

Isc P-Channel MOSFET Transistor

SUD50P10-43L

• FEATURES

- TrenchFET® Power MOSFET
- 175 ° C Junction Temperature
- 100 % Rg and UIS Tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

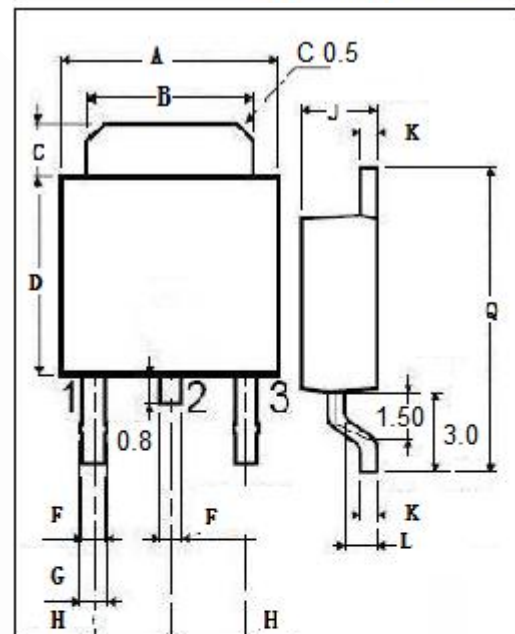
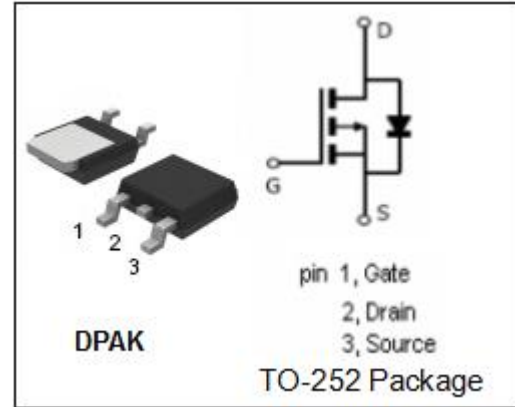
- Power Supply
 - Secondary Synchronous Rectification
- Power tools
- Motor drive switch
- Battery management

• ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{DSS}	Drain-Source Voltage	-100	V
V _{GSS}	Gate-Source Voltage	±20	V
I _D	Drain Current-Continuous@T _c =25°C (T _J =150°C)	-37.1 T _c =125°C -31 T _A =25°C -9.2 T _A =125°C -7.7	A
I _{DM}	Drain Current-Single Pulsed(t=100 μ s)	-40	A
P _D	Total Dissipation @T _c =25°C T _c =70°C T _A =25°C T _A =70°C	136 95 8.3 5.8	W
T _{ch}	Max. Operating Junction Temperature	-55~175	°C
T _{stg}	Storage Temperature	-55~175	°C

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
Rth(ch-c)	Channel-to-case thermal resistance	1.1	°C/W
Rth(ch-a)	Channel-to-ambient thermal resistance t ≤ 10sec Steady State	18 50	°C/W



DIM	mm	
	MIN	MAX
A	6.40	6.60
B	5.20	5.40
C	1.15	1.35
D	5.70	6.10
F	0.65	
G	0.75	
H	2.10	2.50
J	2.10	2.40
K	0.40	0.60
L	0.90	1.10
Q	9.90	10.1

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ELECTRICAL CHARACTERISTICS

 T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D =-0.25mA	-100			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = ±20V; I _D =-0.25mA	-1		-3	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = -10V; I _D =-9.2A V _{GS} = -4.5V; I _D =-7.7A		36 40	43 48	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V; V _{DS} = 0V			±0.1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = -100V; V _{GS} = 0V; T _J =25°C T _J =55°C			-1 -10	μA
V _{SDF}	Diode forward voltage	I _F =-7.7A, V _{GS} = 0 V		-0.8	-1.2	V