

Isc N-Channel MOSFET Transistor

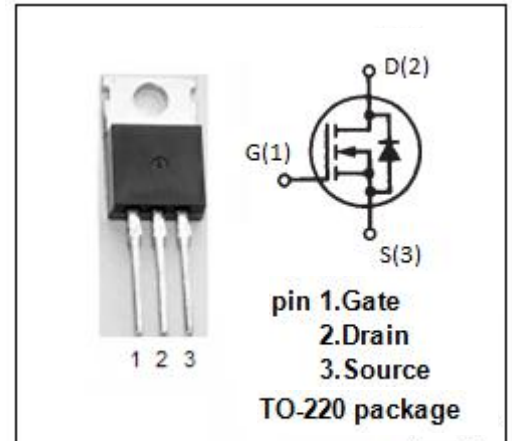
STP21NM60ND

• FEATURES

- With TO-220 package
- Low input capacitance and gate charge
- Low gate input resistance
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

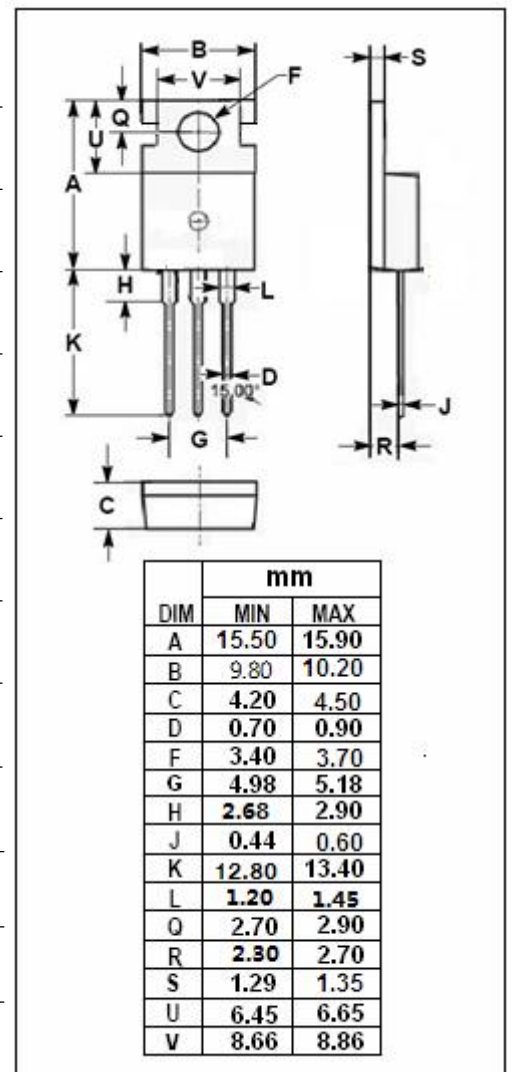
• APPLICATIONS

- Switching applications



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	600	V
V_{GSS}	Gate-Source Voltage	± 25	V
I_D	Drain Current-Continuous@ $T_c=25^{\circ}\text{C}$ $T_c=125^{\circ}\text{C}$	17 10	A
I_{DM}	Drain Current-Single Pulsed	68	A
P_D	Total Dissipation @ $T_c=25^{\circ}\text{C}$	140	W
T_{ch}	Max. 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	0.89	$^{\circ}\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	62.5	$^{\circ}\text{C/W}$

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ELECTRICAL CHARACTERISTICS

 T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D = 1mA	600			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = ±25V; I _D =0.25mA	3		5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =8.5A		170	220	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±25V; V _{DS} = 0V			±0.1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 600V; V _{GS} = 0V; T _J =25°C T _J =125°C			1 100	μA
V _{SDF}	Diode forward voltage	I _{SD} =17A, V _{GS} = 0 V			1.6	V

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