

**isc N-Channel Mosfet Transistor**
**STP12N65M5**
**• FEATURES**

- Drain Current  $I_D = 8.5A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS} = 650V(\text{Min})$
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• APPLICATIONS**

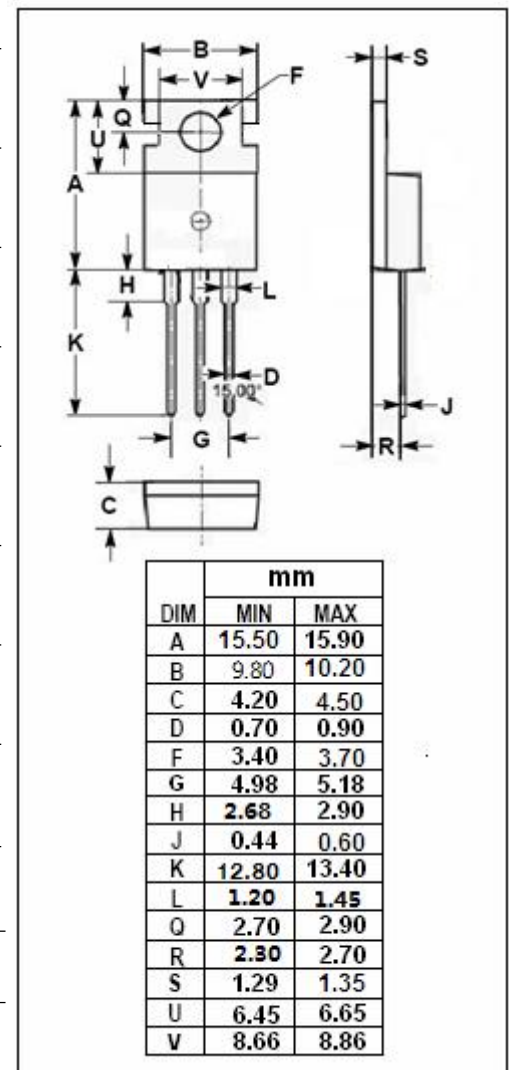
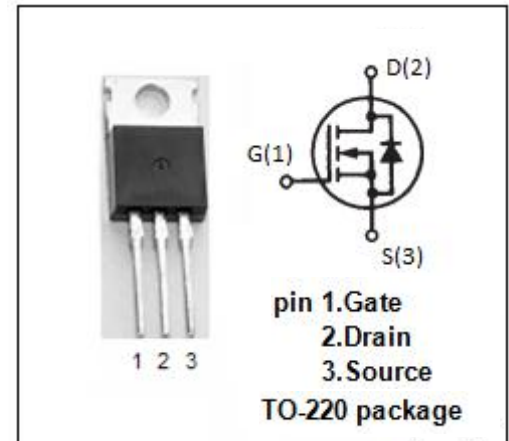
- Switching applications

**• ABSOLUTE MAXIMUM RATINGS( $T_a = 25^\circ C$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	650	V
$V_{GS}$	Gate-Source Voltage	$\pm 25$	V
$I_D$	Drain Current-continuous@ $T_C = 25^\circ C$	8.5	A
$I_{DM}$	Pulse Drain Current	34	A
$P_{tot}$	Total Dissipation@ $T_C = 25^\circ C$	70	W
$T_j$	Max. Operating Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ C$

**• THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{thj-c}$	Thermal Resistance, Junction to Case	1.79	$^\circ C/W$



## isc N-Channel Mosfet Transistor

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## ELECTRICAL CHARACTERISTICS

T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> = 0; I <sub>D</sub> = 1mA	650			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> =250μA	3		5	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> = 4.3A			430	mΩ
I <sub>GSS</sub>	Gate-Body Leakage Current	V <sub>GS</sub> = ±25V; V <sub>DS</sub> = 0			±100	nA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> = Max rating			1	μA
		V <sub>DS</sub> = Max rating; T <sub>c</sub> =125°C			100	
V <sub>SD</sub>	Diode Forward On-Voltage	I <sub>S</sub> = 8.5A; V <sub>GS</sub> = 0			1.5	V

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