# 20V P-Channel Enhancement Mode MOSFET

## Description

The NP2307DR uses advanced trench technology to provide excellent $R_{DS(ON)}$, low gate charge and operation with gate voltages as low as 1.8V. This device is suitable for use as a load switch or in PWM applications.

## General Features

$V_{DS}$ =-20V $I_D$ =-8A

$R_{DS(ON)}$(Typ.)=15.6mΩ @$V_{GS}$=-4.5V

$R_{DS(ON)}$(Typ.)=20mΩ @$V_{GS}$=-2.5V

High power and current handing capability

Lead free product is acquired

Surface mount package

## Application

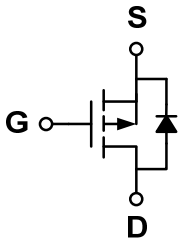
PWM applications

Load switch

## Package

DFN2*2-6L-B

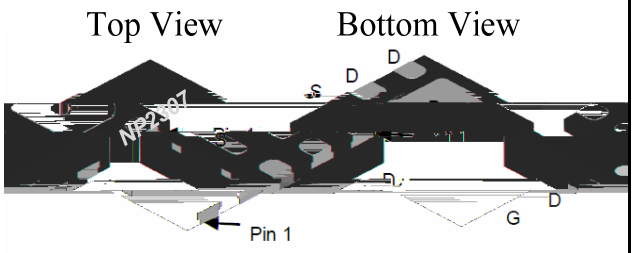
## Schematic diagram




## Marking and pin assignment

**DFN2*2-6L-B**

Thickness 0.55mm




NP----Natlinear Power

2307----NP2307

## Ordering Information

| Part Number | Storage Temperature | Package | Devices Per Reel |
|---|---|---|---|
| NP2307DR-G | -55°C to +150°C | DFN2*2-6L-B | 4000 |

## Absolute Maximum Ratings (TA=25℃ unless otherwise noted)

| parameter | | symbol | limit | unit |
|---|---|---|---|---|
| Drain-source voltage | | $V_{DS}$ | -20 | V |
| Gate-source voltage | | $V_{GS}$ | ±12 | V |
| Drain current-continuous | $T_C$=25℃ | $I_D$ | -8[a] | A |
| | $T_C$=70℃ | | -8[a] | |
| | $T_A$=25℃ | | -8[a,b,c] | |
| | $T_A$=70℃ | | -6[b,c] | |
| Drain-source Diode forward current | $T_C$=25℃ | Is | -8[a] | A |
| | $T_A$=25℃ | | -2.9[b,c] | |

## Typical Performance Characteristics

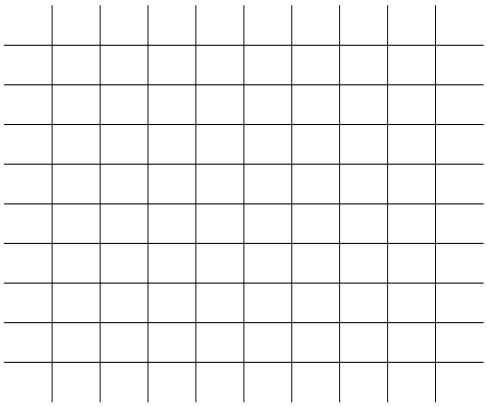


Fig1 Output Characteristics

Fig2 Transfer Characteristics

Fig3 Rdson-Drain current

Fig4 Capacitance vs Vds

Fig5 Rdson-Gate Drain voltage

Fig6 Gate Charge

## Package Information

**DFN2*2-6L-B 0**



SIDE VIEW