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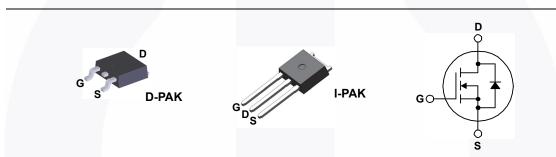
FQD2N100 / FQU2N100 N-Channel QFET[®] MOSFET 1000 V, 1.6 A, 9 Ω

Description

This N-Channel enhancement mode power MOSFET is produced using Fairchild Semiconductor's proprietary planar stripe and DMOS technology. This advanced MOSFET technology has been especially tailored to reduce on-state resistance, and to provide superior switching performance and high avalanche energy strength. These devices are suitable for switched mode power supplies, active power factor correction (PFC), and electronic lamp ballasts.

Features

- 1.6 A, 1000 V, R_{DS(on)} = 9 Ω (Max.)@ V_{GS} = 10 V, I_D = 0.8 A
- Low Gate Charge (Typ. 12 nC)
- Low Crss (Typ. 5 pF)
- 100% Avalanche Tested
- RoHS Compliant



Absolute Maximum Ratings T_c = 25°C unless otherwise noted

Symbol	Parameter		FQD2N100TM / FQU2N100TU	Unit
V _{DSS}	Drain-Source Voltage		1000	V
I _D	Drain Current - Continuous (T _C = 25°C)		1.6	А
	- Continuous (T _C = 100	1.0	А	
I _{DM}	Drain Current - Pulsed	(Note 1)	6.4	А
V _{GSS}	Gate-Source Voltage		± 30	V
E _{AS}	Single Pulsed Avalanche Energy	(Note 2)	160	mJ
I _{AR}	Avalanche Current (Note 1)		1.6	А
E _{AR}	Repetitive Avalanche Energy (Note 1)		5.0	mJ
dv/dt	Peak Diode Recovery dv/dt (Note 3)		5.5	V/ns
P_D Power Dissipation (T _A = 25°C) *			2.5	W
	Power Dissipation ($T_C = 25^{\circ}C$)		50	W
	- Derate above 25°C		0.4	W/°C
T _J , T _{STG}	Operating and Storage Temperature Range		-55 to +150	°C
TL	Maximum lead temperature for soldering purposes, 1/8" from case for 5 seconds		300	°C

