

# Isc N-Channel MOSFET Transistor

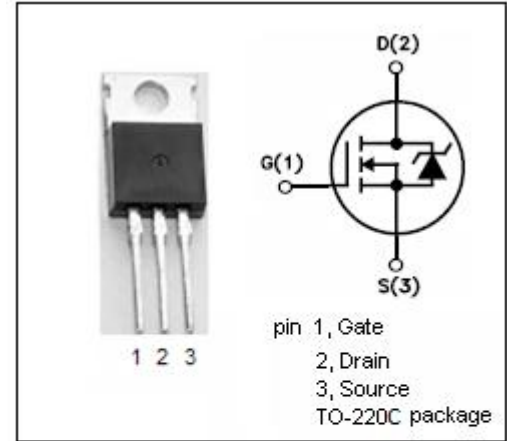
# MTP2N50

**• FEATURES**

- With low gate drive requirements
- Easy to drive
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

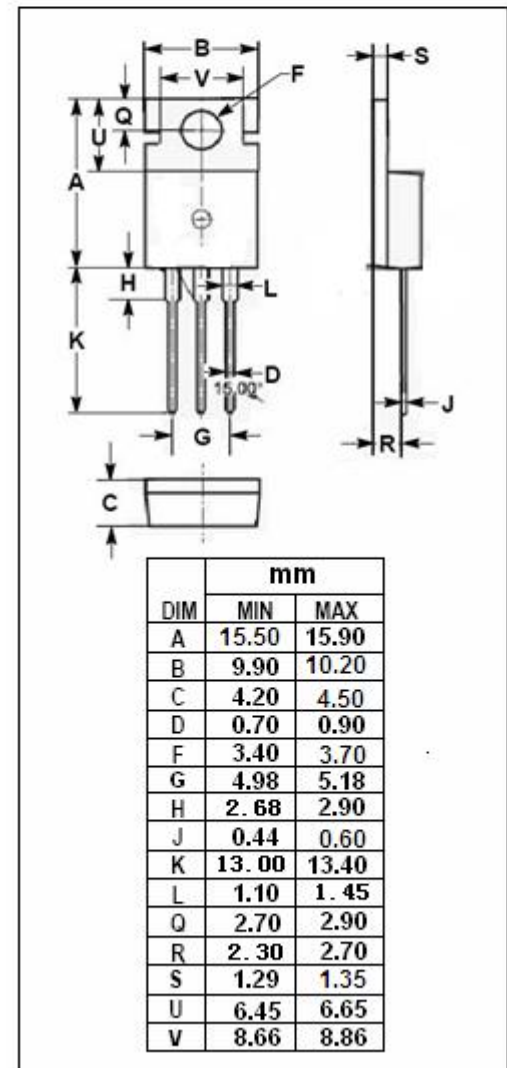
**• APPLICATIONS**

- 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>GSS</sub>	Gate-Source Voltage	±20	V
I <sub>D</sub>	Drain Current-Continuous@T <sub>C</sub> =100°C	2	A
I <sub>DM</sub>	Drain Current-Single Pulsed	10	A
P <sub>D</sub>	Total Dissipation	75	W
T <sub>j</sub>	Operating Junction Temperature	-55~150	°C
T <sub>stg</sub>	Storage Temperature	-55~150	°C



**• THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th(ch-c)</sub>	Channel-to-case thermal resistance	1.36	°C/W
R <sub>th(ch-a)</sub>	Channel-to-ambient thermal resistance	62.5	°C/W

**Isc N-Channel MOSFET Transistor**
**MTP2N50**
**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> = 0.25mA	500			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =±20V; I <sub>D</sub> =0.25mA	2.0		4.5	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =1.0A			4.0	Ω
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0V			±0.1	μ A
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> = 500V; V <sub>GS</sub> = 0V; T <sub>J</sub> =25°C V <sub>DS</sub> = 400V; V <sub>GS</sub> = 0V; T <sub>J</sub> =25°C			250 1000	μ A
V <sub>SDF</sub>	Diode forward voltage	I <sub>SD</sub> =2.0A, V <sub>GS</sub> = 0 V			1.3	V

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