

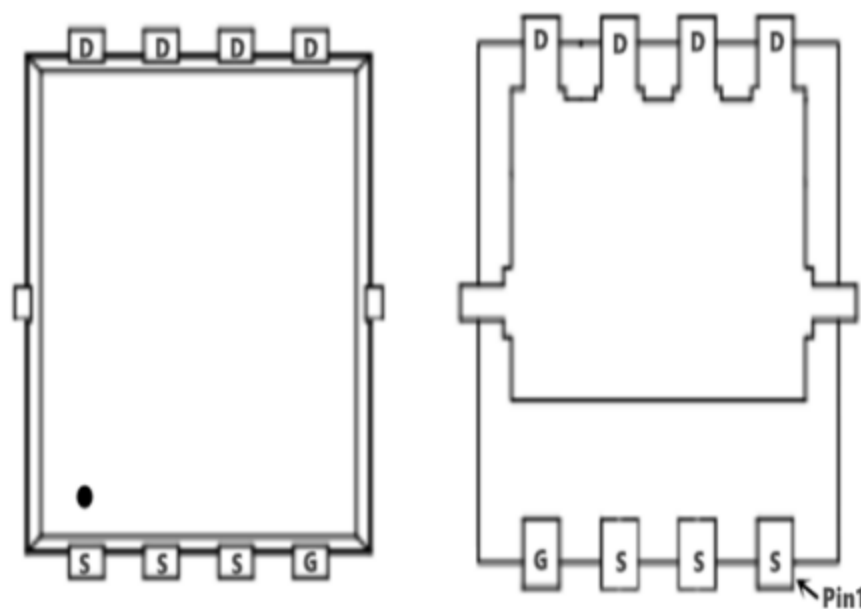
Product Summary

- $R_{DS(ON)} \leq 15m\Omega @ V_{GS} = -10V$