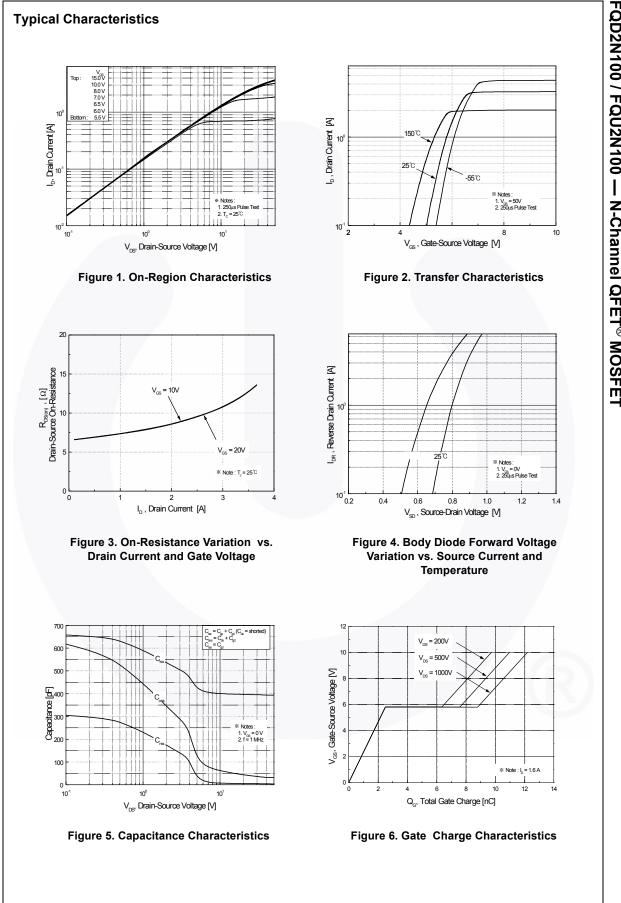
Thermal Characteristics

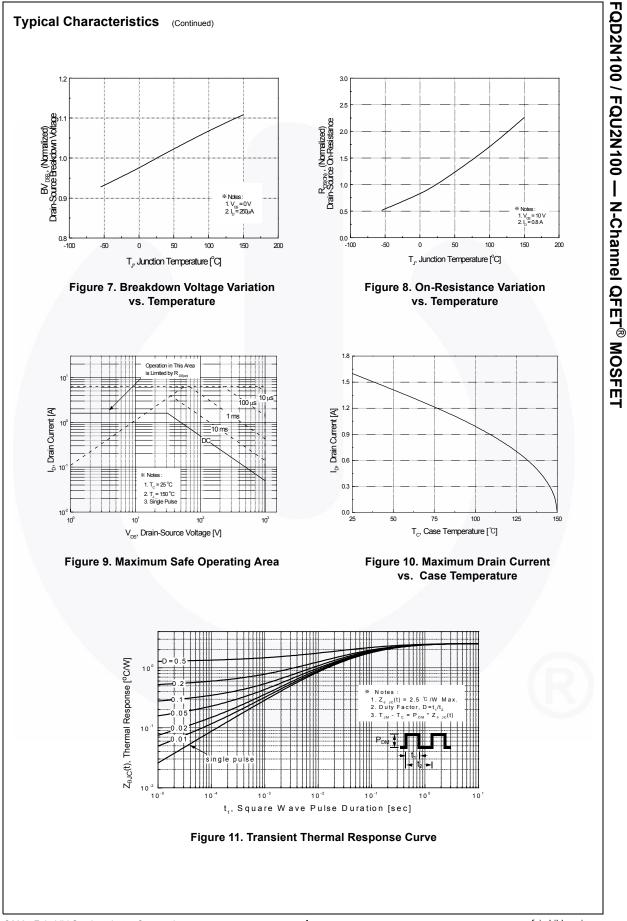
Symbol	Parameter	FQD2N100TM FQU2N100TU	Unit
R_{\thetaJC}	Thermal Resistance, Junction to Case, Max.	2.5	
D	Thermal Resistance, Junction to Ambient (minimum pad of 2 oz copper), Max.	110	°C/W
$R_{ hetaJA}$	Thermal Resistance, Junction to Ambient (* 1 in ² pad of 2 oz copper), Max.	50	

