

# isc N-Channel MOSFET Transistor

# IRF140

### DESCRIPTION

- Drain Current  $I_D=27A@ T_C=25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS}= 100V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} =0.085 \Omega (\text{Max})$
- High Power,High Speed Applications
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

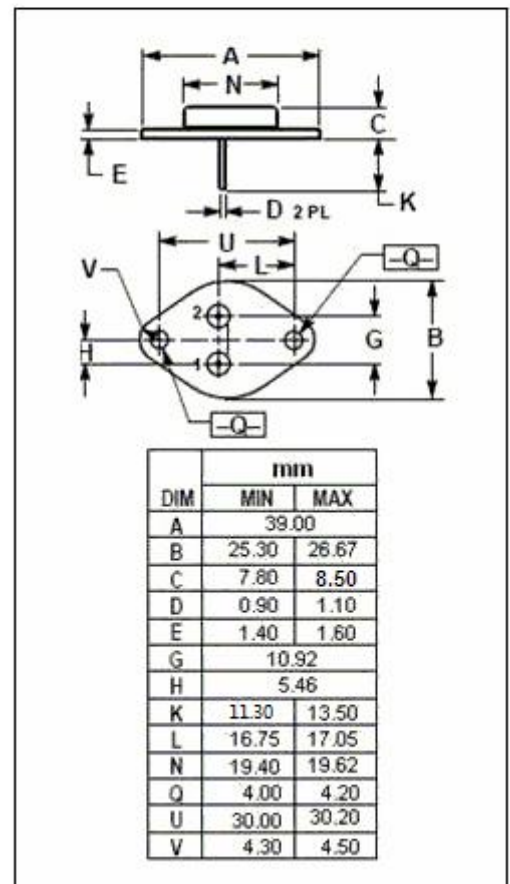
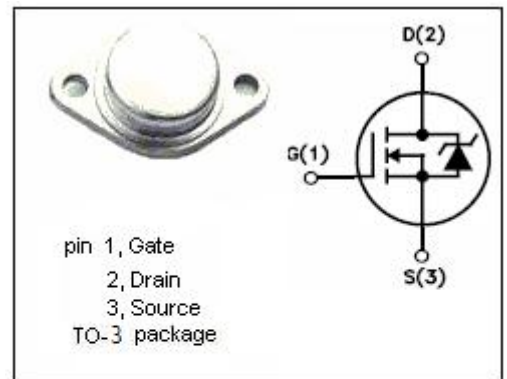
- Switching power supplies
- UPS,AC and DC motor controls

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage ( $V_{GS}=0$ )	100	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-continuous@ $T_C=25^\circ C$	27	A
	Drain Current-continuous@ $T_C=100^\circ C$	17	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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• ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0; I <sub>D</sub> =250μA	100			V
V <sub>GS(TH)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> =250μA	2.0		4.0	V
R <sub>DS(ON)</sub>	Drain-Source On-stage Resistance	V <sub>GS</sub> =10V; I <sub>D</sub> =15A			0.085	Ω
I <sub>GSS</sub>	Gate Source Leakage Current	V <sub>GS</sub> =±20V; V <sub>DS</sub> =0			±100	nA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> =100V; V <sub>GS</sub> =0			25	μA
V <sub>SD</sub>	Diode Forward Voltage	I <sub>S</sub> =27A; V <sub>GS</sub> =0			2.5	V

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