

# Isc N-Channel MOSFET Transistor

# STP57N65M5

### • FEATURES

- With TO-262( I<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

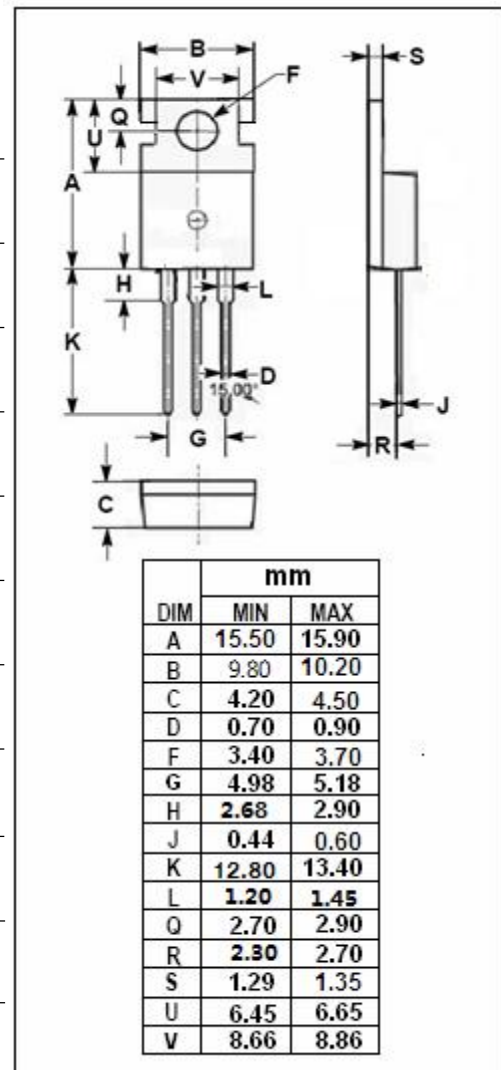
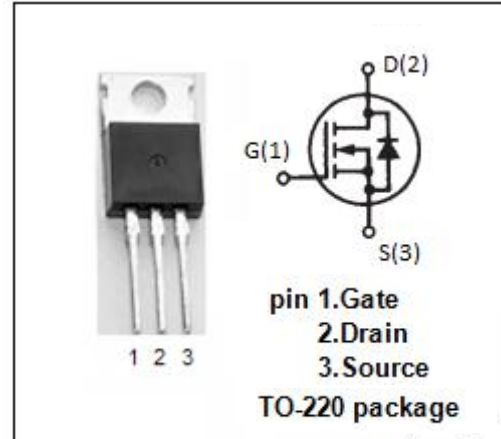
- Power supply
- Switching applications

### • ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>DSS</sub>	Drain-Source Voltage	650	V
V <sub>GSS</sub>	Gate-Source Voltage	±25	V
I <sub>D</sub>	Drain Current-Continuous@T <sub>c</sub> =25°C T <sub>c</sub> =100°C	42 26.5	A
I <sub>DM</sub>	Drain Current-Single Pulsed	168	A
P <sub>D</sub>	Total Dissipation	250	W
T <sub>j</sub>	Operating Junction Temperature	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	0.5	°C/W



**Isc N-Channel MOSFET Transistor****STP57N65M5****ELECTRICAL CHARACTERISTICS**T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
B <sub>V</sub> DSS	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V; I <sub>D</sub> = 1mA	650			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> V; I <sub>D</sub> =0.25mA	3		5	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =21A		56	63	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> = 650V; 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> =42A, V <sub>GS</sub> = 0 V			1.5	V

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