- $R_{DS(ON)} \leq 20m\Omega @ V_{GS} = -4.5V$
- Super high density cell design for extremely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability

Application

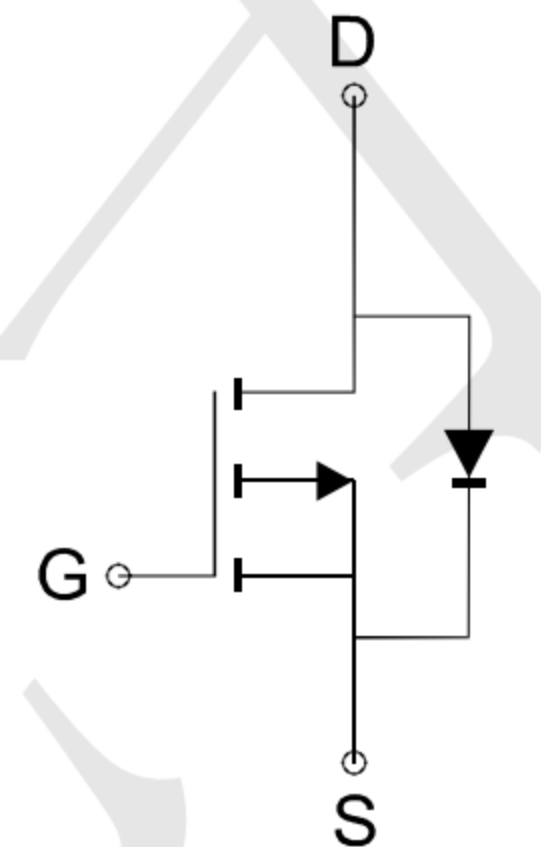
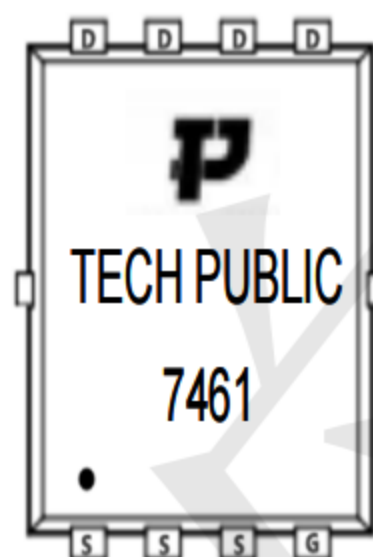
