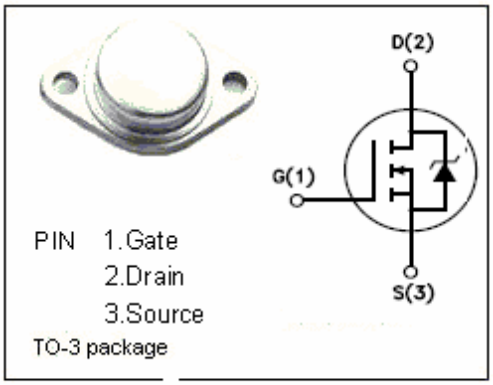
isc N-Channel MOSFET Transistor IRF123

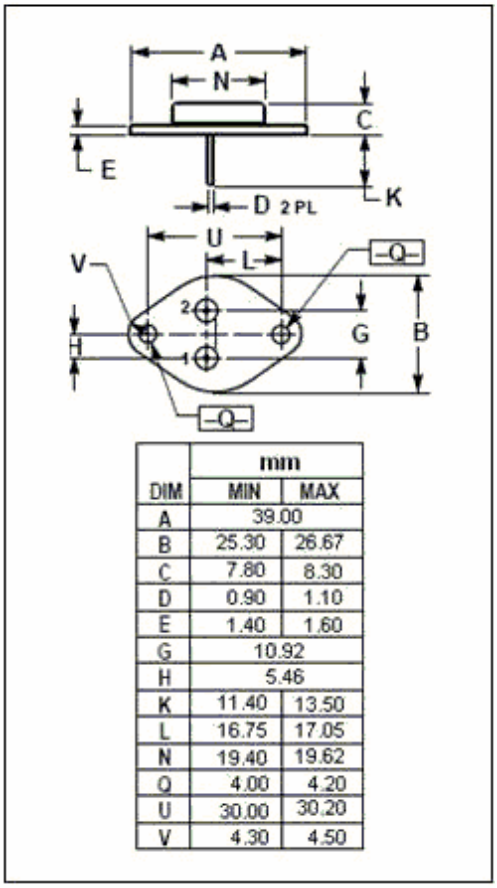
DESCRIPTION

- Drain Current I_D=7A@ T_C=25℃
- Drain Source Voltage-
  : V_{DSS}= 60V(Min)
- Static Drain-Source On-Resistance
  : $R_{DS(on)}$ =0.4Ω (Max)
- Nanosecond Switching Speeds



APPLICATIONS

- Switching power supplies
- Motor controls,Inverters and Choppers
- Audio amplifiers and high energy pulse circuits.



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)	60	V
V_{GS}	Gate-Source Voltage	±20	V
I_D	Drain Current-continuous@ TC=25℃	7	A
P_{tot}	Total Dissipation@T_C=25℃	40	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	3.12	℃/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	60			V
$V_{GS(TH)}$	Gate Threshold Voltage	V_{DS}= V_{GS}; I_D=250μA	2.0		4.0	V
$R_{DS(ON)}$	Drain-Source On-stage Resistance	V_{GS}=10V; I_D=4A			0.4	Ω
I_{GSS}	Gate Source Leakage Current	V_{GS}=±20V;V_{DS}=0			±100	nA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}=60V; V_{GS}=0			250	uA
V_{SD}	Diode Forward Voltage	I_S=7A; V_{GS}=0			2.5	V
C_{iss}	Input Capacitance	V_{DS}=25V; V_{GS}=0V; f_T=1MHz		450	600	pF
C_{rss}	Reverse Transfer Capacitance			50	100	
C_{oss}	Output Capacitance			200	400	
t_r	Rise Time	R_{GS}=50Ω I_D=4A; V_{DD}=50V; R_L=50Ω		35	70	ns
$t_{d(on)}$	Turn-on Delay Time			20	40	
t_f	Fall Time			35	70	
$t_{d(off)}$	Turn-off Delay Time			50	100	

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