

isc N-Channel MOSFET Transistor

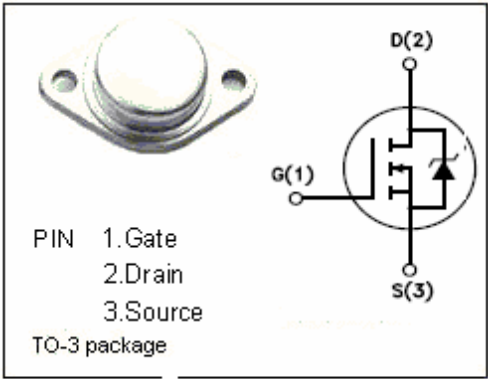
IRF143

DESCRIPTION

- Drain Current $I_D=24A@ T_C=25^{\circ}C$
- Drain Source Voltage-
: $V_{DSS}= 60V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)}=0.11 \Omega (\text{Max})$
- High Power,High Speed Applications

APPLICATIONS

- Switching power supplies

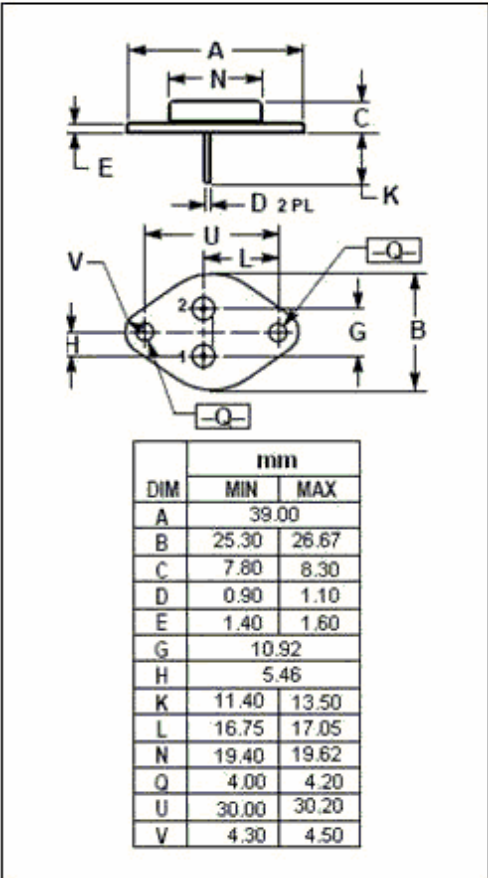


ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}C$)

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@ $T_C=25^{\circ}C$	24	A
P_{tot}	Total Dissipation@ $T_C=25^{\circ}C$	125	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	1.0	$^{\circ}C/W$
$R_{th j-a}$	Thermal Resistance,Junction to Ambient	30	$^{\circ}C/W$



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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 =8A			0.11	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 =24A; V _{GS} =0			2.5	V
C _{iss}	Input Capacitance	V _{DS} =25V; V _{GS} =0V; f _T =1MHz		1320	1600	pF
C _{rss}	Reverse Transfer Capacitance			250	300	
C _{oss}	Output Capacitance			600	800	
t _r	Rise Time	I _D =15A; V _{DD} =50V; R _L =4.7 Ω			60	ns
t _{d(on)}	Turn-on Delay Time				30	
t _f	Fall Time				30	
t _{d(off)}	Turn-off Delay Time				80	