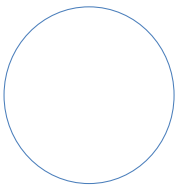
# 20V N-Ch Power MOSFET

| | | | |
|---|---|---|---|
| $V_{DS}$ | | 20 | V |
| $R_{DS(on),typ}$ | $V_{GS}$=4.5V | 13 | mΩ |
| $I_{D\ (Sillicon\ Limited)}$ | | 8 | A |



| Part Number | Package | Marking |
|---|---|---|
| HTL140N02 | DFN2*2 | 1L |

## 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℃ | 8 | A |
| | | $T_C$=70℃ | 6.2 | |
| Drain to Source Voltage | $V_{DS}$ | - | 20 | V |
| Gate to Source Voltage | $V_{GS}$ | - | ±12 | V |
| Pulsed Drain Current | $I_{DM}$ | - | 32 | A |
| Avalanche Energy, Single Pulse | $E_{AS}$ | L=0.1mH, $T_C$=25℃ | 5.0 | mJ |
| Power Dissipation | $P_D$ | $T_C$=25℃ | 2.08 | W |
| Operating and Storage Temperature | $T_J$, $T_{stg}$ | - | -55 to150 | ℃ |

## Absolute Maximum Ratings

| Parameter | Symbol | Max | Unit |
|---|---|---|---|
| Thermal Resistance Junction-Ambient | $R_{\theta JA}$ | 60 | ℃/W |
| Thermal Resistance Junction-Case | $R_{\theta JC}$ | 12 | ℃/W |

