

# isc N-Channel MOSFET Transistor

# FQP13N10

### • FEATURES

- Drain Source Voltage-  
:  $V_{DSS} = 100V(\text{Min})$
- 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

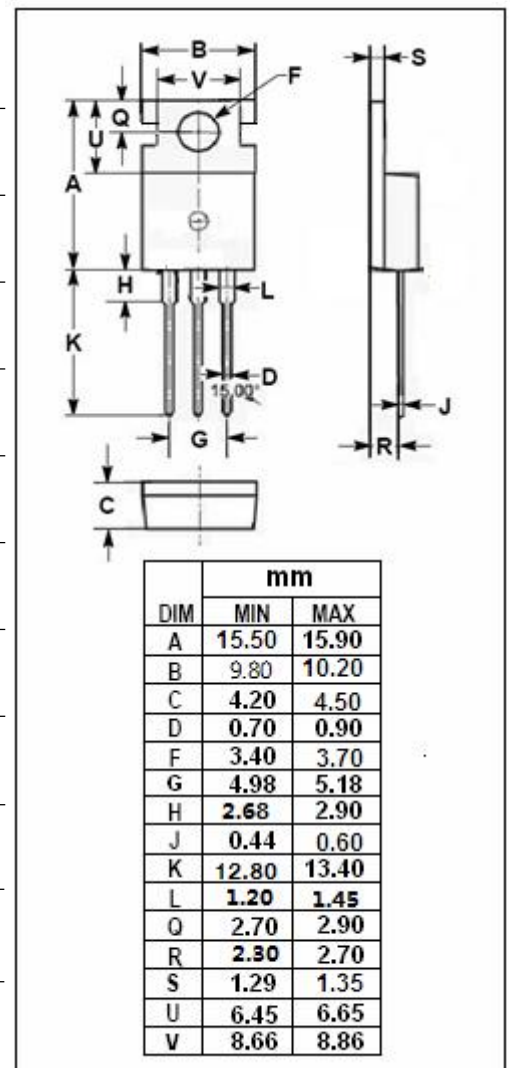
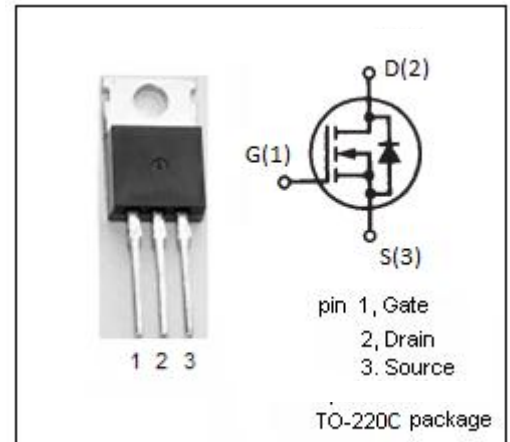
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	100	V
$V_{GSS}$	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	$^\circ\text{C/W}$



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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> = 250uA	100			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> ; I <sub>D</sub> =250uA	2		4	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =6.4A			180	mΩ
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±25V; V <sub>DS</sub> = 0V			±100	nA
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> = 100V; V <sub>GS</sub> = 0V; V <sub>DS</sub> = 80V; V <sub>GS</sub> = 0V; T <sub>C</sub> = 150°C			1 10	μA
V <sub>SDF</sub>	Diode forward voltage	I <sub>SD</sub> =12.8A, V <sub>GS</sub> = 0 V			1.5	V

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