

## isc N-Channel MOSFET Transistor

## FQP13N10

## • FEATURES

- Drain Source Voltage-  
:  $V_{DS} = 100V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} \leq 180m\Omega @ V_{GS} = 10V$
- Fast Switching
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • APPLICATIONS

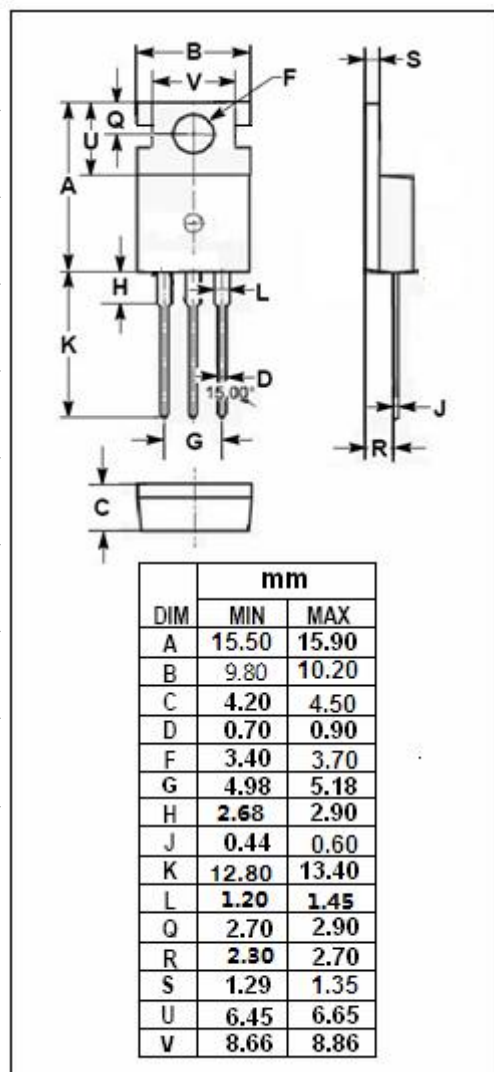
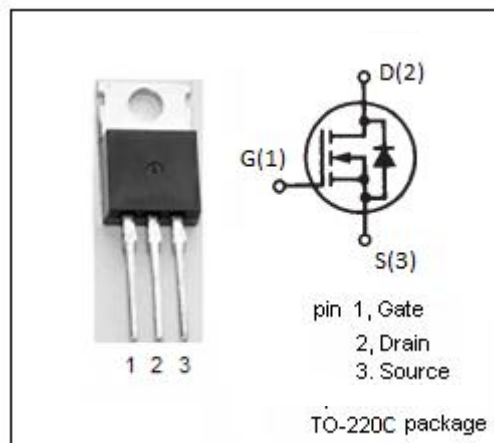
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DS}$	Drain-Source Voltage	100	V
$V_{GS}$	Gate-Source Voltage	$\pm 25$	V
$I_D$	Drain Current-Continuous@ $T_c = 25^\circ\text{C}$ $T_c = 100^\circ\text{C}$	12.8 9.05	A
$I_{DM}$	Drain Current-Single Pulsed	51.2	A
$P_D$	Total Dissipation	65	W
$T_j$	Operating Junction Temperature	-55~175	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~175	$^\circ\text{C}$

## • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	2.31	$^\circ\text{C/W}$



**isc N-Channel MOSFET Transistor****FQP13N10****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=250\mu A$	100			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	$V_{GS}=10V; I_D=6.4A$			180	$m\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 25V; V_{DS}=0V$			$\pm 100$	nA
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=100V; V_{GS}=0V;$ $V_{DS}=80V; V_{GS}=0V; T_C=150^{\circ}\text{C}$			1 10	$\mu A$
$V_{SDF}$	Diode forward voltage	$I_{SD}=12.8A, V_{GS}=0V$			1.5	V

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