Fig 1. Typical Output Characteristics

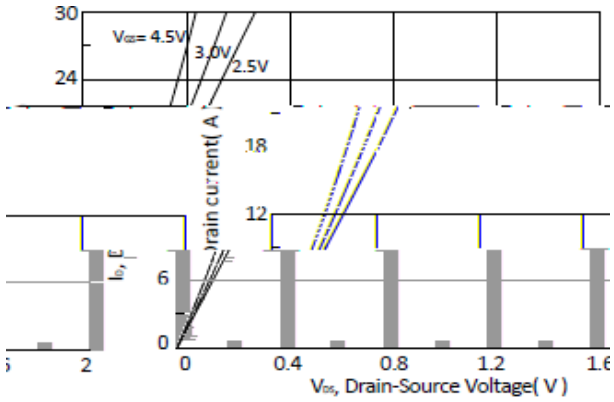



Figure 2. On-Resistance vs. Gate-Source Voltage

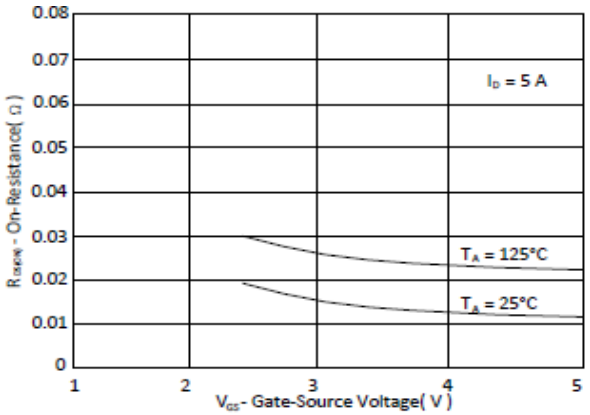



Figure 3. On-Resistance vs. Drain Current and Gate Voltage

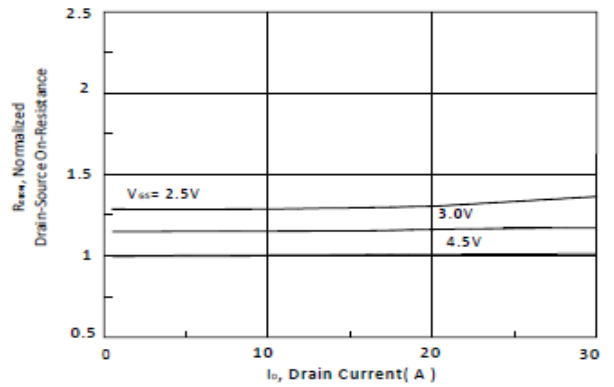



Figure 4. Normalized On-Resistance vs. Junction Temperature

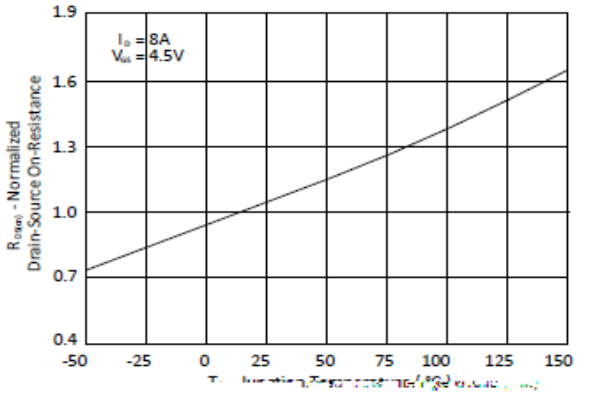



Figure 5. Typical Transfer Characteristics

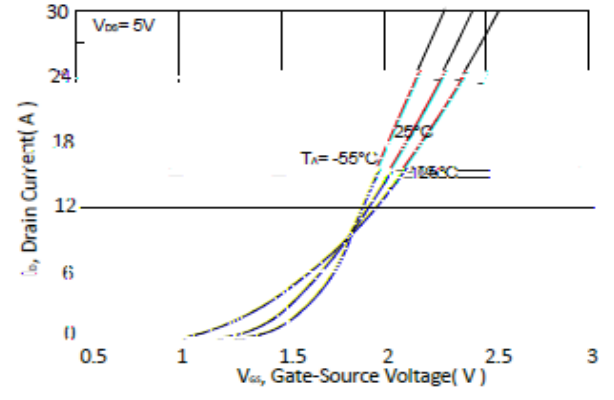



Figure 6. Typical Source-Drain Diode Forward Voltage

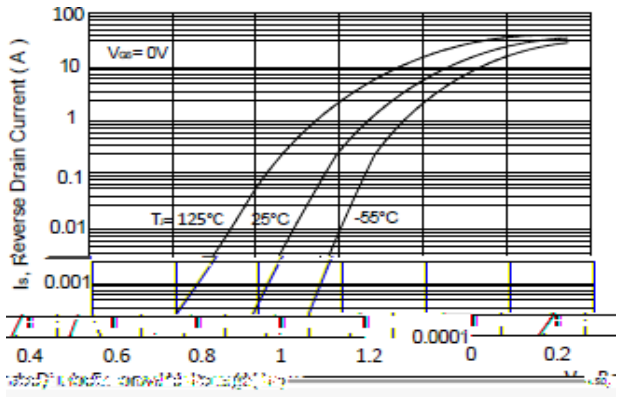


Figure 7. Typical Gate-Charge vs. Gate-to-Source Voltage

