

# isc N-Channel MOSFET Transistor

# STB28NM50N

### • FEATURES

- With TO-263( D2PAK ) 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

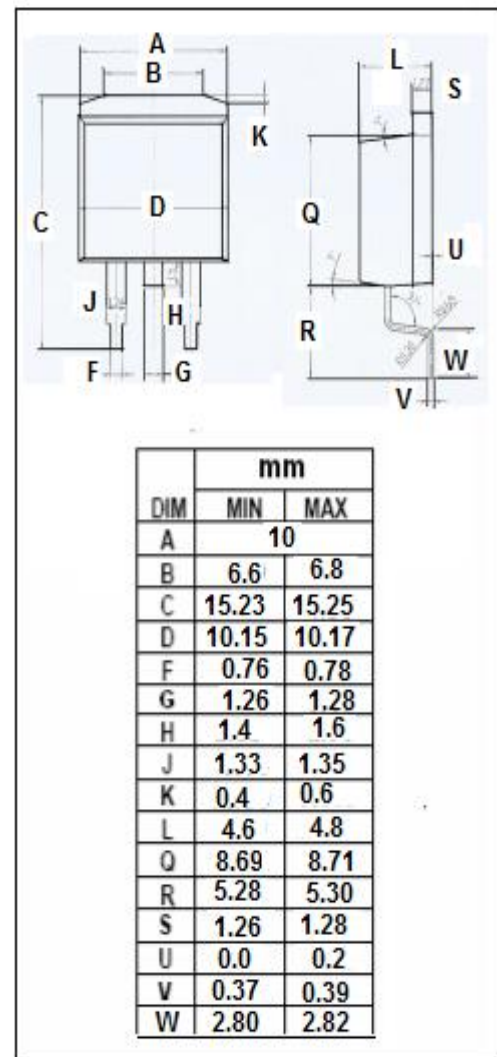
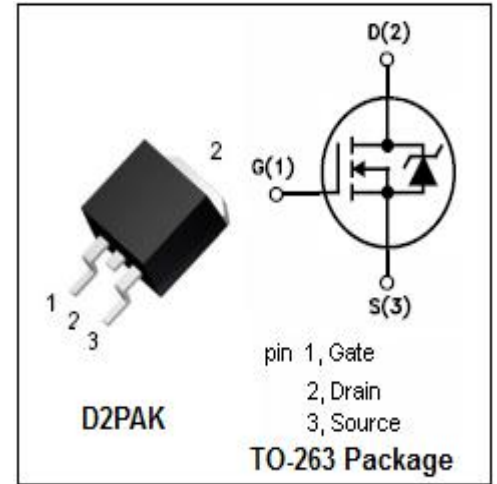
- Power supply
- Switching applications

### • ABSOLUTE MAXIMUM RATINGS( $T_a=25^{\circ}\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	500	V
$V_{GSS}$	Gate-Source Voltage	$\pm 25$	V
$I_D$	Drain Current-Continuous@ $T_c=25^{\circ}\text{C}$ $T_c=100^{\circ}\text{C}$	21 13	A
$I_{DM}$	Drain Current-Single Pulsed	84	A
$P_D$	Total Dissipation	150	W
$T_j$	Operating Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^{\circ}\text{C}$

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.83	$^{\circ}\text{C}/\text{W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	62.5	$^{\circ}\text{C}/\text{W}$



**isc N-Channel MOSFET Transistor**
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**ELECTRICAL CHARACTERISTICS**

 T<sub>C</sub>=25°C 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> = 1mA	500			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =±25V; I <sub>D</sub> =0.25mA	2.0		4.0	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =10.5A		135	158	mΩ
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±25V; V <sub>DS</sub> = 0V			±0.1	μA
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> = 500V; V <sub>GS</sub> = 0V; T <sub>J</sub> =25°C T <sub>J</sub> =125°C			1 100	μA
V <sub>SDF</sub>	Diode forward voltage	I <sub>SD</sub> =21A, V <sub>GS</sub> = 0 V			1.5	V

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