## Feature

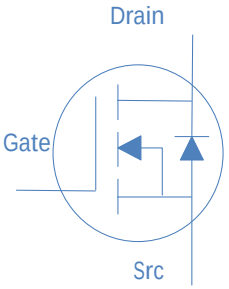
- High Speed Power Switching, Logic Level
- Enhanced Body diode dv/dt capability
- Enhanced Avalanche Ruggedness
- 100% UIS Tested, 100% Rg Tested
- Lead Free, Halogen Free

| | | | |
|---|---|---|---|
| $V_{DS}$ | | 100 | V |
| R | $V_{GS}$=10V | 9.2 | mΩ |
| R | $V_{GS}$=4.5V | 11 | mΩ |
| I | | 62 | A |
| I | | 60 | A |

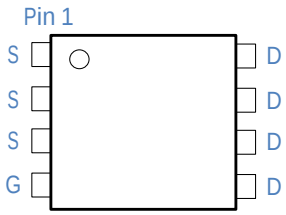
## Application

- Synchronous Rectification in SMPS
- Hard Switching and High Speed Circuit
- DC/DC in Telecoms and Inductrial

DFN5x6




| | | |
|---|---|---|
| HGN110N10SL | | GN110N10SL |




## Absolute Maximum Ratings at $T_j$

| | | | Value | Unit |
|---|---|---|---|---|
| | $I_D$ | $T_C$ | 62 | A |
| | | $T_C$ | 40 | |
| | | $T_C$ | 60 | |
| | $V_{DS}$ | - | 100 | V |
| | $V_{GS}$ | - | ±20 | V |
| | $I_{DM}$ | - | 160 | A |
| | AS | C | 22 | mJ |
| | $P_D$ | $T_C$ | 83 | |
| | $T_J$ stg | - | -55 to150 | |

## Absolute Maximum Ratings

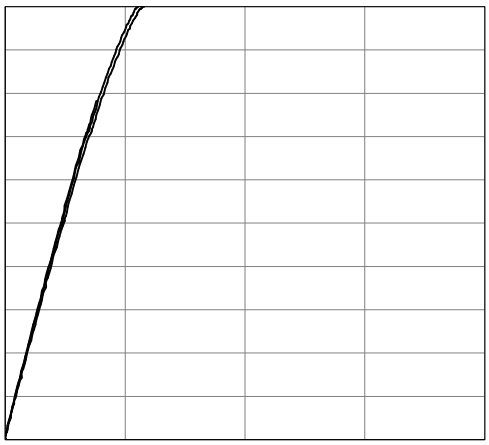
| | | Max | Unit |
|---|---|---|---|
| | $R_{\theta JA}$ | 55 | |
| | $R_{\theta JC}$ | 1.5 | |

