Product specification

60V N-Channel MOSFET

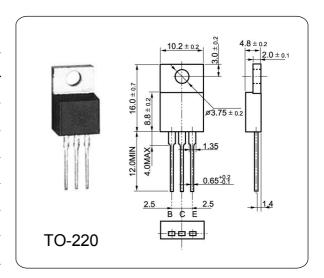
FQP50N06

DESCRIPTION

These N-Channel enhancement mode power field effect transistors are produced using Fairchild's proprietary, planar stripe, 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 low voltage applications such as automotive, DC/DC converters, and high efficiency switching for power management in portable and battery operated products.

ABSOLUTE MAXIMUM RATINGS (Ta = 25 °C)

Parameter	I	Value	Unit
Drain-Source Voltage	V _{DSS}	60	V
Drain Current - Continuous	I _D	50	Α
Drain Current - Pulsed	I _{DM}	200	Α
Gate-Source Voltage	V _{GSS}	±25	V
Power Dissipation	P _D	120	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.	Тур.	Max.	Unit
Drain-Source Breakdown Voltage	BV _{DSS}	$V_{GS} = 0V, I_{D} = 250 \mu A$	60	_	_	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =60V, V _{GS} =0V	_	_	1.0	uA
Gate-Body Leakage Current, Forward	I _{GSSF}	$V_{GS} = 25V, V_{DS} = 0V$	_		100	nA
Gate-Body Leakage Current, Reverse	I _{GSSR}	$V_{GS} = -25V, V_{DS} = 0V$	_	_	-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)}	$V_{GS} = 10 \text{ V}, I_{D} = 25 \text{ A}$	_	18	22	mΩ
Forward Transconductance	g _{FS}	$V_{DS} = 25 \text{ V}, I_{D} = 25 \text{ A}$	_	22		S
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS} = 0 \text{ V}, I_{S} = 50 \text{ A}$	_	_	1.5	V