- Power Management in Note book
- DC/DC Converter
- Load Switch
- LCD Display inverter

Package and Pin Configuration



PDFN5x6-8L

Marking



P-Channel MOSFET

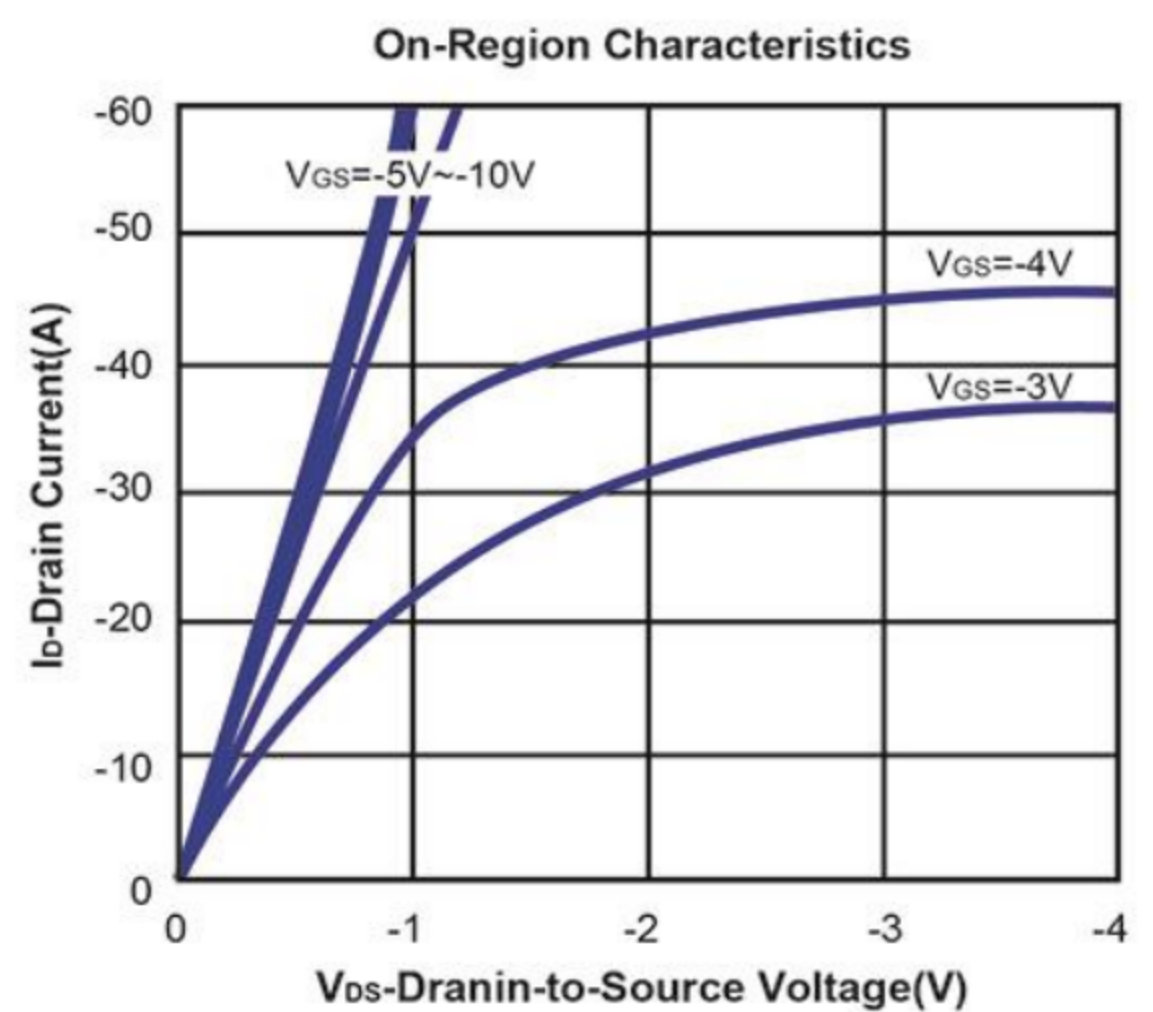
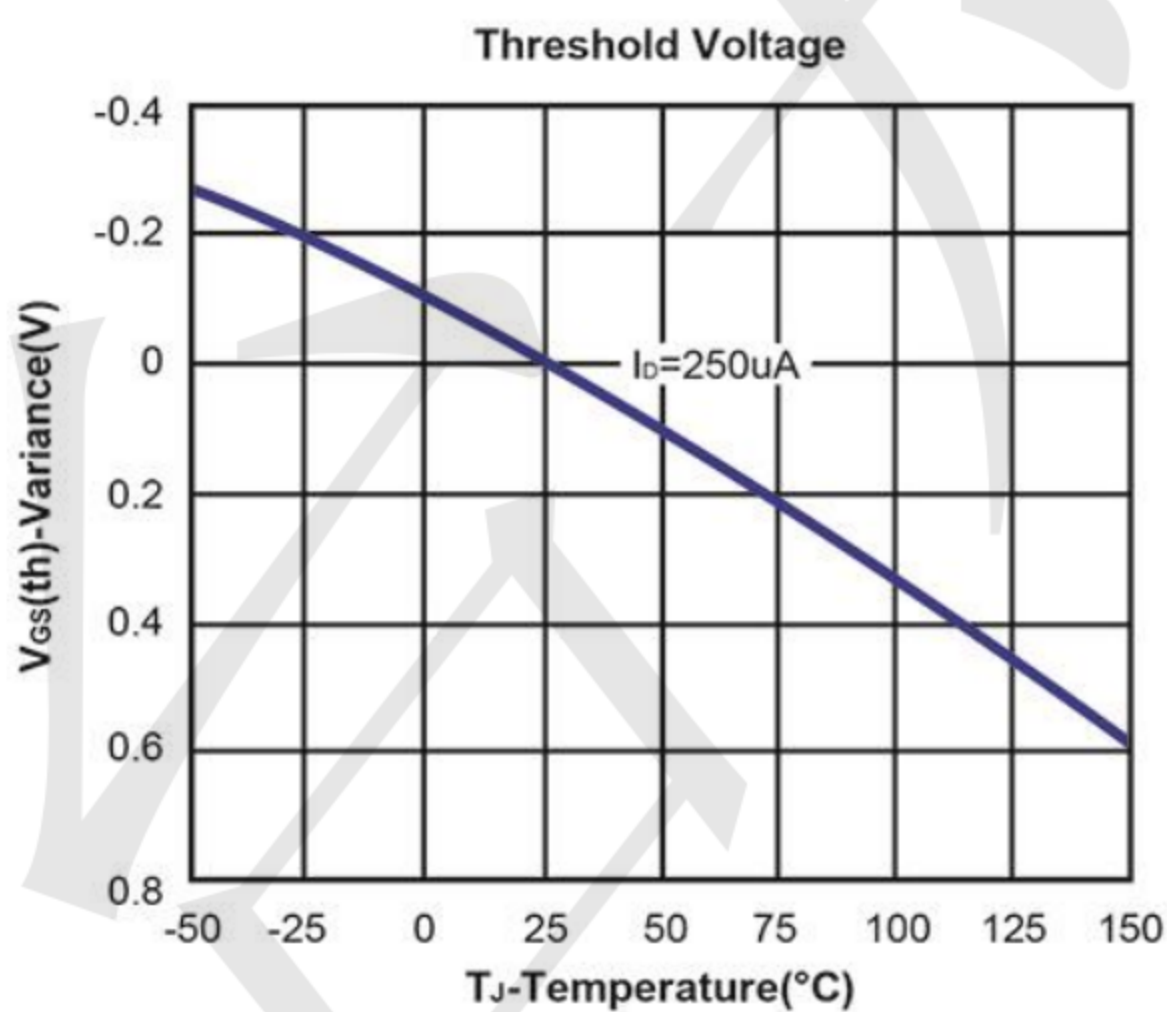
