

**isc N-Channel MOSFET Transistor**

**IPA90R500C3, IIPA90R500C3**

**• FEATURES**

- Drain-source on-resistance:  
 $R_{DS(on)} \leq 0.5\Omega @ 10V$
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• DESCRIPTION**

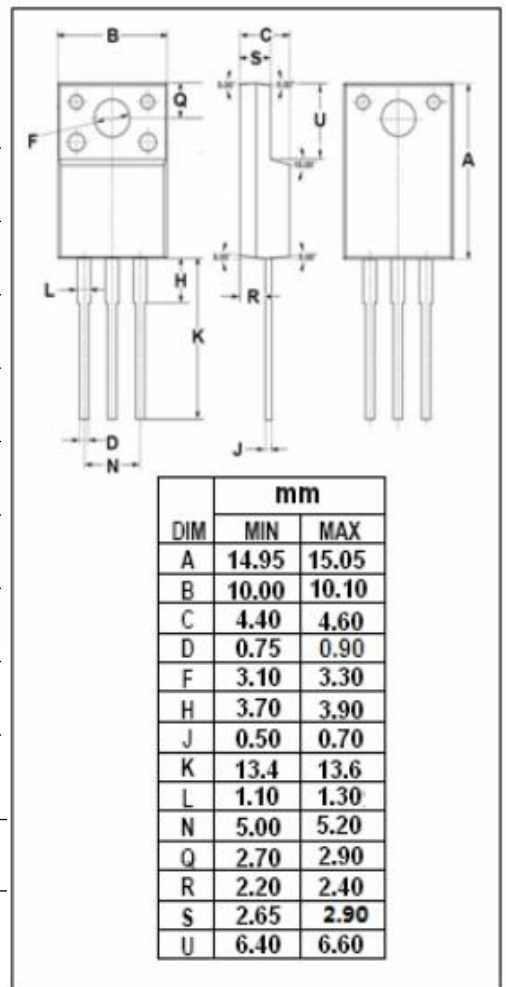
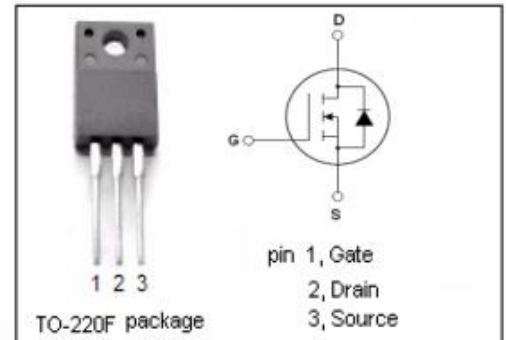
- High fast switching Power Supply

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	900	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous	11	A
$I_{DM}$	Drain Current-Single Pulsed	24	A
$P_D$	Total Dissipation @ $T_c=25^\circ C$	34	W
$T_j$	Max. Operating Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature	-55~150	$^\circ C$

**• THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	3.7	$^\circ C/W$



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**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 μ A	900			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> =0.74mA	2.5		3.5	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> =10V; I <sub>D</sub> =6.6A			0.5	Ω
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = 20V; V <sub>DS</sub> = 0V			100	nA
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> =900V; V <sub>GS</sub> = 0V			1	μ A
		V <sub>DS</sub> =900V; V <sub>GS</sub> = 0V; T <sub>J</sub> =150°C		10		
V <sub>SD</sub>	Diode forward voltage	I <sub>DR</sub> =6.6A, V <sub>GS</sub> = 0 V		0.9	1.2	V