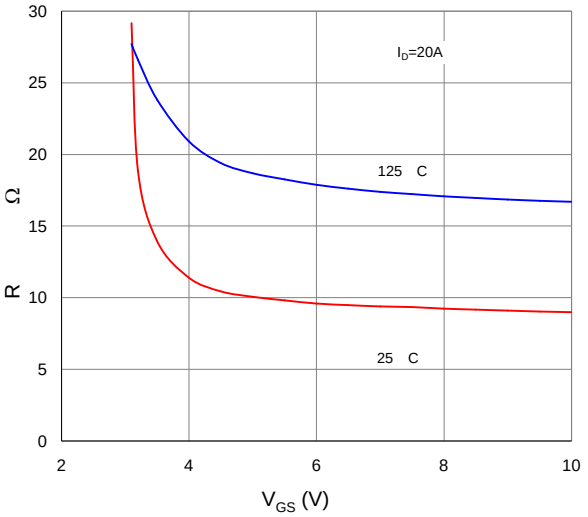
j

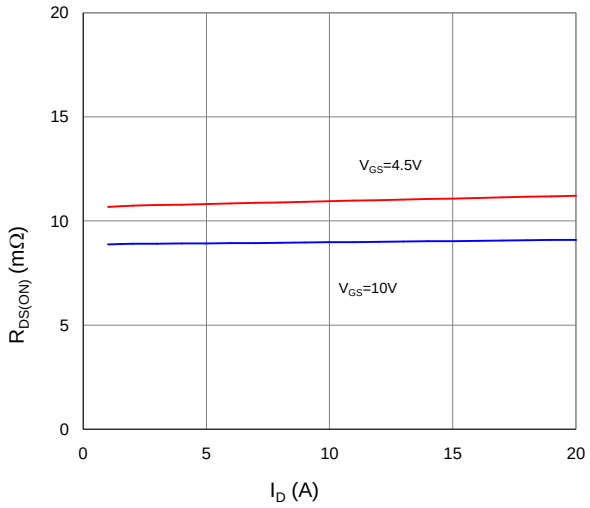
| | | | Value | | | Unit |
|---|---|---|---|---|---|---|
| | | | min | | max | |
| | V | $V_{GS}$ $_D$=250µA | 100 | - | - | V |
| | V | $V_{GS}$=$V_{DS}$ $_D$=250µA | 1.4 | 1.9 | 2.4 | |
| | $I_{DSS}$ | $V_{GS}$ $_{DS}$ $_j$ | - | - | 1 | µA |
| | | $V_{GS}$ $_{DS}$ $_j$ | - | - | 100 | |
| | $I_{GSS}$ | $V_{GS}$ $_{DS}$=0V | - | - | ±100 | nA |
| | R | $V_{GS}$ $_D$=20A | - | 9.2 | 11 | mΩ |
| | | $V_{GS}$ $_D$=20A | - | 11 | 15 | |
| | g | $V_{DS}$ $_D$=20A | - | 60 | - | S |
| | $R_G$ | $V_{GS}$ $_{DS}$ | - | 1.5 | - | Ω |

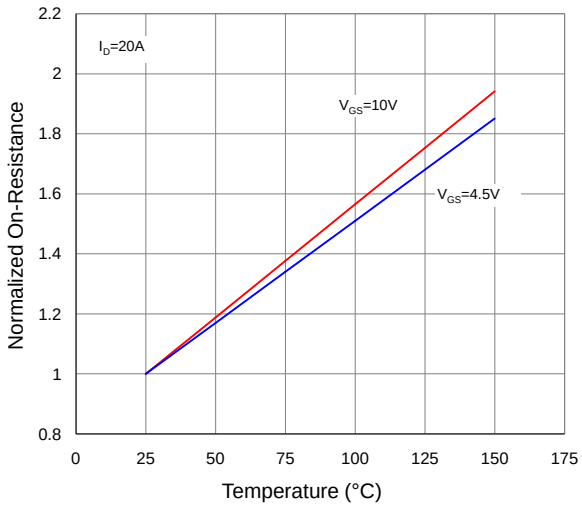
| | | | | | | |
|---|---|---|---|---|---|---|
| | $C_{iss}$ | $V_{GS}$ $_{DS}$ | - | 2275 | - | |
| | $C_{oss}$ | | - | 162 | - | |
| | C | | - | 7.9 | - | |
| | $Q_g$ | $V_{DD}$ $_D$ $_{GS}$=10V | - | 29 | - | nC |
| | $Q_g$ | | - | 14 | - | |
| | $Q_{gs}$ | | - | 5 | - | |
| | Q | | - | 5 | - | |
| | t | $V_{DD}$ $_D$ $_{GS}$ $R_G$=10Ω | - | 8 | - | ns |
| Rise time | t | | - | 3 | - | |
| | t | | - | 26 | - | |
| | t | | - | 4 | - | |

