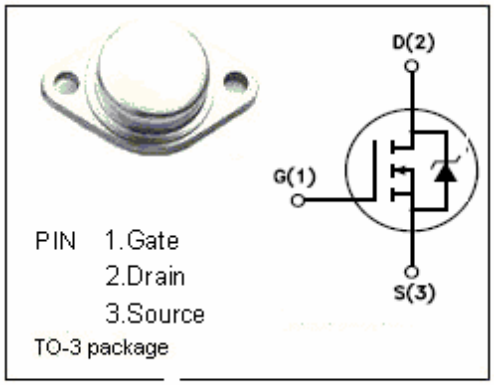
isc N-Channel MOSFET Transistor IRF251

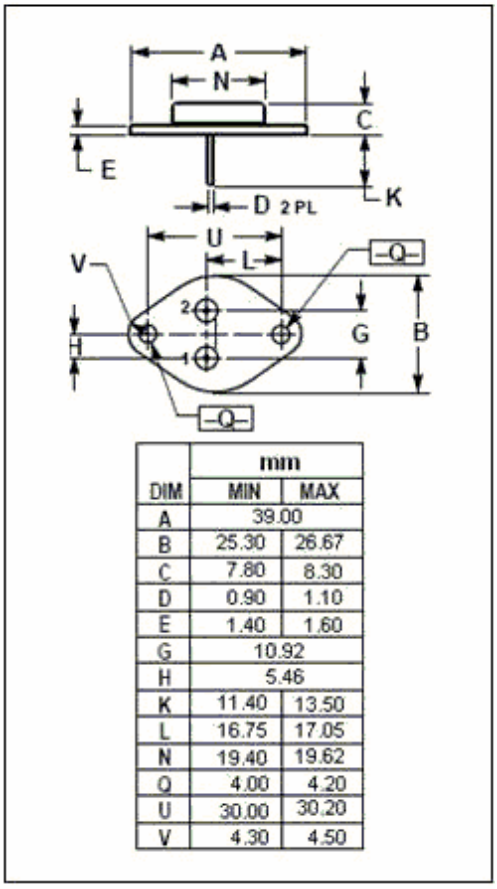
DESCRIPTION

- Drain Current –I_D=30A@ T_C=25℃
- Drain Source Voltage-
  : V_{DSS}= 150V(Min)
- Static Drain-Source On-Resistance
  : $R_{DS(on)}$ =0.085Ω (Max)
- Nanosecond Switching Speed



APPLICATIONS

- Switching power supplies
- Switching converters,motor driver,relay driver



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.30
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.40	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage (V_{GS}=0)	150	V
V_{GS}	Gate-Source Voltage	±20	V
I_D	Drain Current-continuous@ TC=25℃	30	A
P_{tot}	Total Dissipation@TC=25℃	150	W
T_j	Max. Operating Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	0.83	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	30	℃/W

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• **ELECTRICAL CHARACTERISTICS (T_C=25℃)**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	V_{GS}=0; I_D=250μA	150			V
$V_{GS(TH)}$	Gate Threshold Voltage	V_{DS}= V_{GS}; I_D=250μA	2		4	V
$R_{DS(ON)}$	Drain-Source On-stage Resistance	V_{GS}=10V; I_D=16A			0.085	Ω
I_{GSS}	Gate Source Leakage Current	V_{GS}=±20V;V_{DS}=0			±100	nA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}=150V; V_{GS}=0			250	uA
V_{SD}	Diode Forward Voltage	I_S=30A; V_{GS}=0			2.0	V
C_{iss}	Input Capacitance	V_{DS}=25V; V_{GS}=0V; f_T=1MHz		2000	3000	pF
C_{rss}	Reverse Transfer Capacitance			300	500	
C_{oss}	Output Capacitance			800	1200	
t_r	Rise Time	I_D=16A; V_{DD}=95V; R_L=4.7Ω			100	ns
$t_{d(on)}$	Turn-on Delay Time				35	
t_f	Fall Time				100	
$t_{d(off)}$	Turn-off Delay Time				125	

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