

isc N-Channel MOSFET Transistor

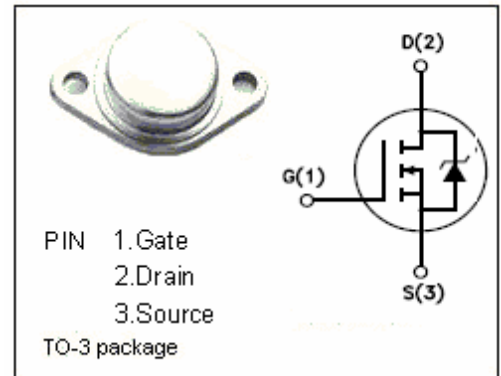
IRF253

DESCRIPTION

- Drain Current $-I_D=25A @ T_C=25^\circ C$
- Drain Source Voltage-
: $V_{DSS}= 150V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} =0.12 \Omega (\text{Max})$
- Nanosecond Switching Speed

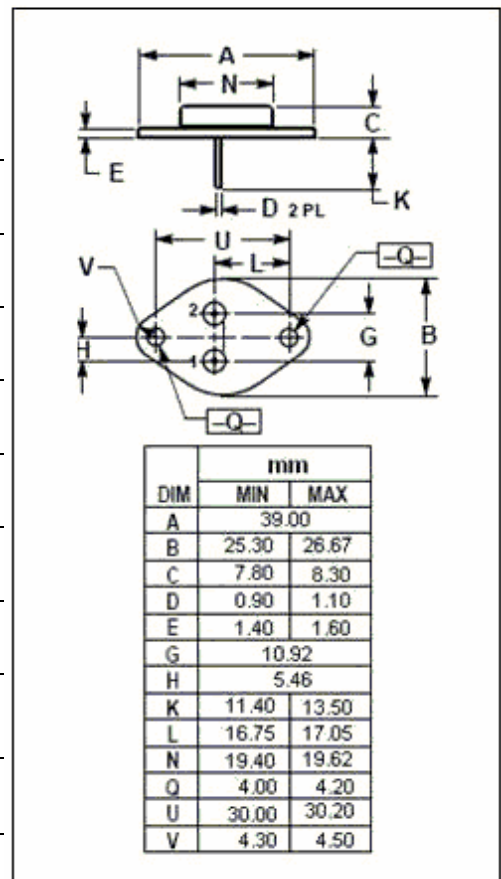
APPLICATIONS

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



ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ C$)

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@ $T_C=25^\circ C$	25	A
P_{tot}	Total Dissipation@ $T_C=25^\circ C$	150	W
T_j	Max. Operating Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-55~150	$^\circ C$



THERMAL CHARACTERISTICS

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

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• ELECTRICAL CHARACTERISTICS (T_C=25°C)

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			0.12	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 =25A; 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 =4.7 Ω			100	ns
t _{d(on)}	Turn-on Delay Time				35	
t _f	Fall Time				100	
t _{d(off)}	Turn-off Delay Time				125	