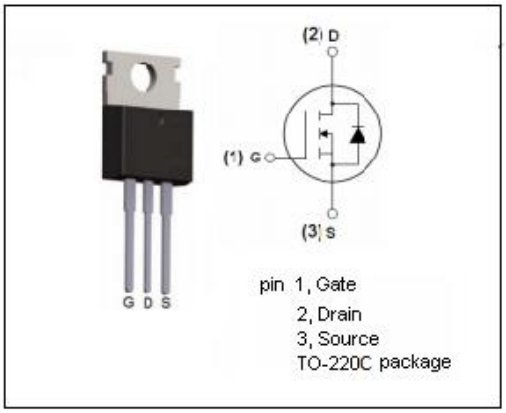
Isc N-Channel MOSFET Transistor SUP70040E



• FEATURES

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

• APPLICATION

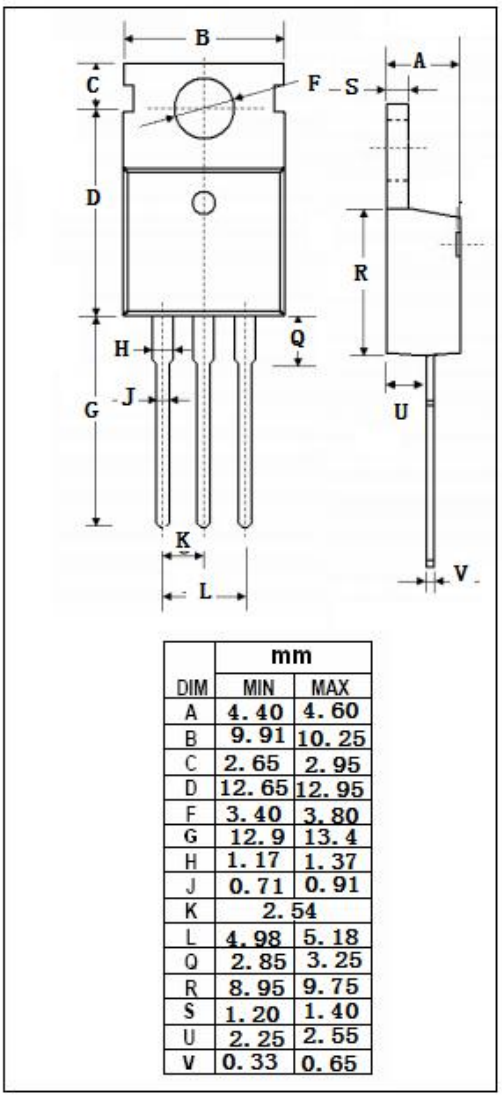
- Power Supply
  - Secondary Synchronous Rectification
- Power tools
- Motor drive switch
- Battery management

• 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=70℃	120 120	A
I_{DM}	Drain Current-Single Pulsed(t=100 μ s)	480	A
P_D	Total Dissipation @T_C=25℃ T_C=125℃	375 125	W
T_{ch}	Max. Operating Junction Temperature	-55~175	℃
T_{stg}	Storage Temperature	-55~175	℃

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
Rth(ch-c)	Channel-to-case thermal resistance	0.4	℃/W
Rth(ch-a)	Channel-to-ambient thermal resistance	40	℃/W



DIM	mm MIN	MAX
A	4.40	4.60
B	9.91	10.25
C	2.65	2.95
D	12.65	12.95
F	3.40	3.80
G	12.9	13.4
H	1.17	1.37
J	0.71	0.91
K	2.54	
L	4.98	5.18
Q	2.85	3.25
R	8.95	9.75
S	1.20	1.40
U	2.25	2.55
V	0.33	0.65

Isc N-Channel MOSFET Transistor SUP70040E

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	2.5		4.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= 10V; I_D=20A V_{GS}= 7.5V; I_D=15A			4.0 4.6	mΩ
I_{GSS}	Gate-Source Leakage Current	V_{GS}= ±20V;V_{DS}= 0V			±0.25	μA
I_{DSS}	Drain-Source Leakage Current	V_{DS}= 100V; V_{GS}= 0V; T_J=25℃ T_J=125℃ T_J=150℃			1 150 5000	μA
V_{SDF}	Diode forward voltage	I_F =10A, V_{GS} = 0 V			1.5	V

NOTICE：

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.