20V N-Channel Enhancement Mode MOSFET

Description

Qd The NQP2Q18DR uses adv ‘ н ‘ ’u , low gate charge and operation with gate voltages as low as 2.5V. This device is suitable for use as a load switch or in PWM applications.

General Features

V_{DS} =20V I_D =16A
$R_{DS(ON)}$(Typ.)=8.6mΩ @V_{GS}=4.5V
$R_{DS(ON)}$(Typ.)=10.7mΩ @V_{GS}=2.5V
High power and current handing capability
Lead free product is acquired
Surface mount package

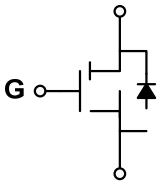
Application

PWM applications
Load switch

Package

DFN2*2-6L-B

Schematic diagram



Ordering Information

Part Number	Storage Temperature	Package	Devices Per Reel
NP2018DR-G	-55°C to +150°C	DFN2*2-6L-B	4000

Absolute Maximum Ratings (TA=25Ņ unless otherwise noted)

parameter	symbol	limit	unit
Drain-source voltage	V_{DS}	20	V
Gate-source voltage	V_{GS}	±12	V
Drain current-continuous[a]@Tj=125Ņ	I_D	16	A
-pulse d[b]	I_{DM}	64	A
Drain-sour 18 W			

			p	Max	Unit
				-	V
				1	μA
				±100	nA
				1.55	V
			6	9.5	mΩ
			.7	12.5	
			0	-	S
			5	-	pF
			2	-	
			2	-	
Rise time	tr	I_D=16A V_{GEN}=4.5V R_{GEN}=6Ω	0	20	ns
Turn-off delay time	$t_{D(OFF)}$		1	25	
			5	70	
Fall time	tf		0	60	
Total gate charge	Qg	V_{DS}=10V,I_D=16A V_{GS}=4.5V	4	-	nC
Gate-source charge	Qgs		2	-	
Gate-drain charge	Qgd		7	-	

Typical Performance Characteristics

Fig1 Output Characteristics

Fig2 Transfer Characteristics

Fig3 Rdson-Drain current

Fig4 Capacitance vs Vds

Fig5

Fig6 Gate Charge

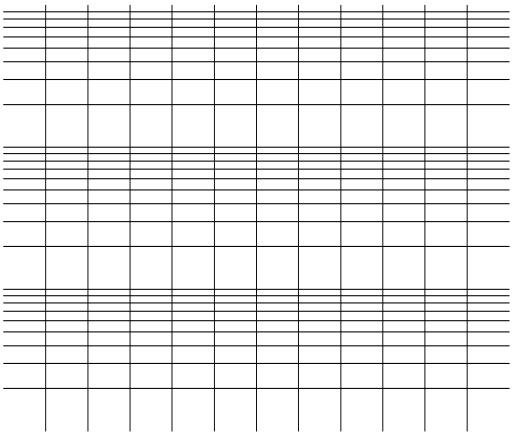


Fig7 Power De-rating

Fig8 Source-Drain Diode Forward