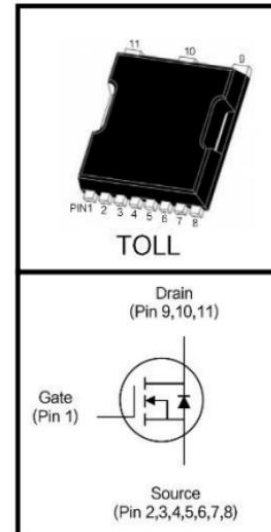


isc N-Channel MOSFET Transistor**IAUT300N08S5N012****FEATURES**

- Drain Current $-I_D = 300A @ T_C = 25^\circ C$
- Drain Source Voltage $-V_{DSS} = 80V(\text{Min})$
- Static Drain-Source On-Resistance
 $-R_{DS(on)} = 1.2m\Omega(\text{Max}) @ V_{GS} = 10V$

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	80	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous@ $T_C = 25^\circ C$	300	A
I_{DM}	Drain Current-Single Pulsed	1200	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	375	W
T_j	Max. Operating Junction Temperature	175	$^\circ C$
T_{stg}	Storage Temperature	-55~175	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.4	$^\circ C/W$

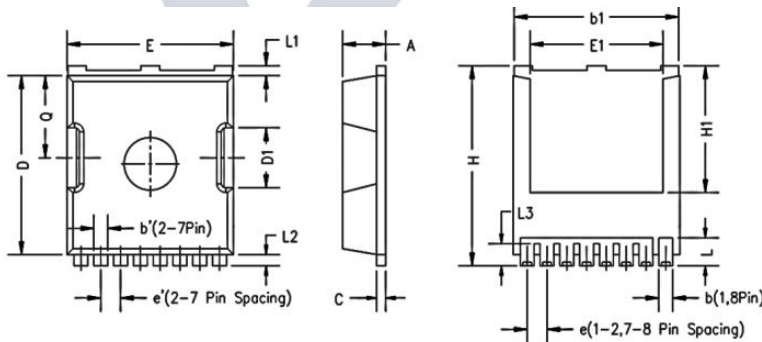
isc N-Channel MOSFET Transistor

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V$; $I_D=1mA$	80	-	-	V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}$; $I_D=275\mu A$	2.2	-	3.8	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=6V$; $I_D=75A$	-	-	1.7	$m\Omega$
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V$; $I_D=100A$	-	-	1.2	$m\Omega$
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 20V$; $V_{DS}=0V$	-	-	± 100	nA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=80V$; $V_{GS}=0V$	-	-	1	μA
V_{SD}	Diode forward voltage	$I_S=100A$, $V_{GS}=0V$	-	-	1.2	V

PACKAGE OUTLINE (UNIT: mm)



SYMBOLS	MILLIMETERS	
	MIN	MAX
A	2.15	2.45
b	0.70	0.85
b'	0.65	0.80
b1	9.65	9.95
C	0.45	0.60
D	10.18	10.58
D1	3.15	3.45
E	9.70	10.10
E1	7.95	8.25
e	BSC1.225	
e'	BSC1.20	
H	11.48	11.88
H1	6.80	7.10
Q1	4.40	4.70
L	1.60	2.00
L1	0.50	0.90
L2	0.48	0.72
L3	1.00	1.30

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