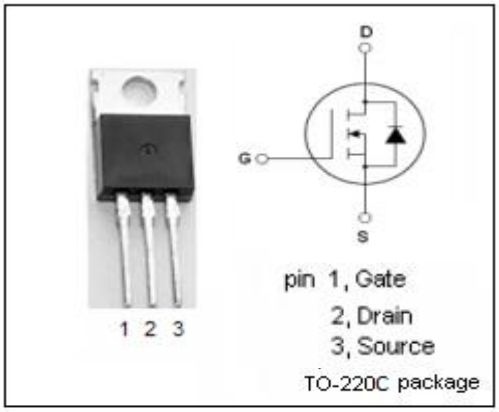
isc N-Channel MOSFET Transistor IXFP56N30X3



- **FEATURES**
- Static drain-source on-resistance:
  $R_{DS}(on) \leq 27m\Omega @ V_{GS}=10V$
- Fully characterized avalanche voltage and current
- 100% Avalanche Tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

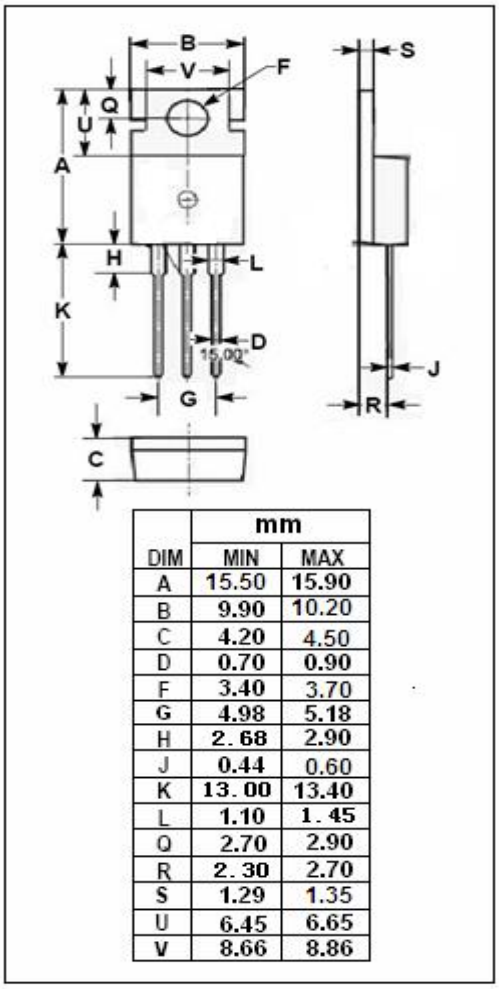
- **APPLICATION**
- Switched mode power supplies
- DC-DC converters

- **ABSOLUTE MAXIMUM RATINGS(T_a=25℃)**

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	300	V
V_{GS}	Gate-Source Voltage	±20	V
I_D	Drain Current-Continuous	56	A
I_{DM}	Drain Current-Single Pulsed	112	A
P_D	Total Dissipation @T_C=25℃	320	W
T_j	Operating Junction Temperature	-55~150	℃
T_{stg}	Storage Temperature	-55~150	℃

- **THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Junction-to-case thermal resistance	0.39	℃/W



DIM	mm MIN	mm MAX
A	15.50	15.90
B	9.90	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	13.00	13.40
L	1.10	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}= 0V; I_D = 1mA	300		V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}= V_{GS}; I_D = 1.5mA	2.5	4.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}=10V; I_D= 28A		27	mΩ
I_{GSS}	Gate-Source Leakage Current	V_{GS}= ±20V;V_{DS}=0V		±100	nA
I_{DSS}	Drain-Source Leakage Current	V_{DS}= V_{DSS}; V_{GS}= 0V		5	μA
		V_{DS}= V_{DSS}; V_{GS}= 0V;T_J= 125℃		500	
V_{SD}	Diode forward voltage	I_F= 56A; V_{GS} = 0V		1.4	V