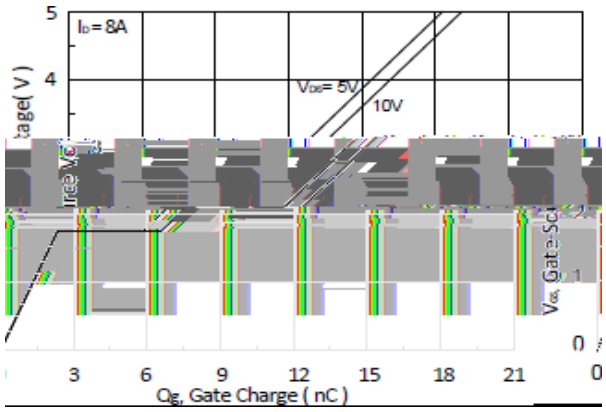



Figure 8. Typical Capacitance vs. Drain-to-Source Voltage

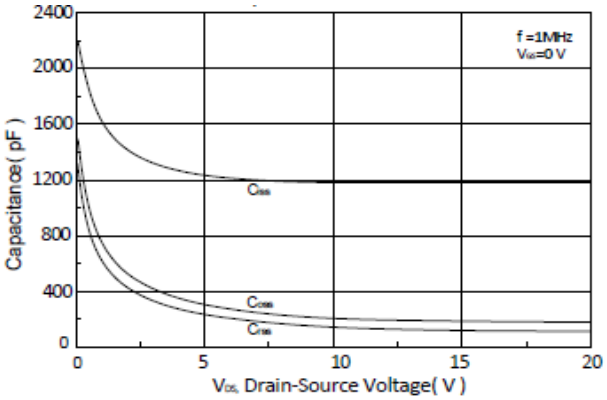



Figure 9. Maximum Safe Operating Area

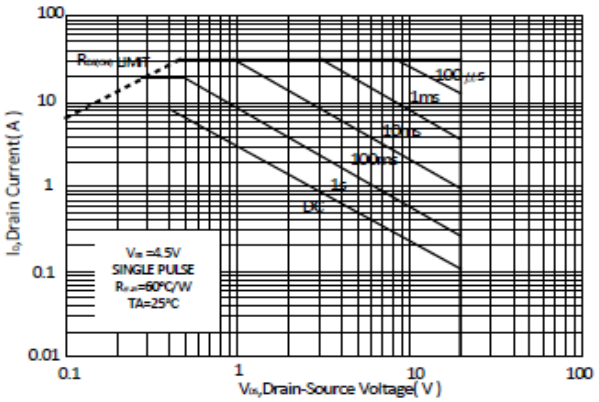
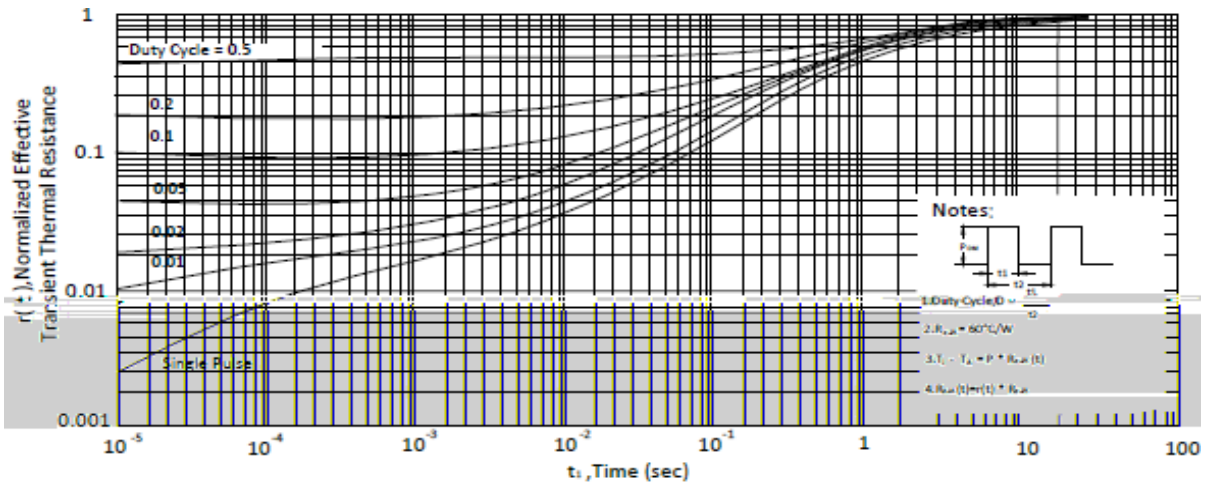


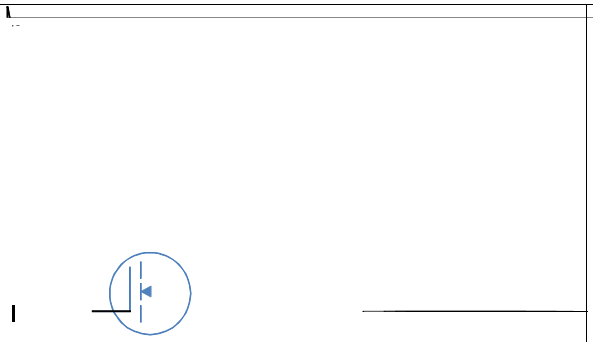

Figure 10. Single Pulse Maximum Power Dissipation

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



| Inductive switching Test | |
|---|---|
| | |

| Gate Charge Test | |
|---|---|
| | |

| Uclamped Inductive Switching (UIS) Test | |
|---|---|
|  | |

| Diode Recovery Test | |
|---|---|
| | |

Package Outline

**DFN2*2_P, 6leads**