

isc N-Channel MOSFET Transistor

IRFP150M, IIRFP150M

• FEATURES

- Static drain-source on-resistance: $R_{DS(on)} \leq 36 \text{ m}\Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

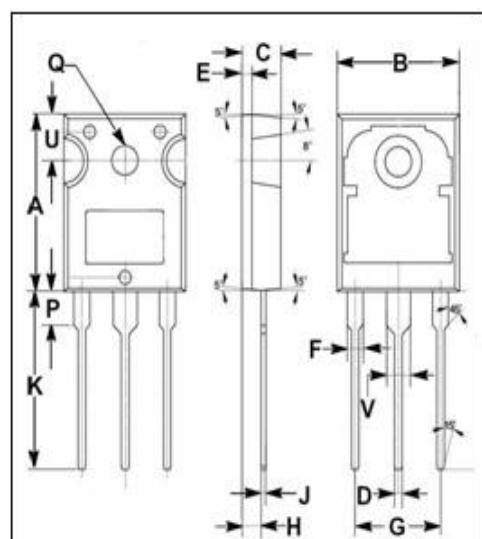
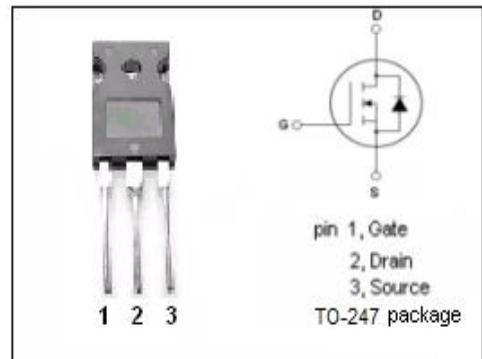
- Fast switching
- Fully Avalanche Rated

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	100	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous	42	A
I_{DM}	Drain Current-Single Pulsed	140	A
P_D	Total Dissipation @ $T_c=25^\circ\text{C}$	160	W
T_j	Max. Operating Junction Temperature	175	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~175	$^\circ\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Channel-to-case thermal resistance	0.95	$^\circ\text{C}/\text{W}$
$R_{th(j-a)}$	Channel-to-ambient thermal resistance	40	$^\circ\text{C}/\text{W}$



DIM	mm	
	MIN	MAX
A	19.80	20.20
B	15.40	15.80
C	4.90	5.10
D	0.90	1.10
E	1.40	1.60
F	1.90	2.10
G	10.80	11.00
H	2.40	2.60
J	0.50	0.70
K	19.50	20.50
P	3.90	4.10
Q	3.30	3.50
U	5.20	5.40
V	2.90	3.10

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ELECTRICAL CHARACTERISTICS

 $T_c=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$\text{V}_{\text{GS}}=0\text{V}$; $\text{I}_{\text{D}}=250\ \mu\text{A}$	100			V
$\text{V}_{\text{GS(th)}}$	Gate Threshold Voltage	$\text{V}_{\text{DS}}=\text{V}_{\text{GS}}$; $\text{I}_{\text{D}}=250\ \mu\text{A}$	2.0		4.0	V
$\text{R}_{\text{DS(on)}}$	Drain-Source On-Resistance	$\text{V}_{\text{GS}}=10\text{V}$; $\text{I}_{\text{D}}=23\text{A}$			36	$\text{m}\Omega$
I_{GSS}	Gate-Source Leakage Current	$\text{V}_{\text{GS}}= \pm 20\text{V}$			± 0.1	μA
I_{DSS}	Drain-Source Leakage Current	$\text{V}_{\text{DS}}=100\text{V}$; $\text{V}_{\text{GS}}= 0\text{V}$			25	μA
V_{SD}	Diode forward voltage	$\text{I}_{\text{S}}=23\text{A}$, $\text{V}_{\text{GS}}= 0\text{V}$			1.3	V

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