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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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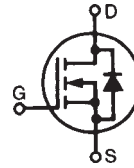


PolarHV™ HiPerFET Power MOSFET

IXFB 82N60P

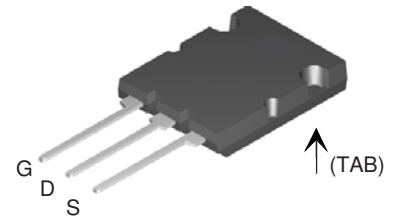
$V_{DSS} = 600 \text{ V}$
 $I_{D25} = 82 \text{ A}$
 $R_{DS(on)} \leq 75 \text{ m}\Omega$
 $t_{rr} \leq 200 \text{ ns}$

N-Channel Enhancement Mode
 Avalanche Rated
 Fast Intrinsic Diode



| Symbol | Test Conditions | Maximum Ratings | |
|---------------|---|-------------------|------------------|
| V_{DSS} | $T_J = 25^\circ\text{C}$ to 150°C | 600 | V |
| V_{DGR} | $T_J = 25^\circ\text{C}$ to 150°C ; $R_{GS} = 1 \text{ M}\Omega$ | 600 | V |
| V_{GSS} | Continuous | ± 30 | V |
| V_{GSM} | Transient | ± 40 | V |
| I_{D25} | $T_C = 25^\circ\text{C}$ | 82 | A |
| I_{DRMS} | External lead current limit | 75 | A |
| I_{DM} | $T_C = 25^\circ\text{C}$, pulse width limited by T_{JM} | 200 | A |
| I_{AR} | $T_C = 25^\circ\text{C}$ | 82 | A |
| E_{AR} | $T_C = 25^\circ\text{C}$ | 100 | mJ |
| E_{AS} | $T_C = 25^\circ\text{C}$ | 5 | J |
| dv/dt | $I_S \leq I_{DM}$, $di/dt \leq 100 \text{ A}/\mu\text{s}$, $V_{DD} \leq V_{DSS}$, $T_J \leq 150^\circ\text{C}$, $R_G = 2 \Omega$ | 20 | V/ns |
| P_D | $T_C = 25^\circ\text{C}$ | 1250 | W |
| T_J | | -55 ... +150 | $^\circ\text{C}$ |
| T_{JM} | | 150 | $^\circ\text{C}$ |
| T_{stg} | | -55 ... +150 | $^\circ\text{C}$ |
| T_L | 1.6 mm (0.062 in.) from case for 10 s | 300 | $^\circ\text{C}$ |
| T_{SOLD} | Plastic body for 10 s | 260 | $^\circ\text{C}$ |
| F_C | Mounting force | 30..120/7.5...2.7 | N/lb |
| Weight | | 10 | g |

PLUS264™ (IXFB)



G = Gate D = Drain
 S = Source TAB = Drain

Features

- International standard packages
- Fast recovery diode
- Unclamped Inductive Switching (UIS) rated
- Low package inductance
 - easy to drive and to protect

Advantages

- Plus 264™ package for clip or spring
- Space savings
- High power density

| Symbol | Test Conditions | Characteristic Values | | |
|--------------|---|-----------------------|------|--|
| | | Min. | Typ. | Max. |
| BV_{DSS} | $V_{GS} = 0 \text{ V}$, $I_D = 3 \text{ mA}$ | 600 | | V |
| $V_{GS(th)}$ | $V_{DS} = V_{GS}$, $I_D = 8 \text{ mA}$ | 3.0 | | 5.0 V |
| I_{GSS} | $V_{GS} = \pm 30 \text{ V}_{DC}$, $V_{DS} = 0$ | | | $\pm 200 \text{ nA}$ |
| I_{DSS} | $V_{DS} = V_{DSS}$ $V_{GS} = 0 \text{ V}$ $T_J = 125^\circ\text{C}$ | | | 25 μA 2000 μA |
| $R_{DS(on)}$ | $V_{GS} = 10 \text{ V}$, $I_D = 0.5 I_{D25}$, Note 1 | | | 75 $\text{m}\Omega$ |

