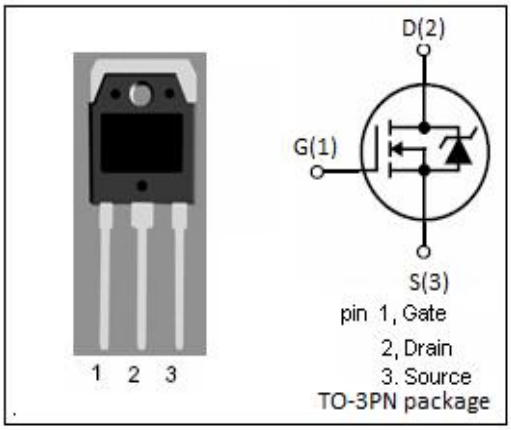
Isc N-Channel MOSFET Transistor FDA59N30

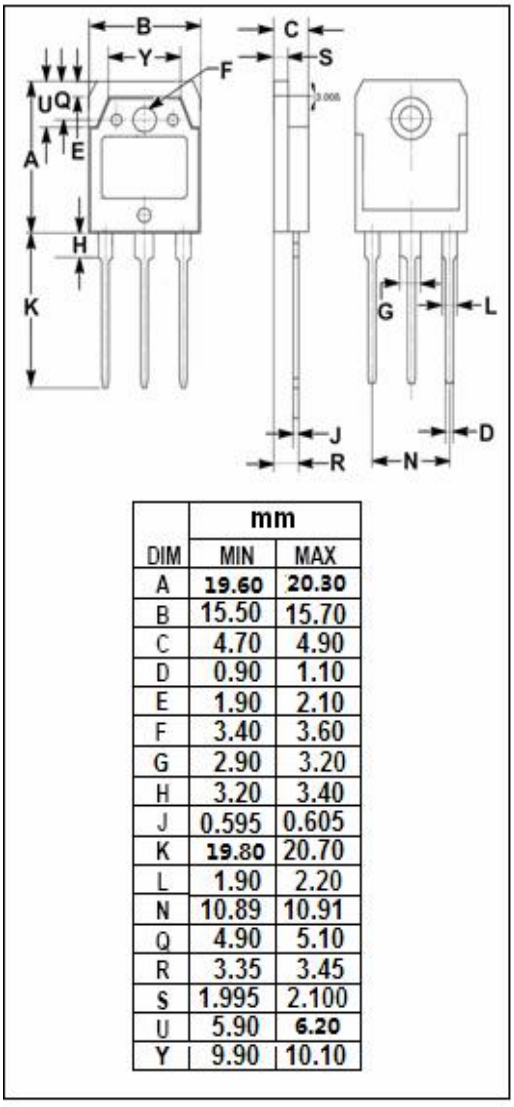


• FEATURES

- With To-3P package
- Low input capacitance and gate charge
- Low gate input resistance
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

- Switching applications



DIM	mm MIN	mm MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

• ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	300	V
V_{GSS}	Gate-Source Voltage	±30	V
I_D	Drain Current-Continuous Tc=25℃ Tc=100℃	59 35	A
I_{DM}	Drain Current-Single Pulsed	236	A
P_D	Total Dissipation @T_C=25℃	500	W
T_{ch}	Max. Operating Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~150	℃

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
Rth(ch-c)	Channel-to-case thermal resistance	0.25	℃/W
Rth(ch-a)	Channel-to-ambient thermal resistance	40	℃/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	300			V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=V_{GS}; I_D=0.25mA	3.0		5.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= 10V; I_D=29.5A		47	56	mΩ
I_{GSS}	Gate-Source Leakage Current	V_{GS}= ±30V;V_{DS}=0V			±0.1	μA
I_{DSS}	Drain-Source Leakage Current	V_{DS}=300V; V_{GS}= 0V;Tj=25℃ V_{DS}=240V; V_{GS}= 0V;Tj=125℃			1 10	μA
V_{SDF}	Diode forward voltage	I_{SD}=59A, V_{GS} = 0V			1.4	V