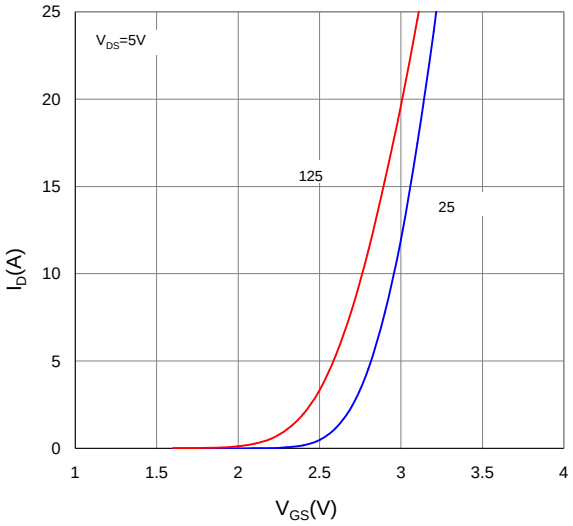
| | | | | | | |
|---|---|---|---|---|---|---|
| | $V_{SD}$ | $V_{GS}$ =20A | - | 0.9 | 1.2 | V |
| | t | $V_R$ µs | - | 33 | - | ns |
| | Q | | - | 157 | - | nC |

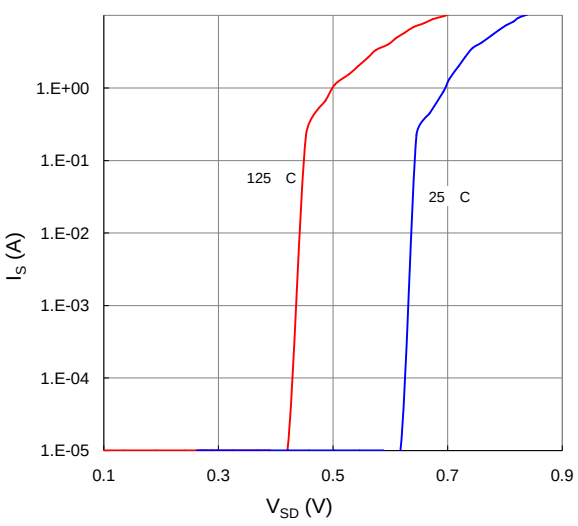


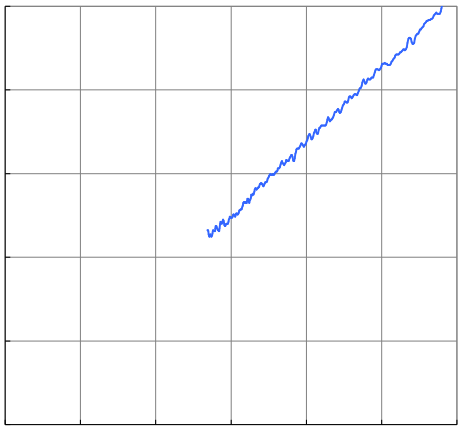

30
25
20
15
10
5
0
Ω
R
$I_D$=20A
125 C
25 C
2
4
6
8
10
$V_{GS}$ (V)

