

isc N-Channel Mosfet Transistor

FQP33N10

• FEATURES

- Low  $R_{DS(on)}$
- Silicon Gate for Fast Switching Speed
- Rugged
- Low Drive Requirements

• DESCRIPTION

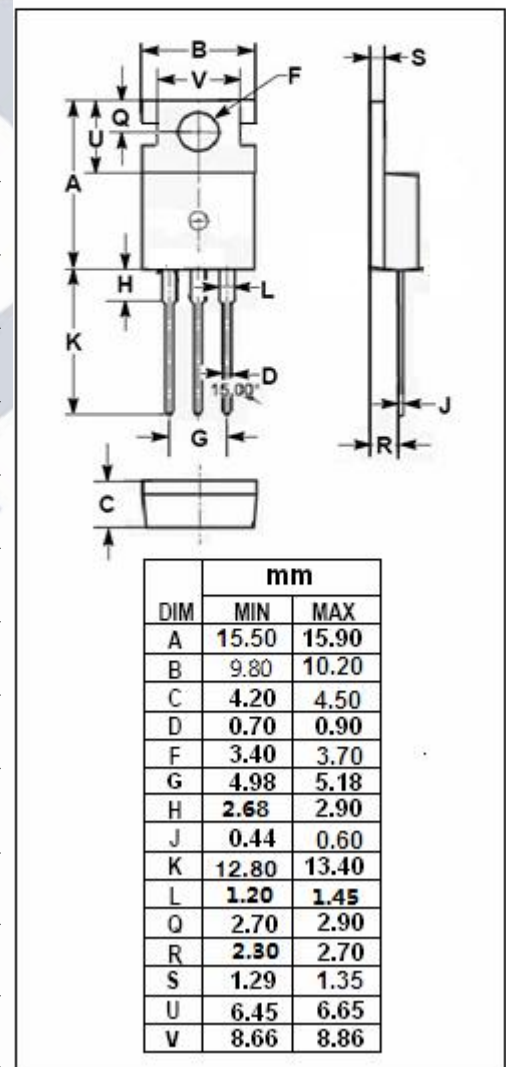
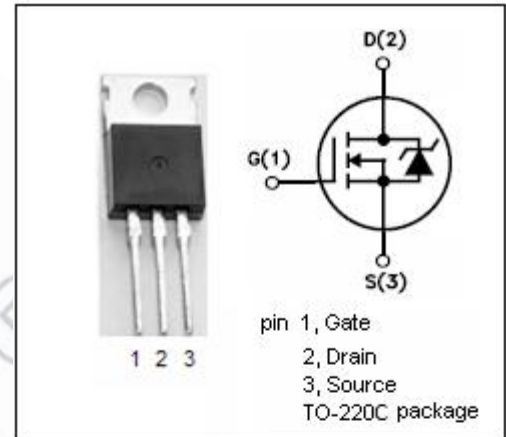
- Designed especially for low voltage applications such as Audio amplifier, high efficiency switching DC/DC converters, and DC motor control.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	100	V
$V_{GS}$	Gate-Source Voltage-Continuous	$\pm 25$	V
$I_D$	Drain Current-Continuous	33	A
$I_{DM}$	Drain Current-Single Pulsed	132	A
$P_D$	Total Dissipation @ $T_c=25^{\circ}C$	127	W
$T_j$	Max. Operating Junction Temperature	-55~175	$^{\circ}C$
$T_{stg}$	Storage Temperature	-55~175	$^{\circ}C$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.18	$^{\circ}C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^{\circ}C/W$



**isc N-Channel Mosfet Transistor****FQP33N10****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=0.25\text{mA}$	100		V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.25\text{mA}$	2	4	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}; I_D=16.5\text{A}$		0.052	$\Omega$
$I_{GSS}$	Gate-Body Leakage Current	$V_{GS}=\pm 25\text{V}; V_{DS}=0$		$\pm 100$	nA
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS}=100\text{V}; V_{GS}=0$		1.0	$\mu\text{A}$
$V_{SD}$	Forward On-Voltage	$I_S=33\text{A}; V_{GS}=0$		1.5	V
Gfs	Forward Transconductance	$V_{DS}=40\text{V}; I_D=16.5\text{A}$	22		S