

Isc N-Channel MOSFET Transistor

SUD25N15-52

• FEATURES

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

• DESCRIPTION

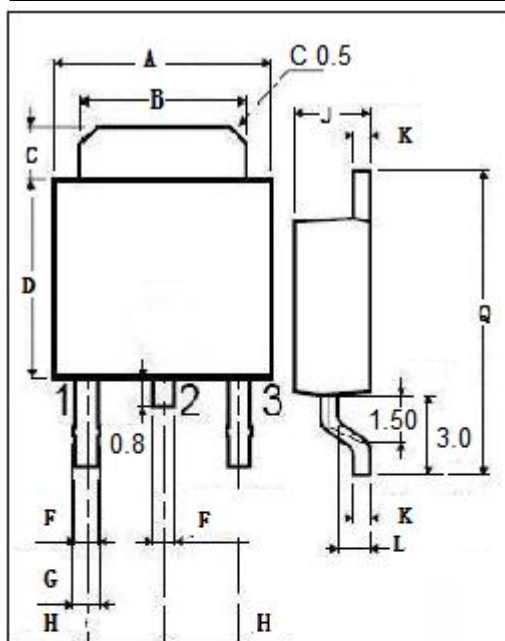
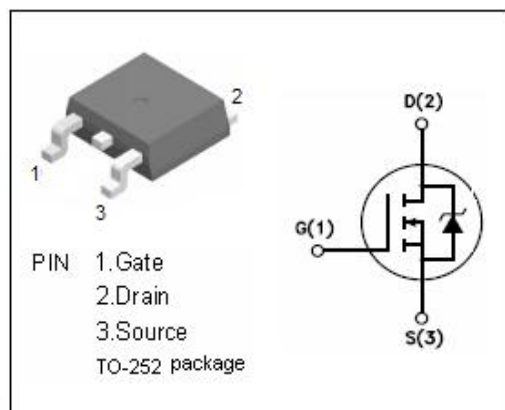
- D Primary Side Switch

• ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	150	V
V_{GSS}	Gate-Source Voltage	± 20	V
I_{D}	Drain Current-Continuous@ $T_c=25^{\circ}\text{C}$ ($T_j=175^{\circ}\text{C}$) $T_c=125^{\circ}\text{C}$	25 14.5	A
I_{DM}	Drain Current-Single Pulsed	50	A
P_{D}	Total Dissipation @ $T_c=25^{\circ}\text{C}$ $T_a=25^{\circ}\text{C}$	136 3	W
T_{ch}	Max. Operating Junction Temperature	-55~175	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~175	$^{\circ}\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{\text{th(ch-c)}}$	Channel-to-case thermal resistance	1.1	$^{\circ}\text{C/W}$
$R_{\text{th(ch-a)}}$	Channel-to-ambient thermal resistance $t \leq 10\text{sec}$ Steady State	18 50	$^{\circ}\text{C/W}$



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

Isc N-Channel MOSFET Transistor**SUD25N15-52****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=0.25mA$	150			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}= \pm 20V; I_D=0.25mA$	2		4	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}= 10V; I_D=5A; T_J=25^{\circ}\text{C}$ $V_{GS}= 10V; I_D=5A; T_J=125^{\circ}\text{C}$ $V_{GS}= 10V; I_D=5A; T_J=175^{\circ}\text{C}$ $V_{GS}= 6V; I_D=5A; T_J=25^{\circ}\text{C}$		42 47	52 109 145 60	$m\Omega$
I_{GSS}	Gate-Source Leakage Current	$V_{GS}= \pm 20V; V_{DS}= 0V$			± 0.1	μA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}= 150V; V_{GS}= 0V; T_J=25^{\circ}\text{C}$ $T_J=125^{\circ}\text{C}$ $T_J=175^{\circ}\text{C}$			1 50 250	mA
V_{SDF}	Diode forward voltage	$I_F=25A, V_{GS}= 0V$		0.9	1.5	V

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