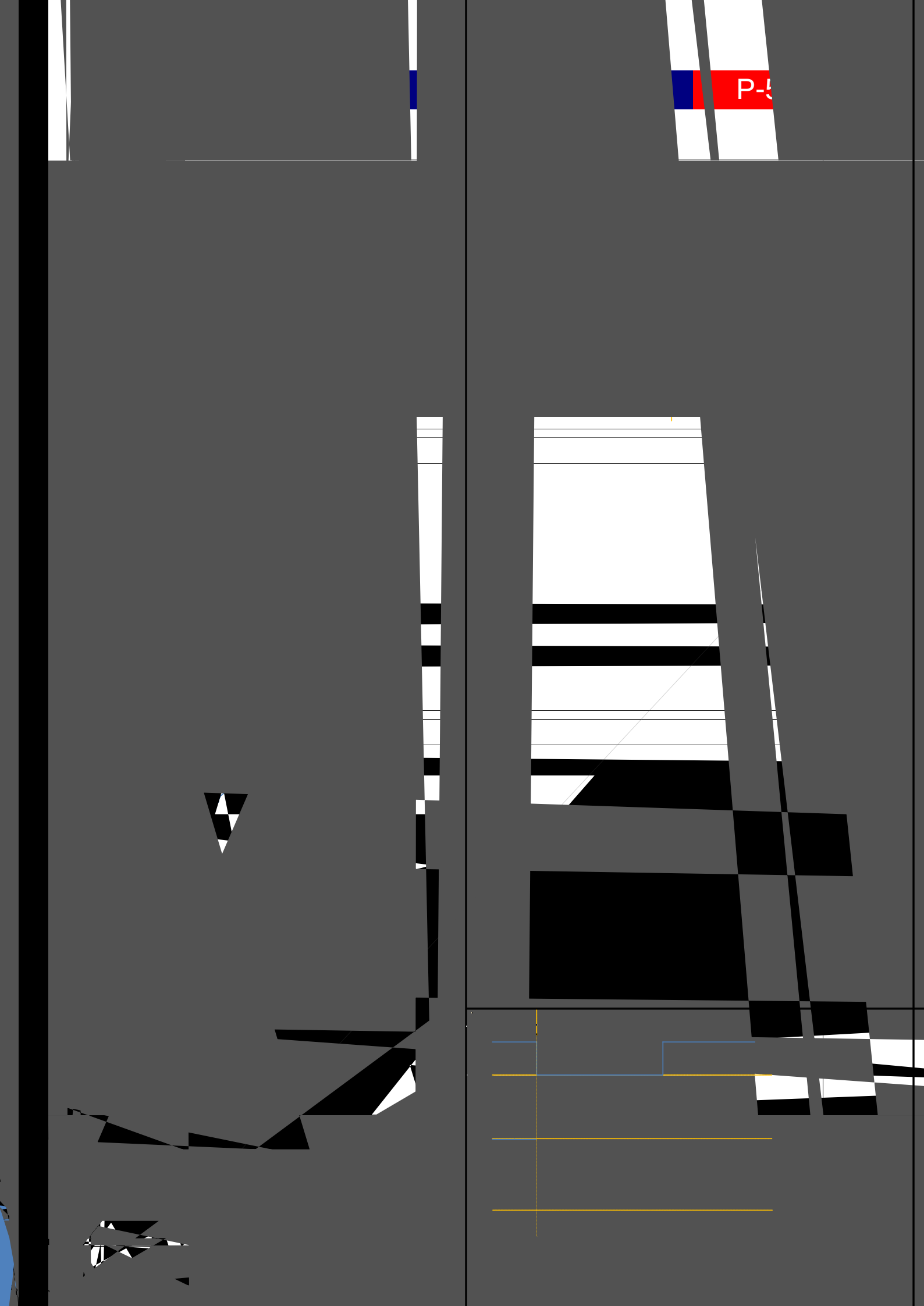

20
15
10
5
0
$R_{DS(ON)}$ (mΩ)
$V_{GS}$=4.5V
$V_{GS}$=10V
0
5
10
15
20
$I_D$ (A)


2.2
2
1.8
1.6
1.4
1.2
1
0.8
Normalized On-Resistance
$I_D$=20A
$V_{GS}$=10V
$V_{GS}$=4.5V
0
25
50
75
100
125
150
175
Temperature (°C)


25
20
15
10
5
0
$I_D$(A)
$V_{DS}$=5V
125
25
1
1.5
2
2.5
3
3.5
4
$V_{GS}$(V)


1.E+00
1.E-01
1.E-02
1.E-03
1.E-04
1.E-05
$I_S$ (A)
125 C
25 C
0.1
0.3
0.5
0.7
0.9
$V_{SD}$ (V)

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