

## isc N-Channel MOSFET Transistor

## IRFR420TR, IIRFR420TR

## • FEATURES

- Static drain-source on-resistance:

$$R_{DS(on)} \leq 3\Omega$$

- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • DESCRIPTION

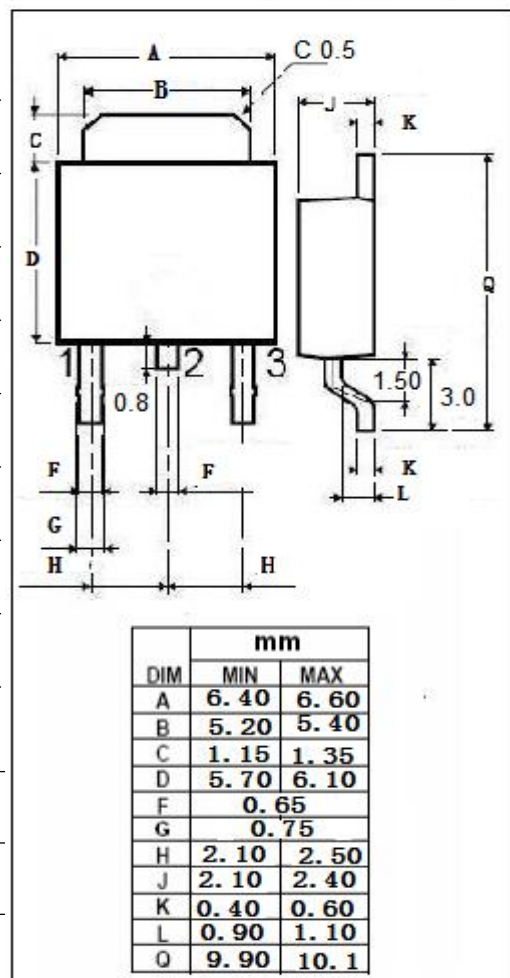
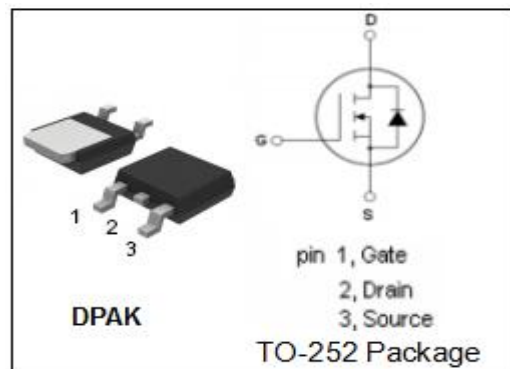
- Fast Switching

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DS}$	Drain-Source Voltage	500	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous	2.4	A
$I_{DM}$	Drain Current-Single Pulsed	8	A
$P_D$	Total Dissipation @ $T_c=25^\circ\text{C}$	42	W
$T_j$	Max. Operating Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$

## • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Channel-to-case thermal resistance	3	$^\circ\text{C/W}$
$R_{th(j-a)}$	Channel-to-ambient thermal resistance	110	$^\circ\text{C/W}$



**isc N-Channel MOSFET Transistor****IRFR420TR,IIRFR420TR****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V$ ; $I_D=250\ \mu A$	500			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}$ ; $I_D=250\ \mu A$	2		4	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V$ ; $I_D=1.4A$			3	$\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 20V$			$\pm 0.1$	$\mu A$
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=500V$ ; $V_{GS}=0V$			25	$\mu A$
$V_{SD}$	Diode forward voltage	$I_S=2.4A$ , $V_{GS}=0V$			1.6	V

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