

# isc N-Channel MOSFET Transistor

# IRFP4110, IIRFP4110

**• FEATURES**

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 4.5m\Omega$
- Enhancement mode:  
 $V_{th} = 2.0$  to  $4.0$  V ( $V_{DS}=V_{GS}$ ,  $I_D=250 \mu$  A)
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• DESCRIPTION**

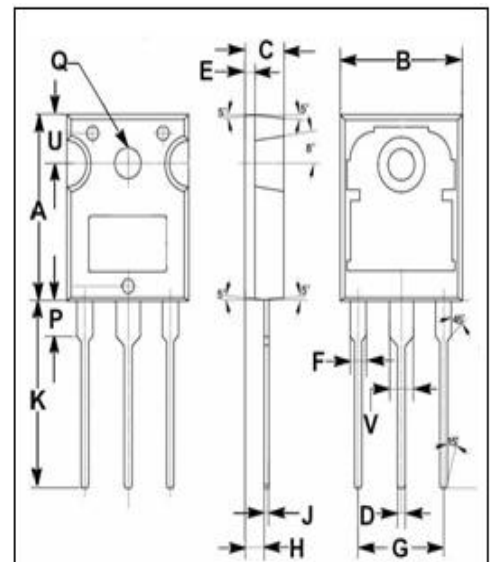
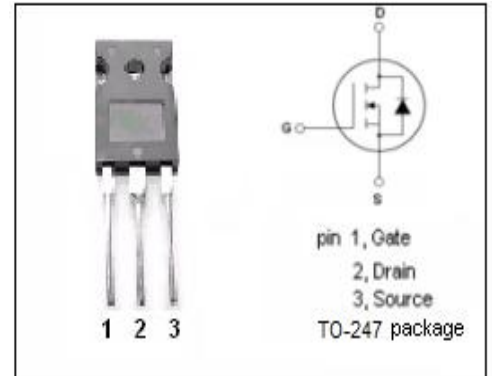
- High Efficiency Synchronous Rectification in SMPS
- Uninterruptible Power Supply
- High Speed Power Switching
- Hard Switched And High Frequency Circuits

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DS}$	Drain-Source Voltage	100	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous	120	A
$I_{DM}$	Drain Current-Single Pulsed	670	A
$P_D$	Total Dissipation @ $T_c=25^\circ C$	370	W
$T_j$	Max. Operating Junction Temperature	175	$^\circ C$
$T_{stg}$	Storage Temperature	-55~175	$^\circ C$

**• THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Channel-to-case thermal resistance	0.402	$^\circ C/W$
$R_{th(j-a)}$	Channel-to-ambient thermal resistance	40	$^\circ C/W$



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	$V_{GS}=0V; I_D=250\ \mu\text{A}$	100			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=250\ \mu\text{A}$	2.0		4.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=75A$			4.5	$\text{m}\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS} = \pm 20V$			$\pm 0.1$	$\mu\text{A}$
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=100V; V_{GS}=0V$			20	$\mu\text{A}$
$V_{SD}$	Diode forward voltage	$I_S=75A, V_{GS}=0V$			1.3	V

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