

## isc N-Channel MOSFET Transistor

## WPH4003-1E

## FEATURES

- Drain Current :  $I_D = 3A @ T_C = 25^\circ C$
- Drain Source Voltage  
:  $V_{DS} = 1700V (Min)$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 10.5 \Omega (Max) @ V_{GS} = 10V$

## DESCRIPTION

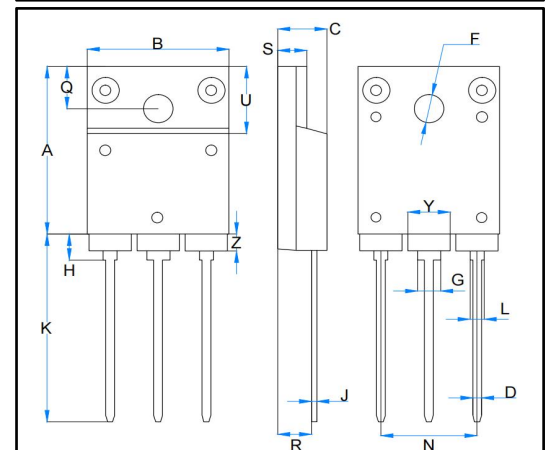
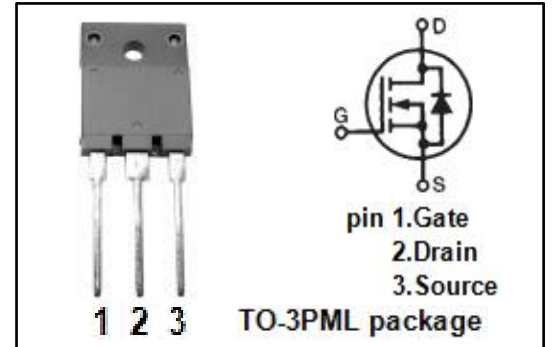
- motor drive,
- DC-DC converter,
- power switch and solenoid drive.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DS}$	Drain-Source Voltage	1700	V
$V_{GS}$	Gate-Source Voltage-Continuous	$\pm 30$	V
$I_D$	Drain Current-Continuous	3	A
$I_{DM}$	Drain Current-Single Pluse	12	A
$P_D$	Total Dissipation @ $T_C = 25^\circ C$	83	W
$T_J$	Max. Operating Junction Temperature	-55~150	$^\circ C$
$T_{stg}$	Storage Temperature	-55~150	$^\circ C$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.5	$^\circ C/W$



DIM	mm		
	MIN	TYP.	MAX
A	19.90	20.00	20.10
B	15.90	16.00	16.10
C	5.50	5.60	5.70
D	0.90	1.00	1.10
F	3.30	3.40	3.50
G	2.90	3.00	3.10
H	5.90	6.00	6.10
J	0.50	0.60	0.70
K	22.30	22.40	22.50
L	1.90	2.00	2.10
N	10.80	10.90	11.00
Q	4.90	5.00	5.10
R	3.75	3.85	3.95
S	3.20	3.30	3.40
U	7.90	8.00	8.10
Y	4.70	4.80	4.90
Z	1.90	2.00	2.10

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ELECTRICAL CHARACTERISTICS ( $T_C=25^{\circ}\text{C}$  unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0$ ; $I_D=10\text{mA}$	1700	--	V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=10\text{V}$ ; $I_D=1\text{mA}$	2	4	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}$ ; $I_D=1.5\text{A}$	--	10.5	$\Omega$
$I_{GSS}$	Gate-Body Leakage Current	$V_{GS}=\pm 30\text{V}$ ; $V_{DS}=0$	--	$\pm 100$	nA
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS}=600\text{V}$ ; $V_{GS}=0$	--	10	$\mu\text{A}$
$V_{SD}$	Forward On-Voltage	$I_S=47\text{A}$ ; $V_{GS}=0$	--	1.4	V

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