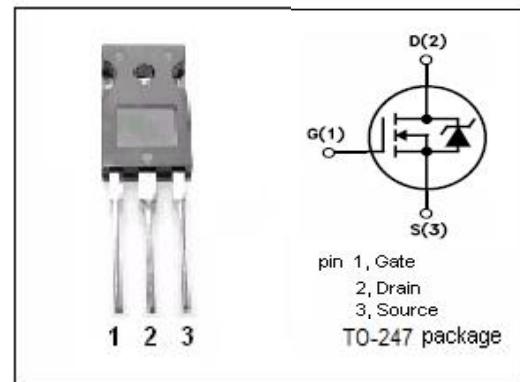


isc N-Channel MOSFET Transistor

IXFH86N30T

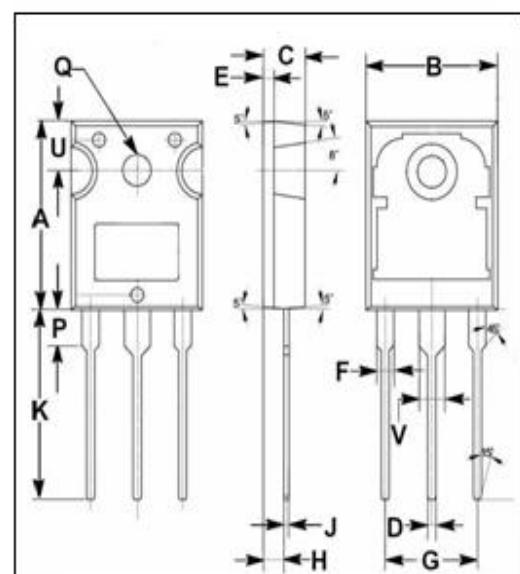
• FEATURES

- With TO-247 packaging
- High speed switching
- Very high commutation ruggedness
- Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



• APPLICATIONS

- PFC stages
- Power supply
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	300	V
V_{GSS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-Continuous	86	A
I_{DM}	Drain Current-Single Pulsed	190	A
P_D	Total Dissipation	830	W
T_J	Operating Junction Temperature	-55~150	°C
T_{Stg}	Storage Temperature	-55~150	°C

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.15	°C/W

DIM	mm	
	MIN	MAX
A	19.80	20.20
B	15.40	15.80
C	4.90	5.10
D	0.90	1.10
E	1.40	1.60
F	1.90	2.10
G	10.80	11.00
H	2.40	2.60
J	0.50	0.70
K	19.50	20.50
P	3.90	4.10
Q	3.30	3.50
U	5.20	5.40
V	2.90	3.10

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ELECTRICAL CHARACTERISTICS

 $T_c=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{\text{GS}}=0\text{V}; I_{\text{D}}= 1\text{mA}$	300			V
$V_{\text{GS(th)}}$	Gate Threshold Voltage	$V_{\text{DS}}=V_{\text{GS}}; I_{\text{D}}=4\text{mA}$	3.0		5.0	V
$R_{\text{DS(on)}}$	Drain-Source On-Resistance	$V_{\text{GS}}= 10\text{V}; I_{\text{D}}=43\text{A}$			43	$\text{m}\Omega$
I_{GSS}	Gate-Source Leakage Current	$V_{\text{GS}}= \pm 20\text{V}; V_{\text{DS}}= 0\text{V}$			± 0.2	$\mu\text{ A}$
I_{DSS}	Drain-Source Leakage Current	$V_{\text{DS}}= 300\text{V}; V_{\text{GS}}= 0\text{V}; T_c=25^\circ\text{C}$ $V_{\text{DS}}= 300\text{V}; V_{\text{GS}}= 0\text{V}; T_c=125^\circ\text{C}$			50 1750	$\mu\text{ A}$
V_{SDF}	Diode forward voltage	$I_{\text{SD}}=86\text{A}, V_{\text{GS}} = 0 \text{ V}$			1.5	V

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