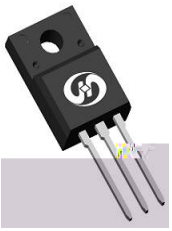
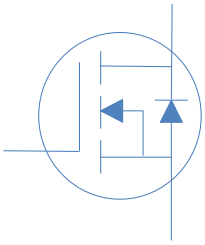
Hunteck

# 100V N-Ch Power MOSFET

| | | | |
|---|---|---|---|
| $V_{DS}$ | | 100 | V |
| $R_{DS(on),typ}$ | $V_{GS}$=10V | 17.5 | m |
| $I_{D\ (Sillicon\ Limited)}$ | | 20 | A |





| Part Number | Package | Marking |
|---|---|---|
| HGA170N10A | TO-220F | GA170N10A |

## Absolute Maximum Ratings at $T_j$=25℃ (unless otherwise specified)

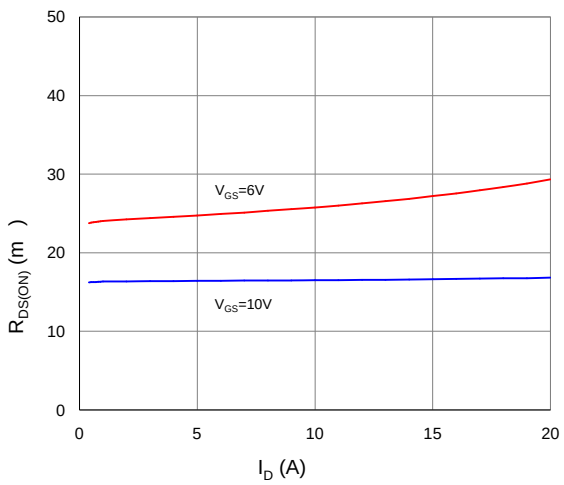
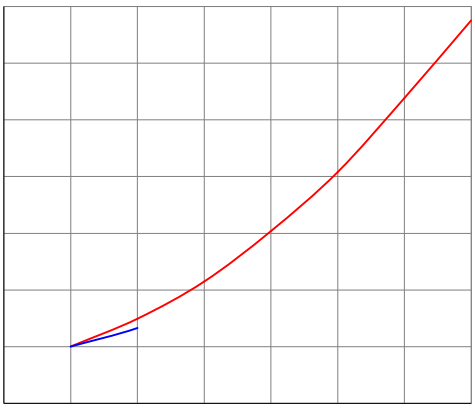
| Parameter | Symbol | Conditions | Value | Unit |
|---|---|---|---|---|
| Continuous Drain Current (Silicon Limited) | $I_D$ | $T_C$=25℃ | 20 | A |
| | | $T_C$=100℃ | 14 | |
| Drain to Source Voltage | $V_{DS}$ | - | 100 | V |
| Gate to Source Voltage | $V_{GS}$ | - | ±20 | V |
| Pulsed Drain Current | $I_{DM}$ | - | 180 | A |
| Avalanche Energy, Single Pulse | $E_{AS}$ | L=0.4mH, $T_C$=25℃ | 45 | mJ |
| Power Dissipation | $P_D$ | $T_C$=25℃ | 17 | W |
| Operating and Storage Temperature | $T_J$, $T_{stg}$ | - | -55 to175 | ℃ |

## Absolute Maximum Ratings

| Parameter | Symbol | Max | Unit |
|---|---|---|---|
| Thermal Resistance Junction-Ambient | $R_{JA}$ | 60 | ℃/W |
| Thermal Resistance Junction-Case | $R_{JC}$ | 9 | ℃/W |

$V_{GS}$

| Fig 1. Typical Output Characteristics | Figure 2. On-Resistance vs. Gate-Source Voltage |
|---|---|
| | |

| Figure 3. On-Resistance vs. Drain Current and Gate Voltage | Figure 4. Normalized On-Resistance vs. Junction Temperature |
|---|---|
|  |  |



| Figure 5. Typical Transfer Characteristics | Figure 6. Typical Source-Drain Diode Forward Voltage |
|---|---|
| | |

