

**isc N-Channel MOSFET Transistor**
**IRFB7546, IIRFB7546**
**• FEATURES**

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 7.3m\Omega$
- Enhancement mode
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• DESCRIPTION**

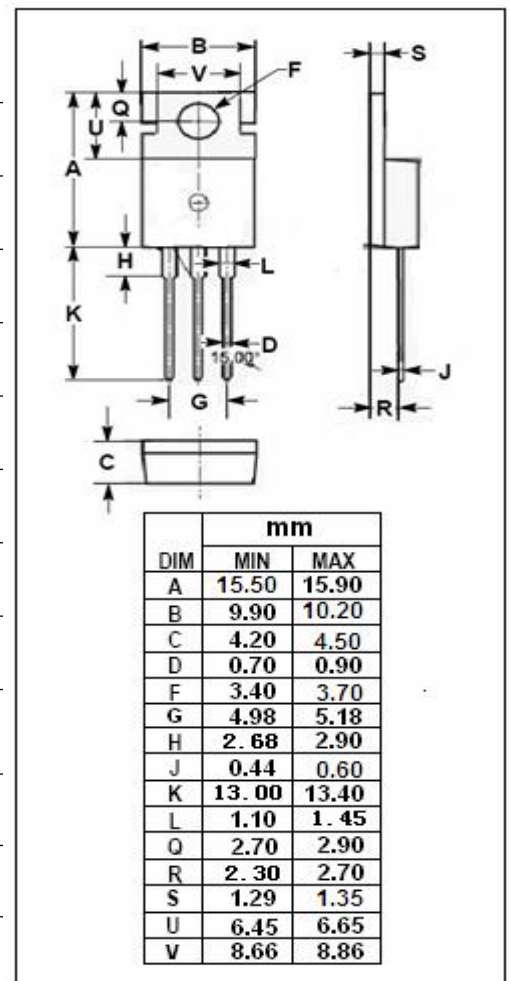
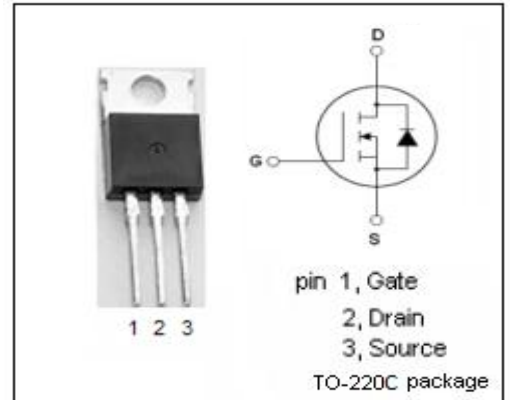
- Synchronous Rectifier applications
- Resonant mode power supplies
- Battery powered circuits

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DS}$	Drain-Source Voltage	60	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous	75	A
$I_{DM}$	Drain Current-Single Pulsed	300	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
$R_{th(ch-c)}$	Channel-to-case thermal resistance	1.52	$^\circ\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	62	$^\circ\text{C/W}$



**isc N-Channel MOSFET Transistor****IRFB7546,IIRFB7546****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D = 250\mu A$	60			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=100\mu A$	2.1		3.7	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=45A$			7.3	$m\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 20V$			$\pm 100$	nA
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=60V; V_{GS}= 0V$			1	$\mu A$
$V_{SD}$	Diode forward voltage	$I_S =45A, V_{GS} = 0 V$			1.2	V

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