

**isc N-Channel MOSFET Transistor**
**NDB710BE**
**FEATURES**

- Drain Current - $I_D = 40A @ T_C = 25^\circ C$
- Drain Source Voltage - $V_{DSS} = 100V(\text{Min})$
- Static Drain-Source On-Resistance  
- $R_{DS(on)} = 42m\Omega(\text{Max}) @ V_{GS} = 10V$

**DESCRIPTION**

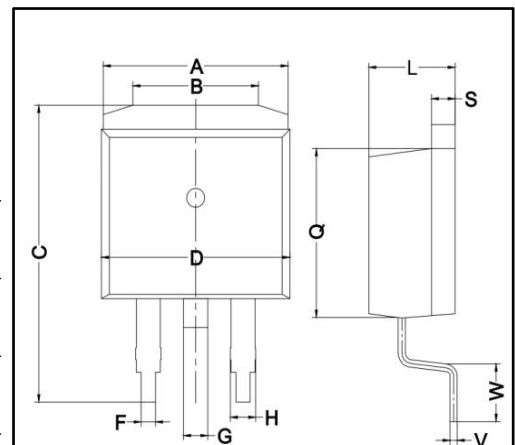
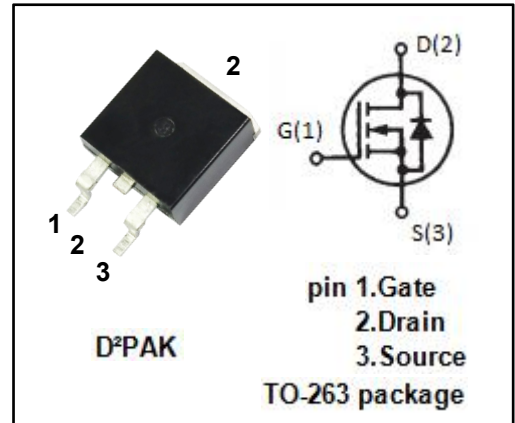
- Motor drive, DC-DC converter, power switch and solenoid drive.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	100	V
$V_{GS}$	Gate-Source Voltage-Continuous	$\pm 20$	V
$I_D$	Drain Current-Continuous	40	A
$I_{DM}$	Drain Current-Single Pulse	160	A
$P_D$	Total Dissipation @ $T_C = 25^\circ C$	150	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	1.0	$^\circ C/W$



DIM	mm		
	MIN	TYP.	MAX
A	9.80	10.00	10.20
B	6.60	6.70	6.80
C	15.10	15.20	15.30
D	9.60	9.80	10.00
F	0.70	0.80	0.90
G	1.26	1.28	1.30
H	1.20	1.33	1.45
L	4.40	4.50	4.60
Q	9.20	9.25	9.30
S	1.25	1.30	1.35
V	0.40	0.50	0.60
W	2.60	2.70	2.80

## isc N-Channel MOSFET Transistor

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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	100	--	V
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> = 100V; 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> = 20A	--	42	mΩ
V <sub>SD</sub>	Forward On-Voltage	I <sub>S</sub> = 20A; V <sub>GS</sub> = 0	--	1.3	V

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