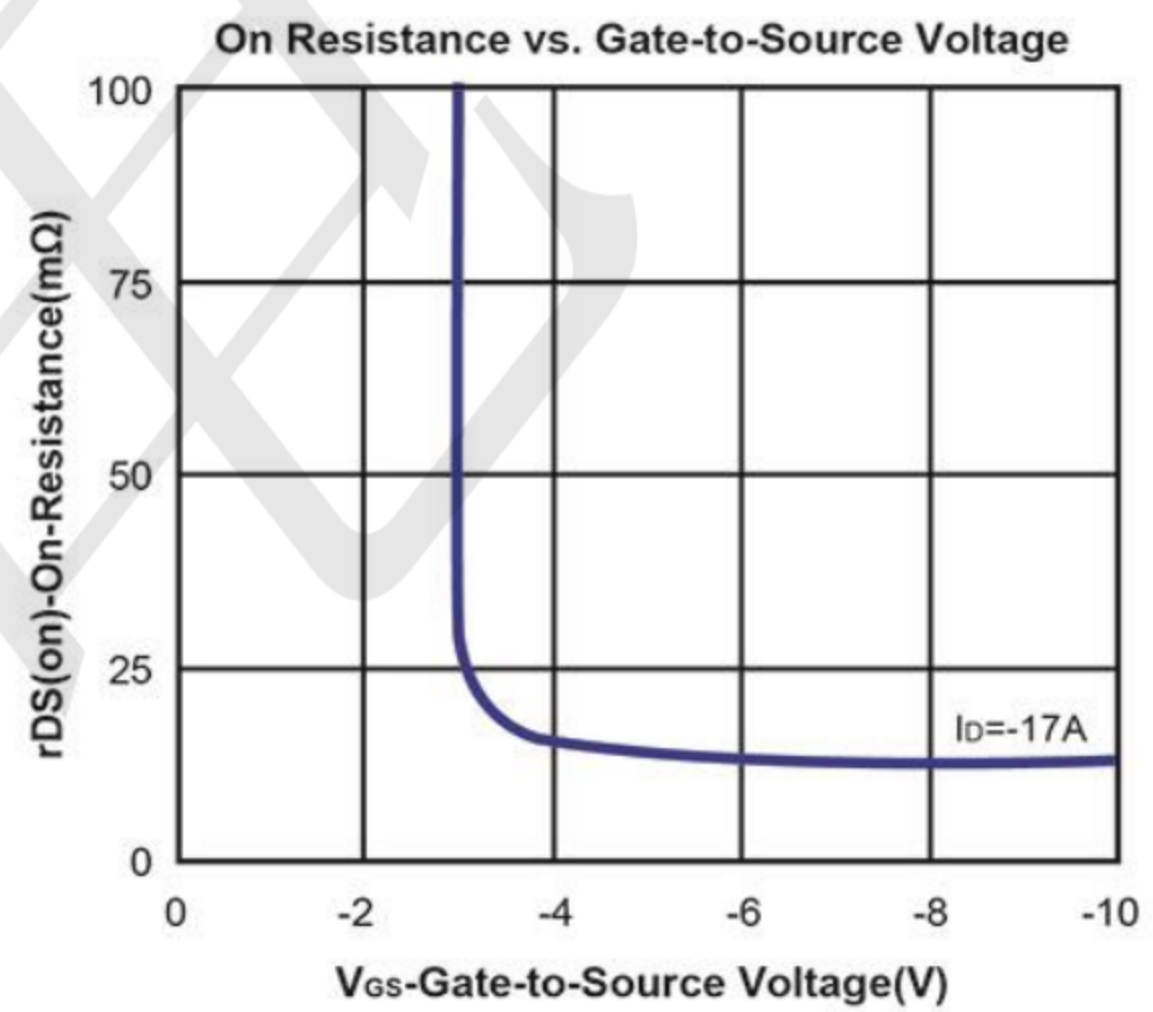
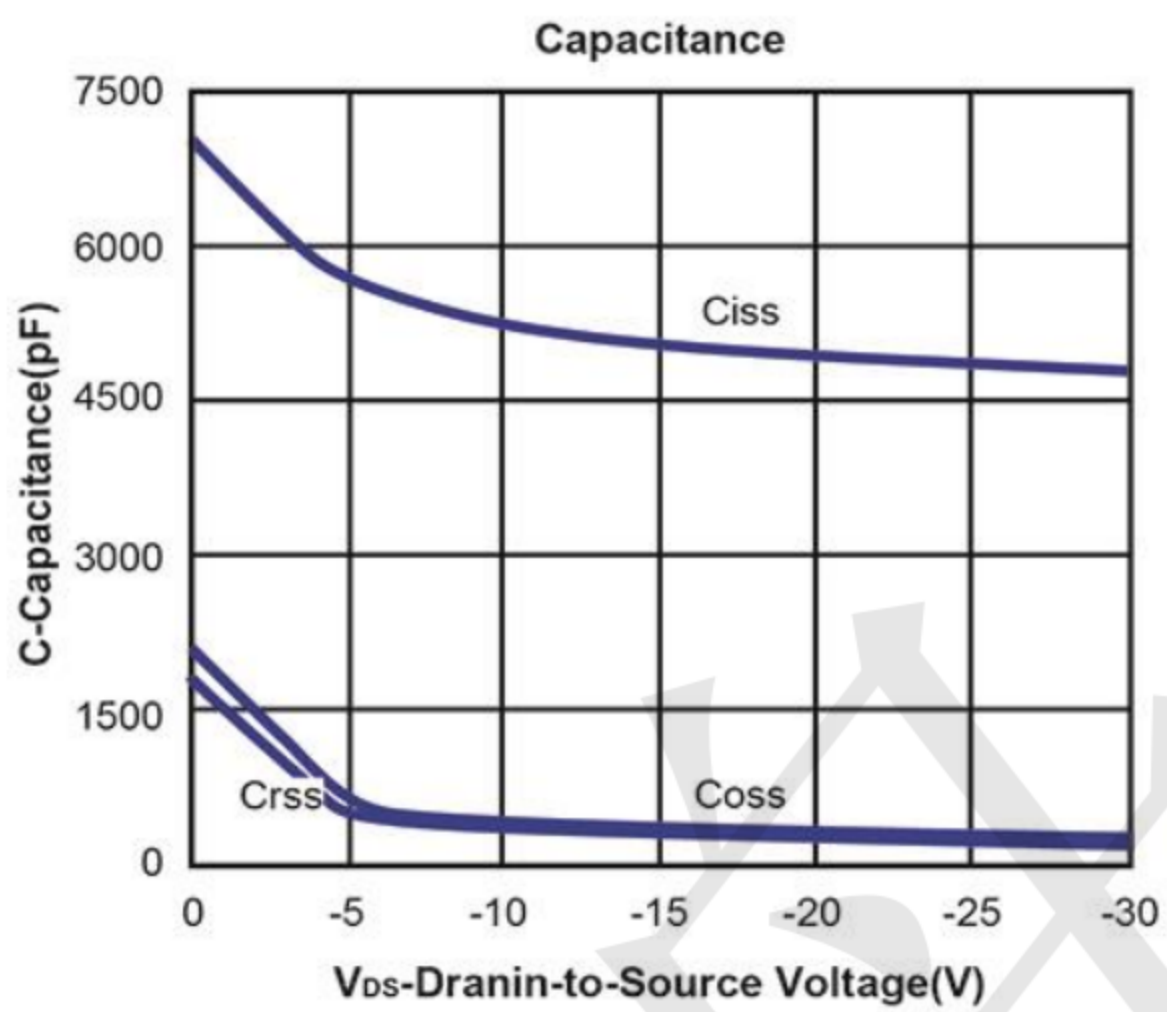
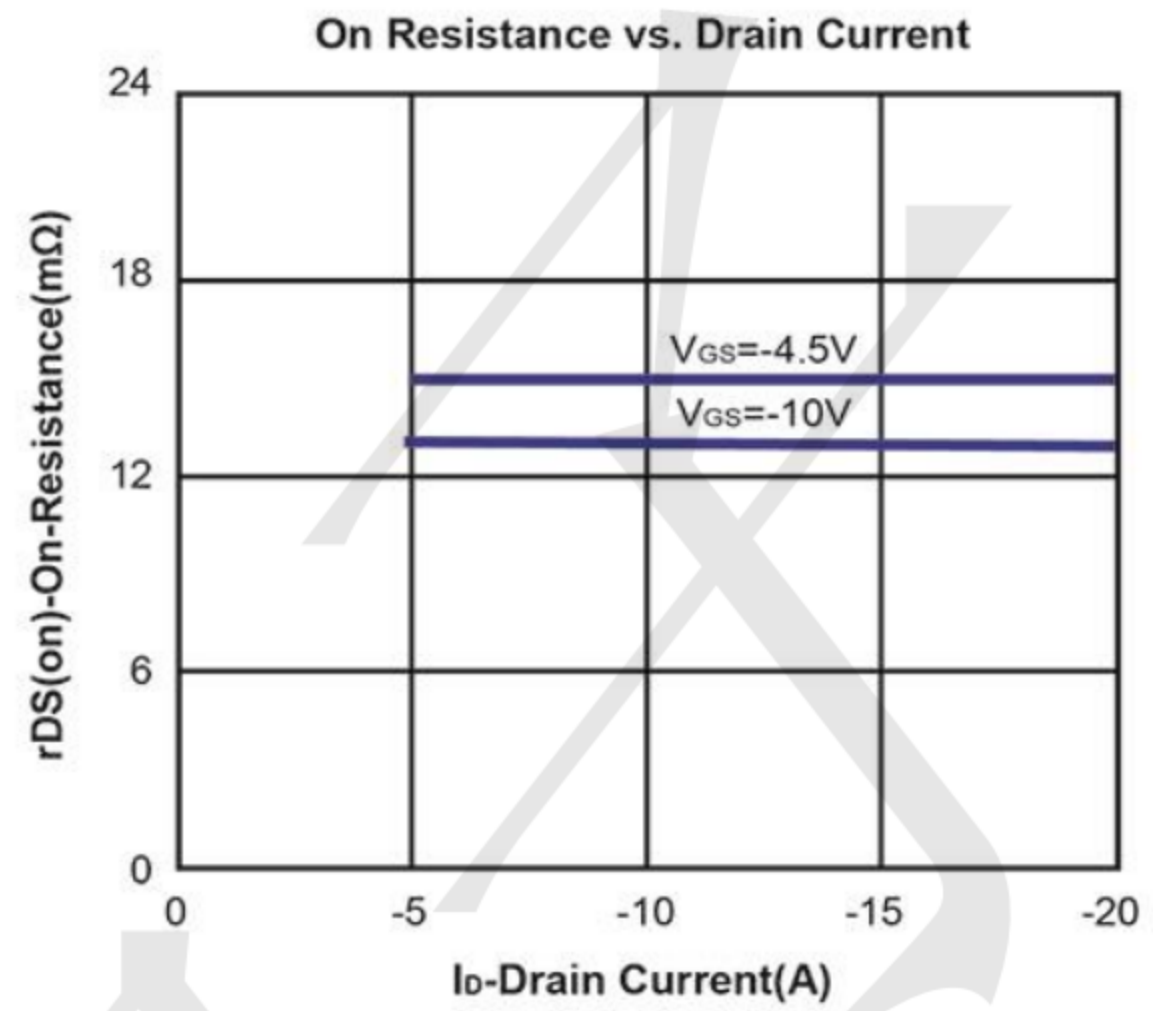