Figure 7. Typical Gate-Charge vs. Gate-to-Source Voltage

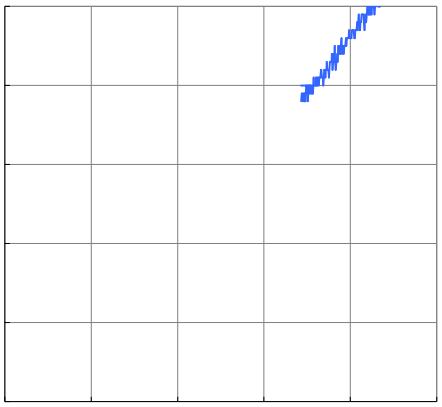


Figure 8. Typical Capacitance vs. Drain-to-Source Voltage

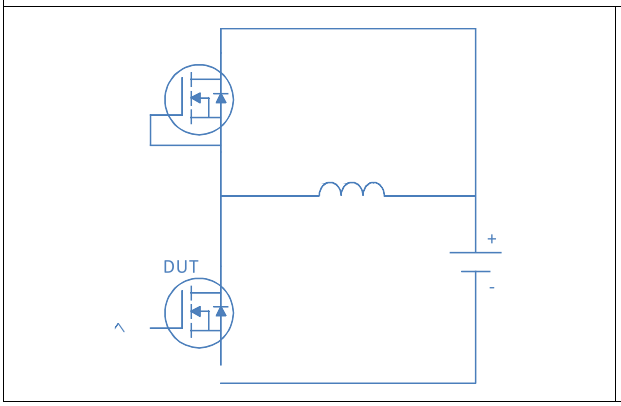
Figure 9. Maximum Safe Operating Area

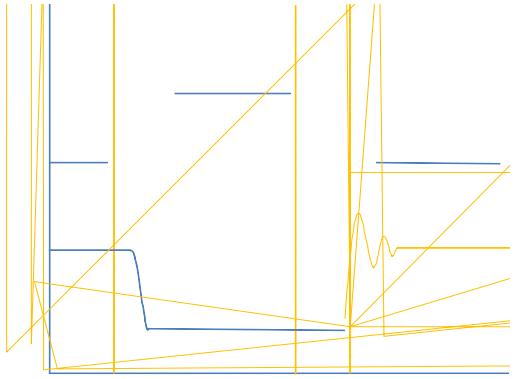
Figure 10. Maximun Drain Current vs. Case Temperature

5 0

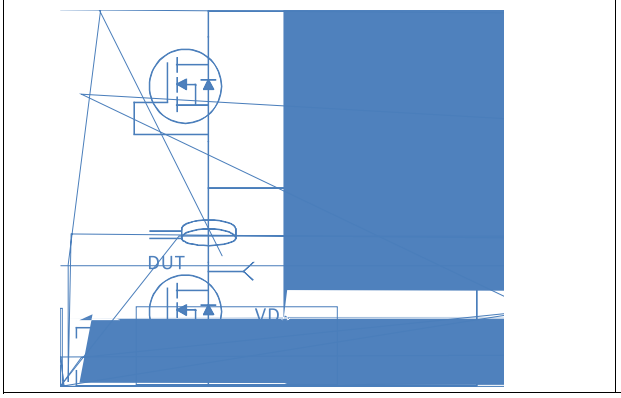
Figure 11. Normalized Maximum Transient Thermal Impedance, Junction-to-Ambient

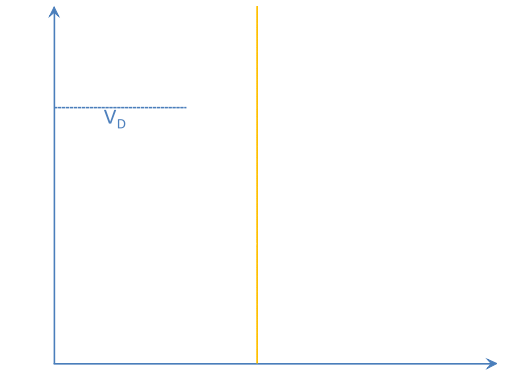
## Inductive switching Test



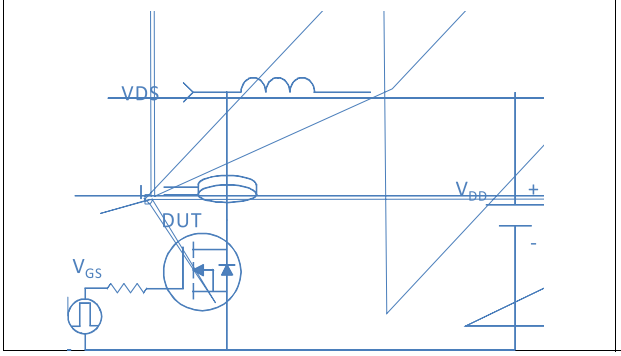



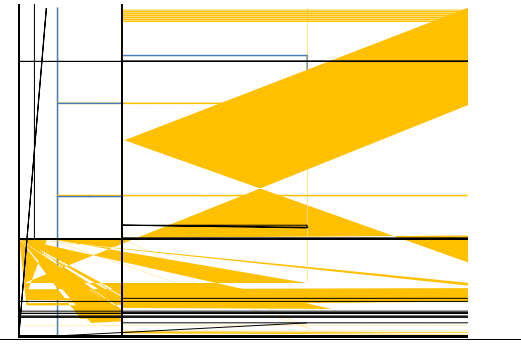
## Gate Charge Test




## Uclamped Inductive Switching (UIS) Test



## Diode Recovery Test