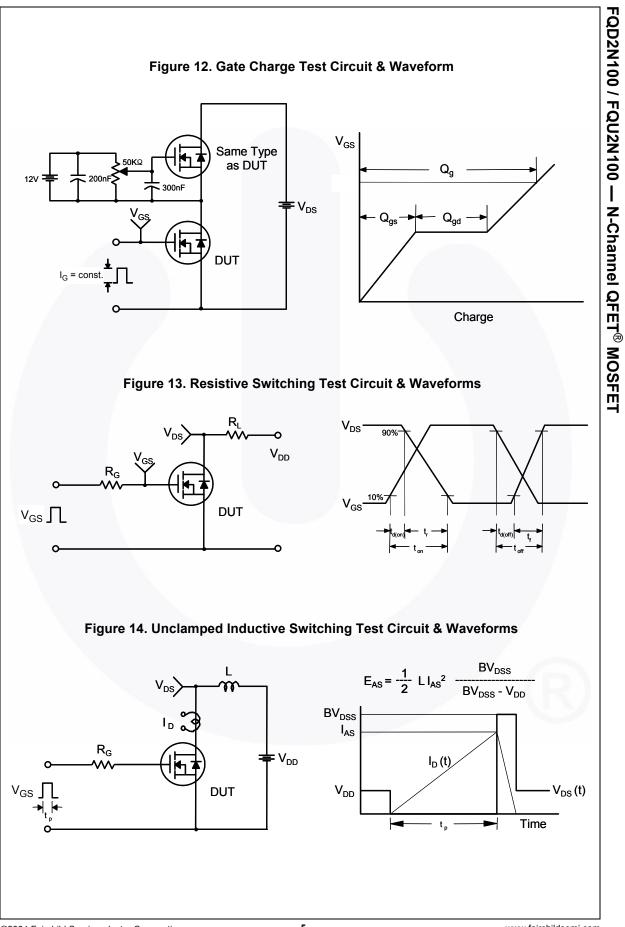
October 2013

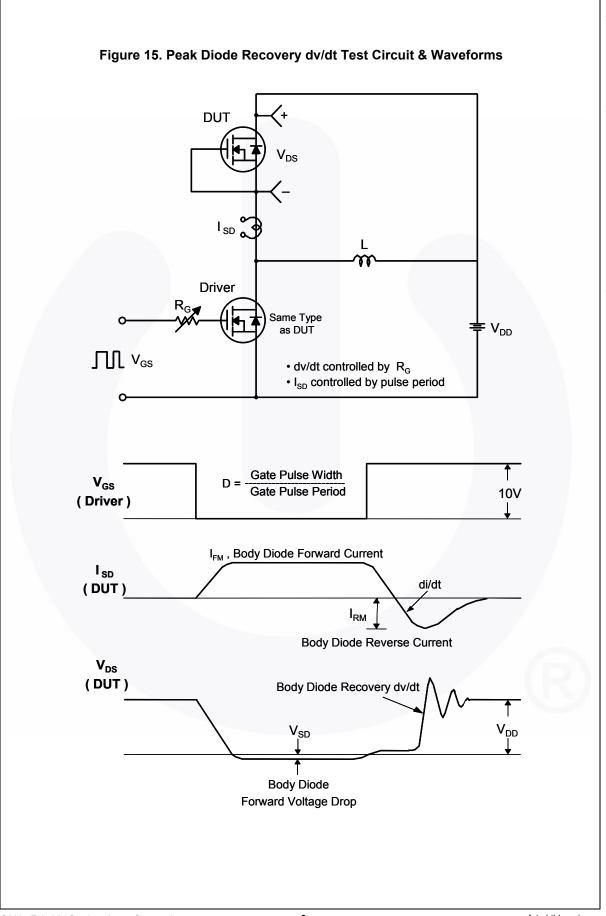
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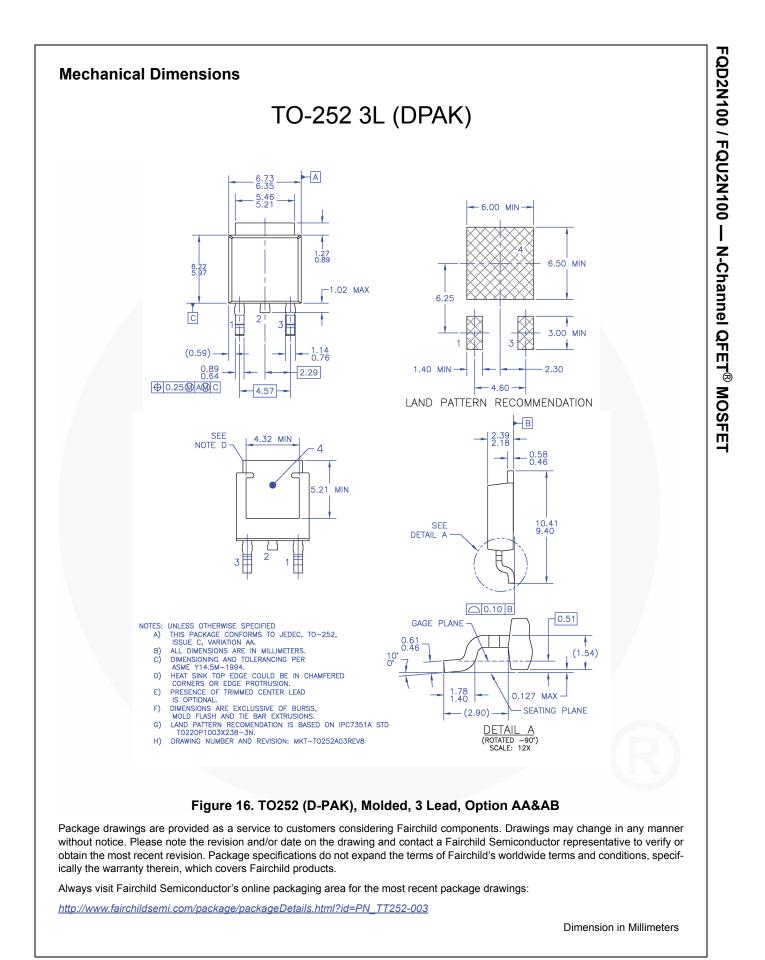
4. Essentially independent of operating temperature

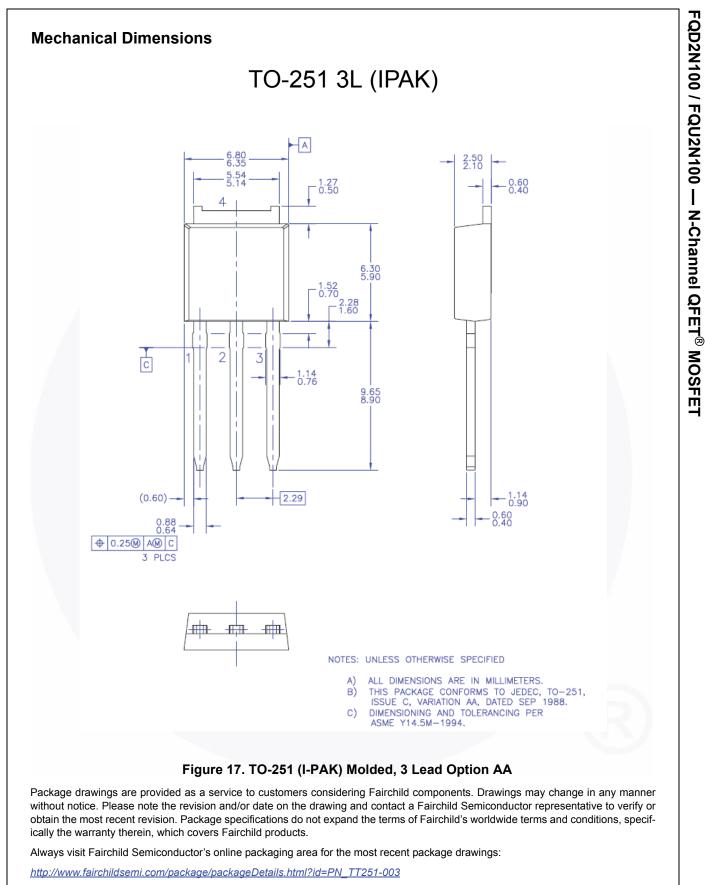












Dimension in Millimeters



SEMICONDUCTOR

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