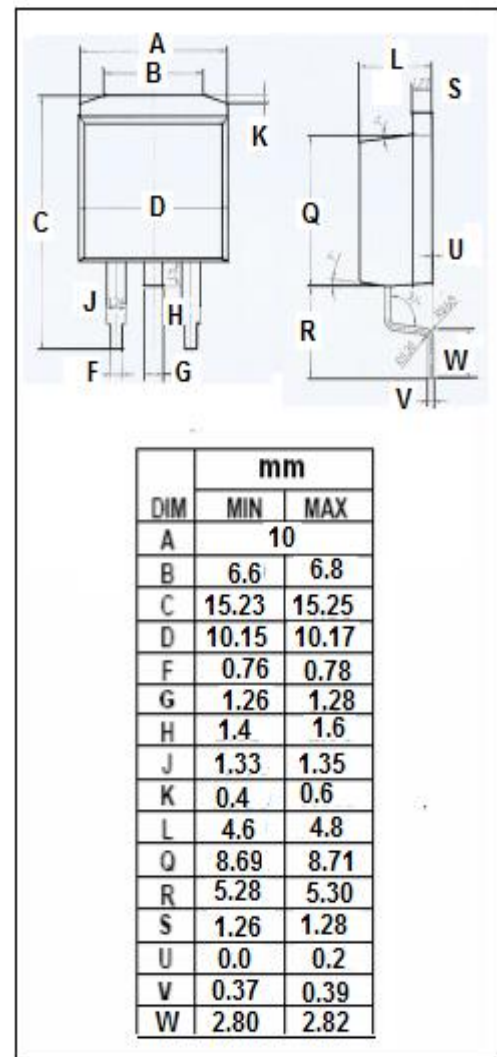
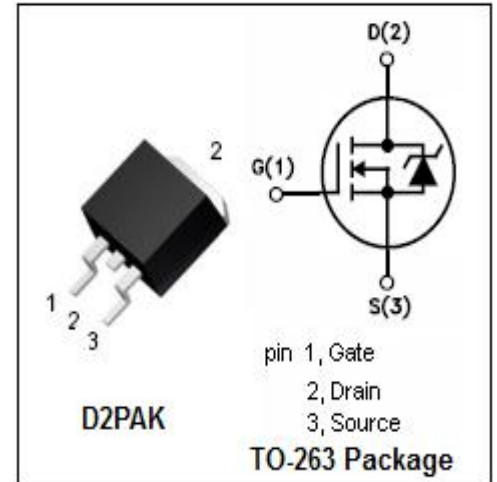
- Power supply
- Switching applications

### • ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=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	16	A
P <sub>D</sub>	Total Dissipation @T <sub>C</sub> =25°C	160	W
T <sub>J</sub>	Max. Operating Junction Temperature	-55~150	°C
T <sub>stg</sub>	Storage Temperature	-55~150	°C

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th(j-c)</sub>	Channel-to-case thermal resistance	0.78	°C/W



**Isc N-Channel MOSFET Transistor****SPB16N50C3****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=250\mu A$	500			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=675\mu A$	2.1	3	3.9	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=10A$		250	280	$m\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 20V; V_{DS}=0V$			$\pm 100$	nA
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=500V; V_{GS}=0V$		0.1	1	$\mu A$
$V_{SD}$	Diode forward voltage	$I_S=16A, V_{GS}=0V$		1	1.2	V

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