| Symbol | Test Conditions | Characteristic Values | | |
|---------------------------|---|---|------|------|
| | | (T _J = 25°C, unless otherwise specified) | | |
| | | Min. | Typ. | Max. |
| g_{fs} | V _{DS} = 20 V; I _D = 0.5 I _{D25} , Note 1 | 50 | 80 | S |
| C_{iss} | V _{GS} = 0 V, V _{DS} = 25 V, f = 1 MHz | | 23 | nF |
| C_{oss} | | | 1490 | pF |
| C_{rss} | | | 200 | pF |
| t_{d(on)} | V _{GS} = 10 V, V _{DS} = 0.5 V _{DSS} , I _D = 0.5 I _{D25} R _G = 1 Ω (External) | | 28 | ns |
| t_r | | | 23 | ns |
| t_{d(off)} | | | 79 | ns |
| t_f | | | 24 | ns |
| Q_{g(on)} | V _{GS} = 10 V, V _{DS} = 0.5 V _{DSS} , I _D = 0.5 I _{D25} | | 240 | nC |
| Q_{gs} | | | 96 | nC |
| Q_{gd} | | | 67 | nC |
| R_{thJC} | | | 0.10 | °C/W |
| R_{thCS} | | | 0.13 | °C/W |

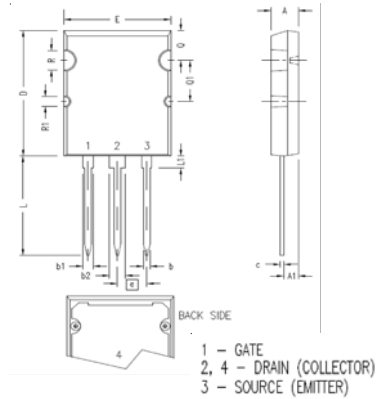
Source-Drain Diode

| Symbol | Test Conditions | Characteristic Values | | |
|-----------------------|--|---|------|--------|
| | | (T _J = 25°C, unless otherwise specified) | | |
| | | Min. | Typ. | Max. |
| I_S | V _{GS} = 0 V | | | 82 A |
| I_{SM} | Repetitive | | | 200 A |
| V_{SD} | I _F = I _S , V _{GS} = 0 V, Note 1 | | | 1.5 V |
| t_{rr} | I _F = 25A, -di/dt = 100 A/μs V _R = 100V | | | 200 ns |
| Q_{RM} | | | | 0.6 |
| I_{RM} | | | 6.0 | A |

Notes:

1. Pulse test, t ≤ 300 μs, duty cycle d ≤ 2 %

PLUS264™ (IXFB) Outline



| SYM | INCHES | | MILLIMETERS | |
|-----|----------|-------|-------------|-------|
| | MIN | MAX | MIN | MAX |
| A | .185 | .209 | 4.70 | 5.31 |
| A1 | .102 | .118 | 2.59 | 3.00 |
| b | .037 | .055 | 0.94 | 1.40 |
| b1 | .087 | .102 | 2.21 | 2.59 |
| b2 | .110 | .126 | 2.79 | 3.20 |
| c | .017 | .029 | 0.43 | 0.74 |
| D | 1.007 | 1.047 | 25.58 | 26.59 |
| E | .760 | .799 | 19.30 | 20.29 |
| e | .215 BSC | | 5.46 BSC | |
| L | .779 | .842 | 19.79 | 21.39 |
| L1 | .087 | .102 | 2.21 | 2.59 |
| Q | .240 | .256 | 6.10 | 6.50 |
| Q1 | .330 | .346 | 8.38 | 8.79 |
| ØR | .155 | .187 | 3.94 | 4.75 |
| ØR1 | .085 | .093 | 2.16 | 2.36 |

