

FQD3N60C / FQU3N60C 600V N-Channel MOSFET

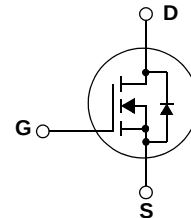
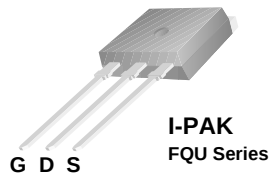
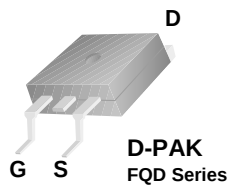
Features

- 2.4A, 600V, $R_{DS(on)} = 3.4 \Omega @ V_{GS} = 10 V$
- Low gate charge (typical 10.5nC)
- Low C_{rss} (typical 5pF)
- Fast switching
- 100% avalanche tested
- Improved dv/dt capability

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 high efficiency switched mode power supplies, electronic lamp ballasts based on half bridge topology.



Absolute Maximum Ratings

Symbol	Parameter	FQD3N60C / FQU3N60C	Units
V_{DSS}	Drain-Source Voltage	600	V
I_D	Drain Current		
	- Continuous ($T_C = 25^\circ C$)	2.4	A
	- Continuous ($T_C = 100^\circ C$)	1.5	A
I_{DM}	Drain Current - Pulsed	(Note 1) 9.6	A
V_{GSS}	Gate-Source Voltage	± 30	V
E_{AS}	Single Pulsed Avalanche Energy	(Note 2) 150	mJ
I_{AR}	Avalanche Current	(Note 1) 2.4	A
E_{AR}	Repetitive Avalanche Energy	(Note 1) 5.0	mJ
dv/dt	Peak Diode Recovery dv/dt	(Note 3) 4.5	V/ns
P_D	Power Dissipation ($T_C = 25^\circ C$)	50	W
	- Derate above $25^\circ C$	0.4	W/ $^\circ C$
T_J, T_{STG}	Operating and Storage Temperature Range	-55 to +150	$^\circ C$
T_L	Maximum lead temperature for soldering purposes, 1/8		

Thermal Characteristics