

## isc N-Channel MOSFET Transistor

## IRFR7746, IIRFR7746

## • FEATURES

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 11.2m\Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • DESCRIPTION

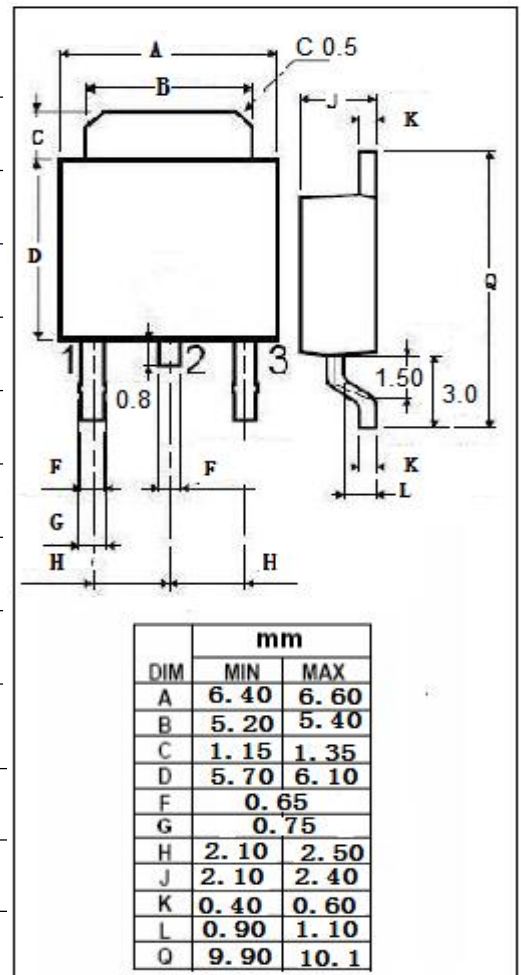
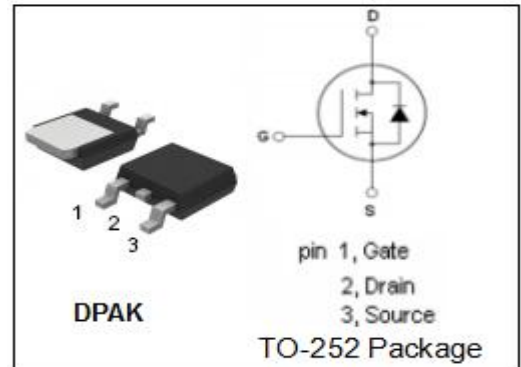
- Synchronous rectifier applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DS}$	Drain-Source Voltage	75	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous	42	A
$I_{DM}$	Drain Current-Single Pulsed	230	A
$P_D$	Total Dissipation @ $T_c=25^\circ\text{C}$	99	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	1.52	$^\circ\text{C/W}$
$R_{th(j-a)}$	Channel-to-ambient thermal resistance	110	$^\circ\text{C/W}$



**isc N-Channel MOSFET Transistor****IRFR7746, IIRFR7746****ELECTRICAL CHARACTERISTICS****T<sub>C</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V; I <sub>D</sub> =250 μA	75			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> ; I <sub>D</sub> =100 μA	2.1		3.7	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> =10V; I <sub>D</sub> =35A			11.2	mΩ
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±20V			±0.1	μA
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> =75V; V <sub>GS</sub> = 0V			1	μA
V <sub>SD</sub>	Diode forward voltage	I <sub>S</sub> =35A, V <sub>GS</sub> = 0V			1.2	V

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