Fig. 1. Output Characteristics @ 25°C

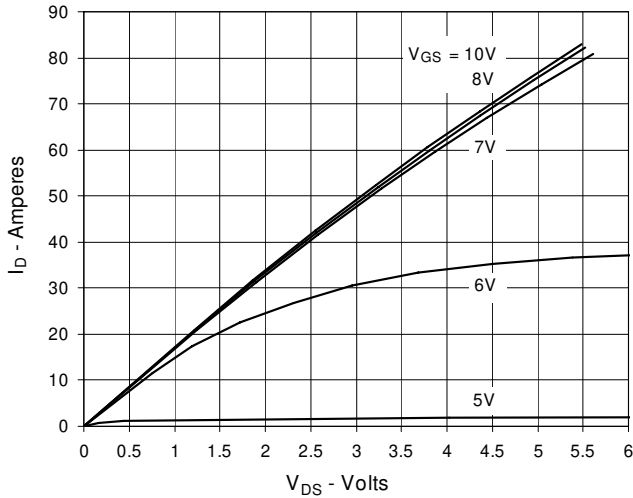


Fig. 2. Extended Output Characteristics @ 25°C

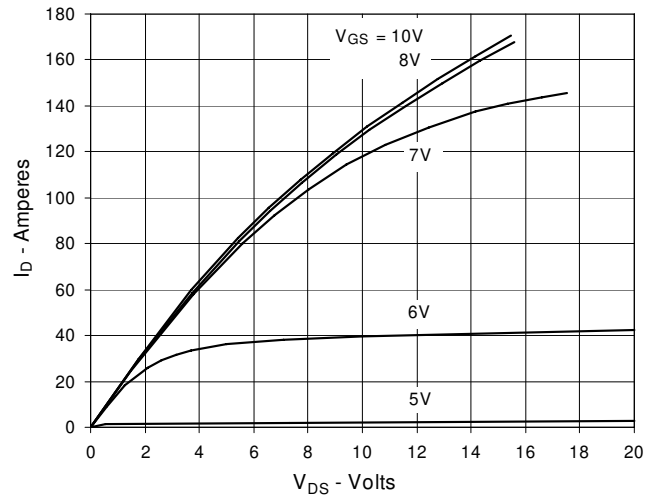


Fig. 3. Output Characteristics @ 125°C

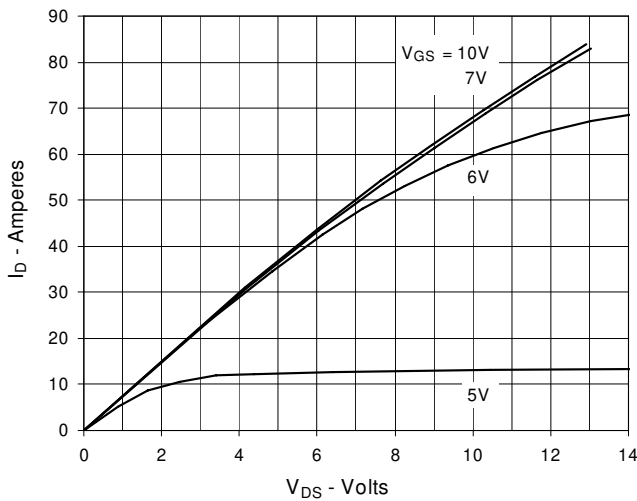


Fig. 4. $R_{DS(on)}$ Normalized to $I_D = 41A$ Value vs. Junction Temperature

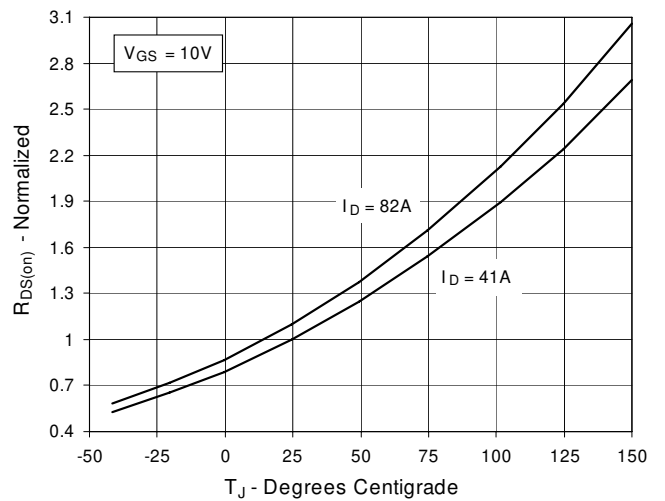


