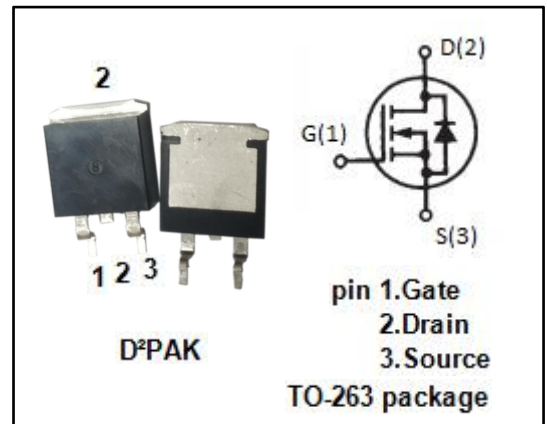


**isc N-Channel MOSFET Transistor**
**2SK3431-Z**
**FEATURES**

- Drain Current :  $I_D = 83A @ T_C = 25^\circ C$
- Drain Source Voltage  
:  $V_{DSS} = 40V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 5.6m\Omega (\text{Max}) @ V_{GS} = 10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**DESCRIPTION**

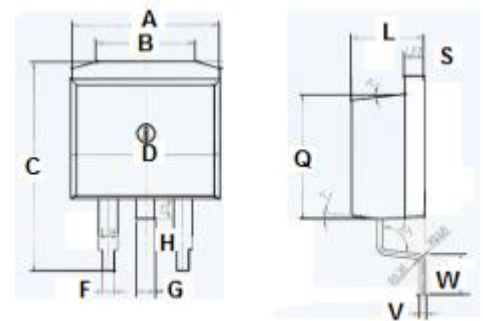
- motor drive, DC-DC converter, power switch and solenoid drive.


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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	40	V
$V_{GS}$	Gate-Source Voltage-Continuous	$\pm 20$	V
$I_D$	Drain Current-Continuous	83	A
$I_{DM}$	Drain Current-Single Pulse	332	A
$P_D$	Total Dissipation @ $T_C = 25^\circ C$	100	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	1.25	$^\circ C/W$



DIM	mm	
	MIN	MAX
A	9.8	10.2
B	6.6	6.8
C	15.1	15.3
D	9.6	10
F	0.7	0.9
G	1.26	1.3
H	1.2	1.45
L	4.4	4.6
Q	9.2	9.3
S	1.25	1.35
V	0.4	0.6
W	2.6	2.8

## 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> = 1.0mA	40	--	V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = 10V; I <sub>D</sub> = 1.0mA	1.5	2.5	V
R <sub>DS(on)1</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> = 42A V <sub>GS</sub> = 4V; I <sub>D</sub> = 42A	--	5.6 8.9	mΩ
I <sub>GSS</sub>	Gate-Body Leakage Current	V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0	--	±10	uA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> =40V; V <sub>GS</sub> = 0	--	10	uA
V <sub>SD</sub>	Forward On-Voltage	I <sub>S</sub> = 83A; V <sub>GS</sub> = 0	--	1.5	V

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