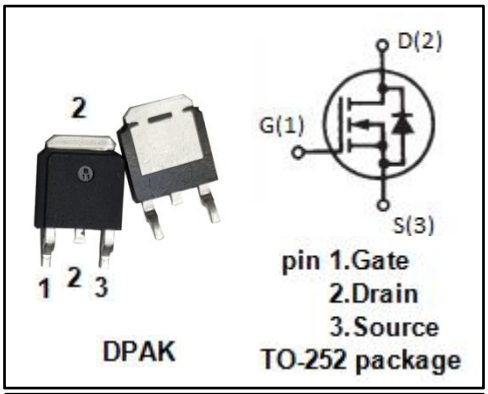
isc N-Channel MOSFET Transistor IPD90N04S4-04

FEATURES

- Drain Current : I_D= 90A@ T_C=25℃
- Drain Source Voltage
  : V_{DSS}= 40V(Min)
- Static Drain-Source On-Resistance
  : $R_{DS(on)}$ = 4.1mΩ (Max) @ V_{GS}= 10V
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



DESCRIPTION

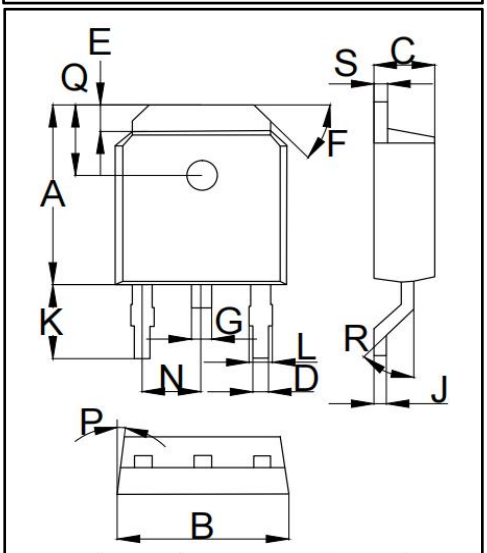
- motor drive, DC-DC converter, power switch and solenoid drive.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	40	V
V_{GS}	Gate-Source Voltage-Continuous	±20	V
I_D	Drain Current-Continuous	90	A
I_{DM}	Drain Current-Single Pluse	360	A
P_D	Total Dissipation @T_C=25℃	71	W
T_J	Max. Operating Junction Temperature	-55~175	℃
T_{stg}	Storage Temperature	-55~175	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	2.1	℃/W



DIM	mm	
	MIN	MAX
A	6.90	7.30
B	6.50	6.70
C	2.20	2.40
D	0.50	0.72
E	0.90	1.10
F	45°	
G	0.70	0.90
J	0.40	0.60
K	2.85	3.50
L	0.70	0.90
N	2.20	2.35
P	7°	
Q	2.750	2.850
R	50°	
S	0.40	0.60

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	V_{GS}= 0; I_D= 1.0mA	40	--	V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}= 10V; I_D= 0.25mA	2.0	4.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= 10V; I_D= 90A	--	4.1	mΩ
I_{GSS}	Gate-Body Leakage Current	V_{GS}= ±20V;V_{DS}= 0	--	±0.1	uA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}= 40V; V_{GS}= 0	--	1.0	uA
V_{SD}	Forward On-Voltage	I_S= 90A; V_{GS}= 0	--	1.3	V