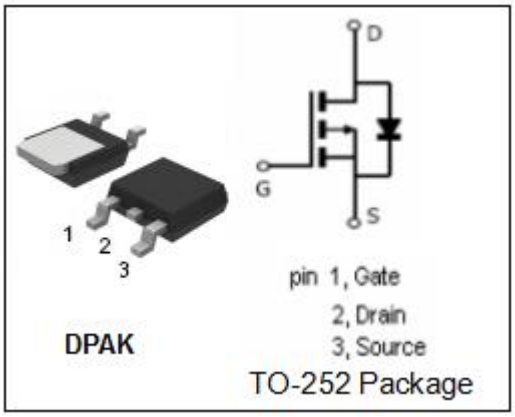
Isc P-Channel MOSFET Transistor SUD50P10-43L

• 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

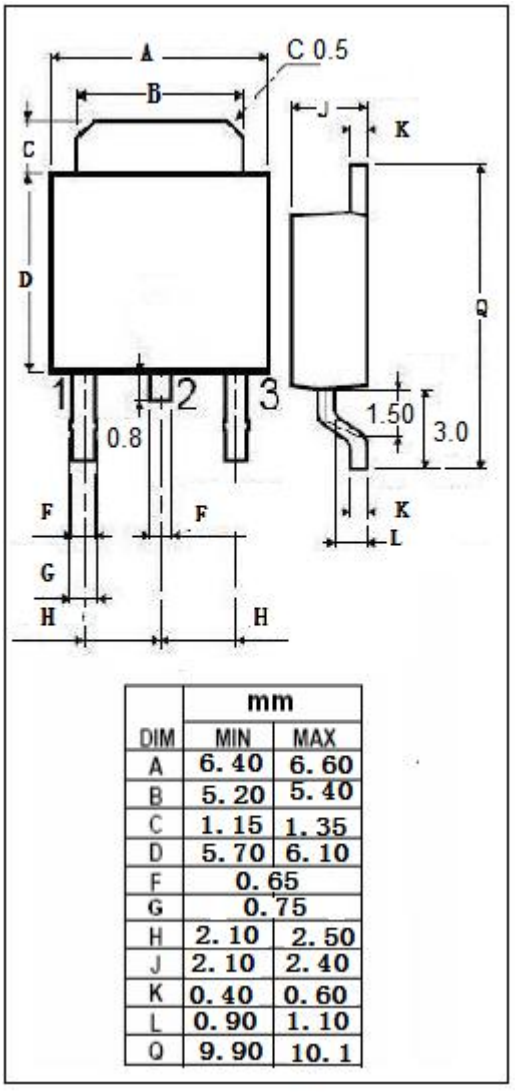


• DESCRIPTION

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

• ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃ （ T_J=150℃）　T_C=125℃ T_A=25℃ T_A=125℃	-37.1 -31 -9.2 -7.7	A
I_{DM}	Drain Current-Single Pulsed(t=100μs)	-40	A
P_D	Total Dissipation @T_C=25℃ T_C=70℃ T_A=25℃ T_A=70℃	136 95 8.3 5.8	W
T_{ch}	Max. Operating Junction Temperature	-55~175	℃
T_{stg}	Storage Temperature	-55~175	℃



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

• THERMAL CHARACTERISTICS

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

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ELECTRICAL CHARACTERISTICS

T_C=25℃ 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℃ T_J=55℃			-1 -10	μA
V_{SDF}	Diode forward voltage	I_F =-7.7A, V_{GS} = 0 V		-0.8	-1.2	V