



### 600V N-Channel MOSFET

### FQP10N60

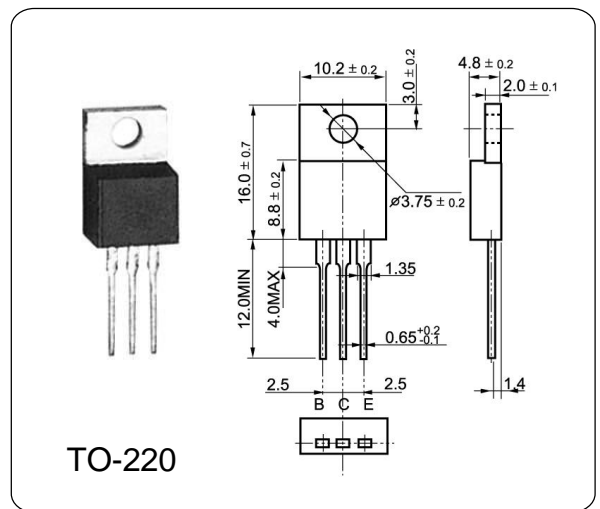
#### DESCRIPTION

These N-Channel enhancement mode power field effect transistors are produced using Fairchild's proprietary, planar, DMOS technology.

This advanced technology has been especially tailored to minimize on-state resistance, provide superior switching performance, and withstand high energy pulse in the avalanche and commutation mode. These devices are well suited for high efficiency switch mode power supplies.

#### ABSOLUTE MAXIMUM RATINGS ( Ta = 25 °C)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DSS}$	600	V
Drain Current - Continuous	$I_D$	9.5	A
Drain Current - Pulsed	$I_{DM}$	38	A
Gate-Source Voltage	$V_{GSS}$	$\pm 30$	V
Power Dissipation	$P_D$	156	W
Max. Operating Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{stg}$	-55~150	°C



#### ELECTRICAL CHARACTERISTICS ( Ta = 25 °C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS} = 0V, I_D = 250 \mu A$	600	—	—	V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 600V, V_{GS} = 0V$	—	—	1.0	$\mu A$
Gate-Body Leakage Current, Forward	$I_{GSSF}$	$V_{GS} = 30V, V_{DS} = 0V$	—	—	100	nA
Gate-Body Leakage Current, Reverse	$I_{GSSR}$	$V_{GS} = -30V, V_{DS} = 0V$	—	—	-100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250 \mu A$	2.0	—	4.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 4.75A$	—	0.6	0.73	W
Drain-Source Diode Forward Voltage	$V_{SD}$	$V_{GS} = 0V, I_S = 9.5A$	—	—	1.4	V