Fig. 5. $R_{DS(on)}$ Normalized to $I_D = 41A$ Value vs. Drain Current

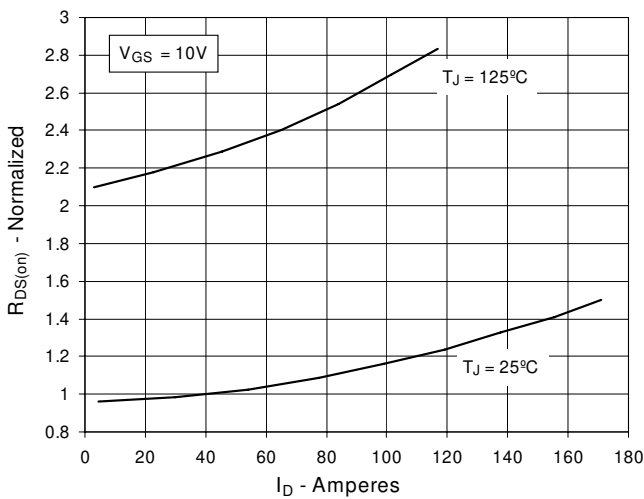


Fig. 6. Maximum Drain Current vs. Case Temperature

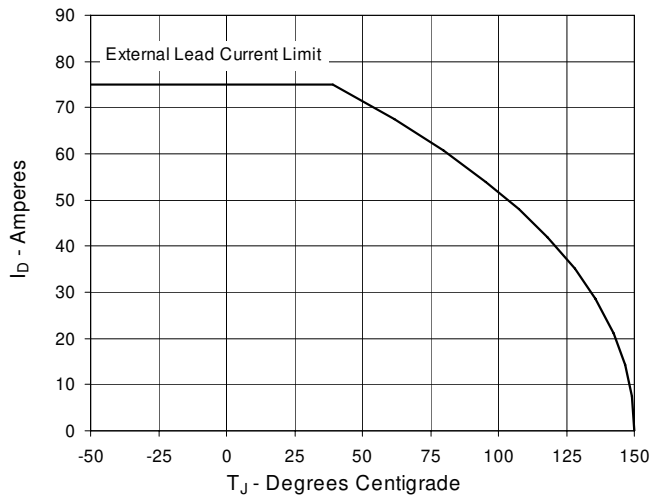


Fig. 7. Input Admittance

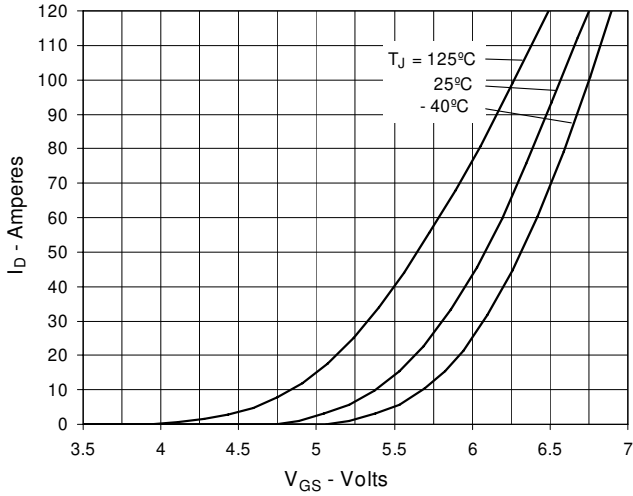


Fig. 8. Transconductance

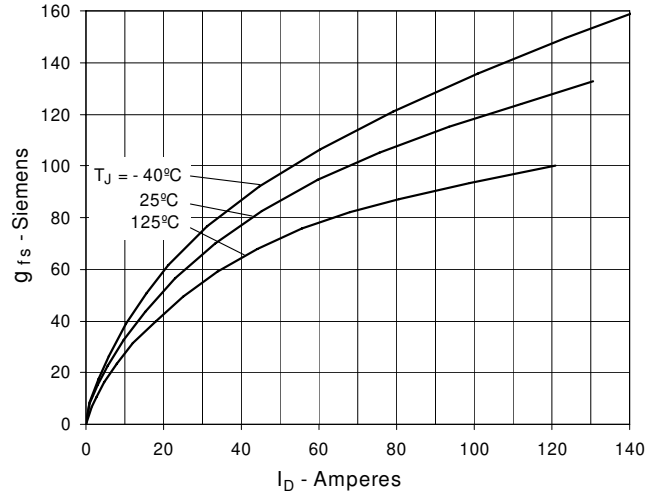


