

## isc N-Channel MOSFET Transistor

## NDP406B

## FEATURES

- Drain Current  $-I_D = 12A @ T_C = 25^\circ C$
- Drain Source Voltage  $-V_{DSS} = 60V(\text{Min})$
- Static Drain-Source On-Resistance  
 $-R_{DS(on)} = 0.15\Omega(\text{Max}) @ V_{GS} = 10V$

## DESCRIPTION

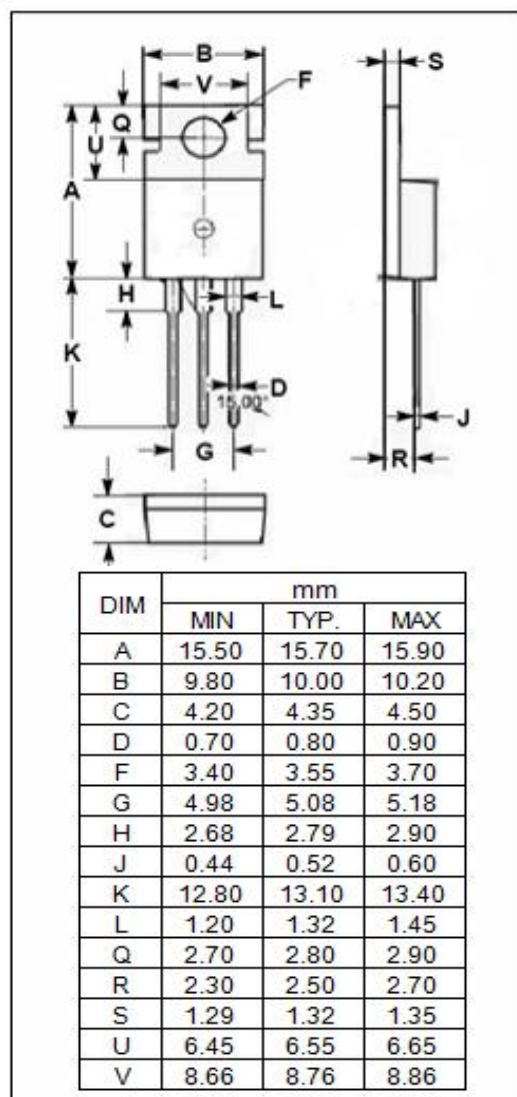
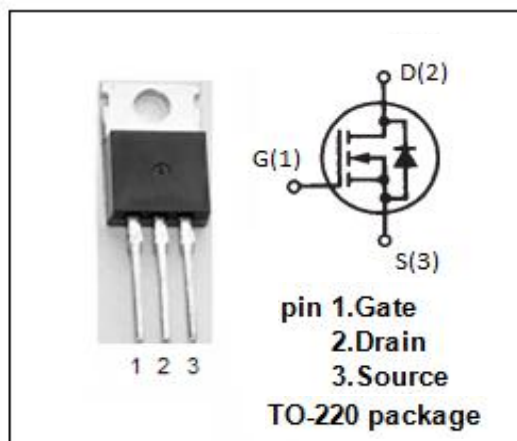
- Motor drive, DC-DC converter, power switch and solenoid drive.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	60	V
$V_{GS}$	Gate-Source Voltage-Continuous	$\pm 20$	V
$I_D$	Drain Current-Continuous	12	A
$I_{DM}$	Drain Current-Single Pluse	36	A
$P_D$	Total Dissipation @ $T_C = 25^\circ C$	50	W
$T_J$	Max. Operating Junction Temperature	175	$^\circ C$
$T_{stg}$	Storage Temperature	-55~175	$^\circ C$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	3.0	$^\circ C/W$



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ELECTRICAL CHARACTERISTICS (T<sub>C</sub>=25°C unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> = 0; I <sub>D</sub> = 0.25mA	60	--	V
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> = 60V; V <sub>GS</sub> = 0	--	250	uA
I <sub>GSS</sub>	Gate-Body Leakage Current	V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0	--	±100	nA
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = V <sub>GS</sub> ; 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> = 6A	--	0.15	Ω
V <sub>SD</sub>	Forward On-Voltage	I <sub>S</sub> = 6A; V <sub>GS</sub> = 0	--	1.3	V

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