Fig. 9. Forward Voltage Drop of Intrinsic Diode

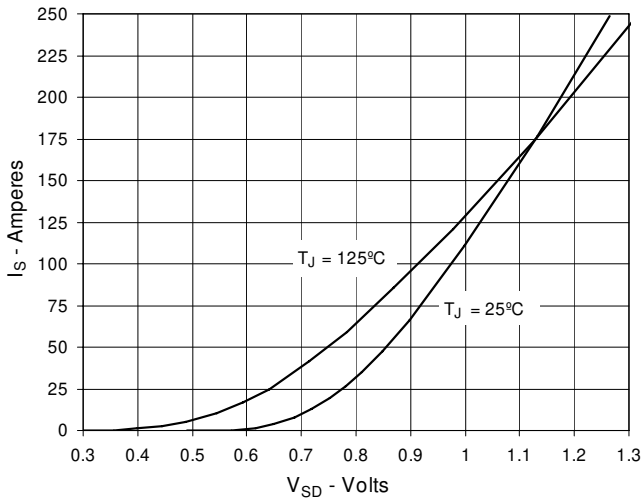


Fig. 10. Gate Charge

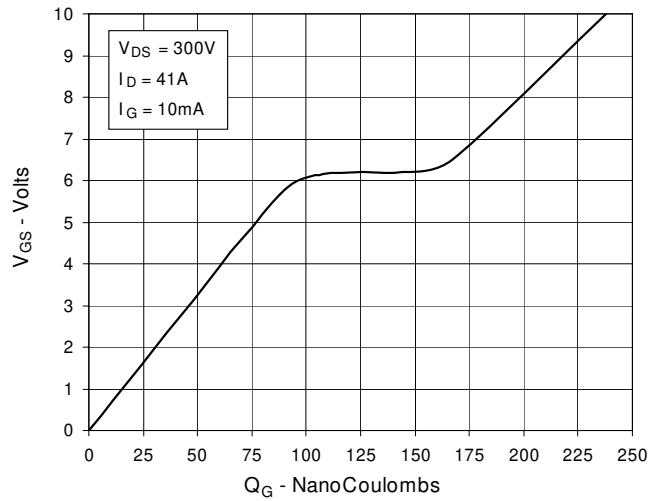


Fig. 11. Capacitance

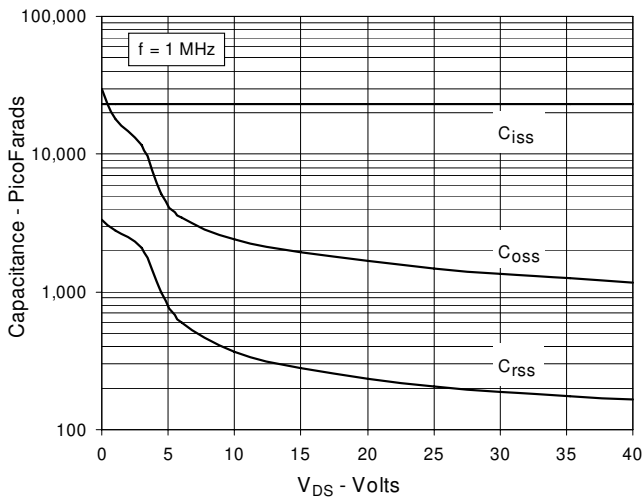


Fig. 12. Forward-Bias Safe Operating Area

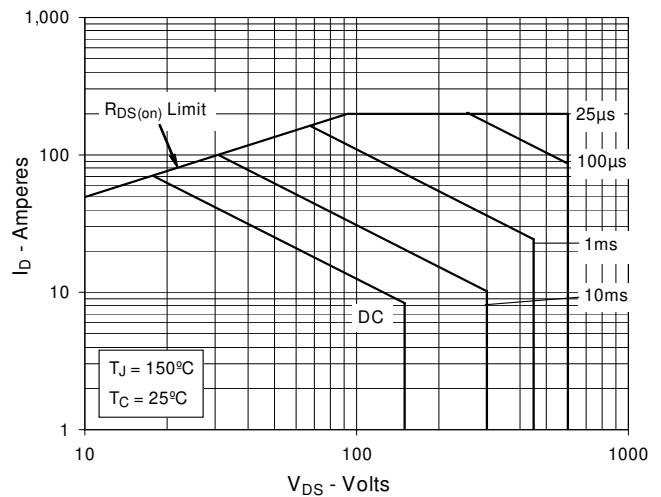


Fig. 13. Maximum Transient Thermal Resistance