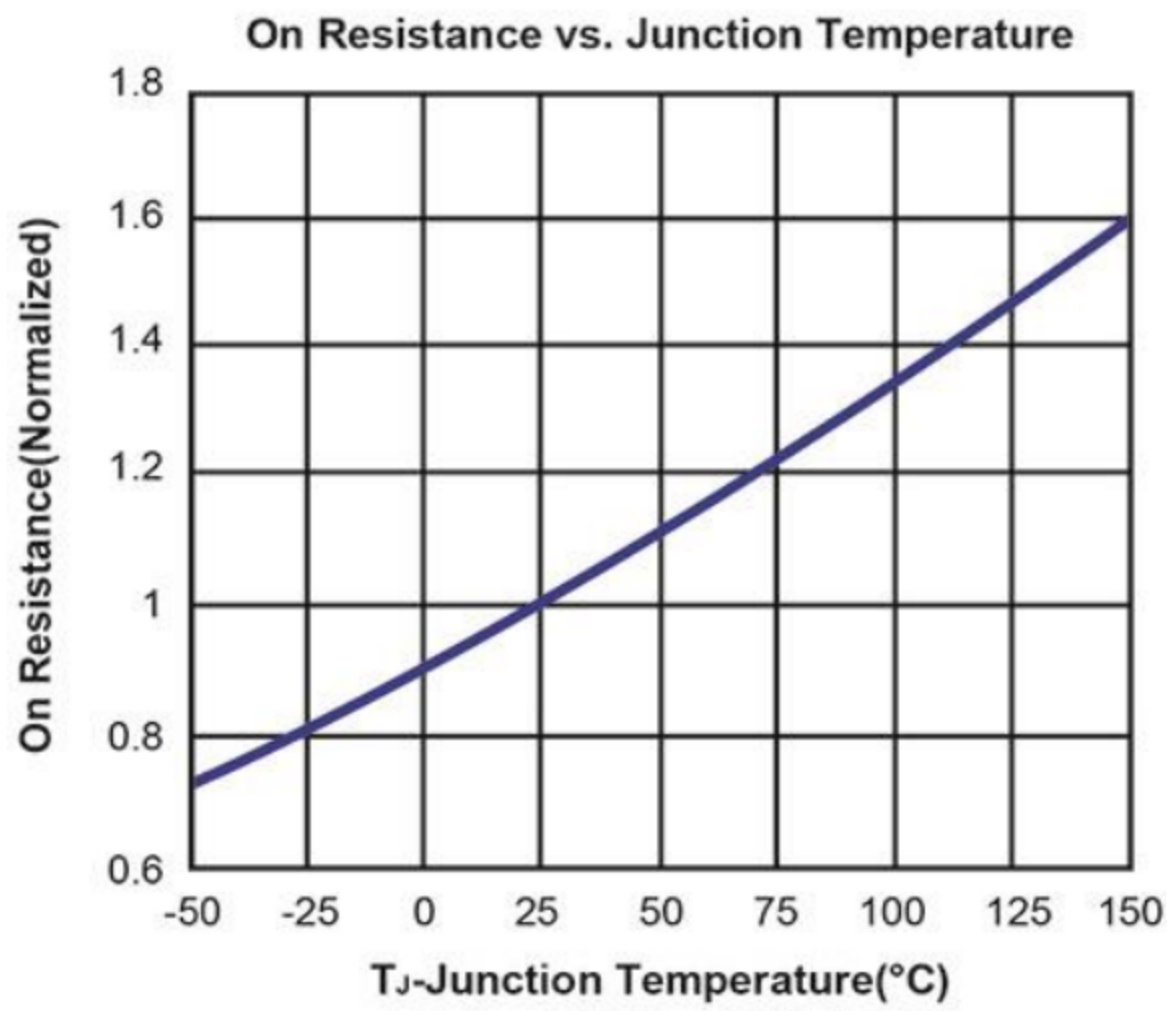
Absolute Maximum Ratings ($T_A = 25^\circ C$ unless otherwise specified)

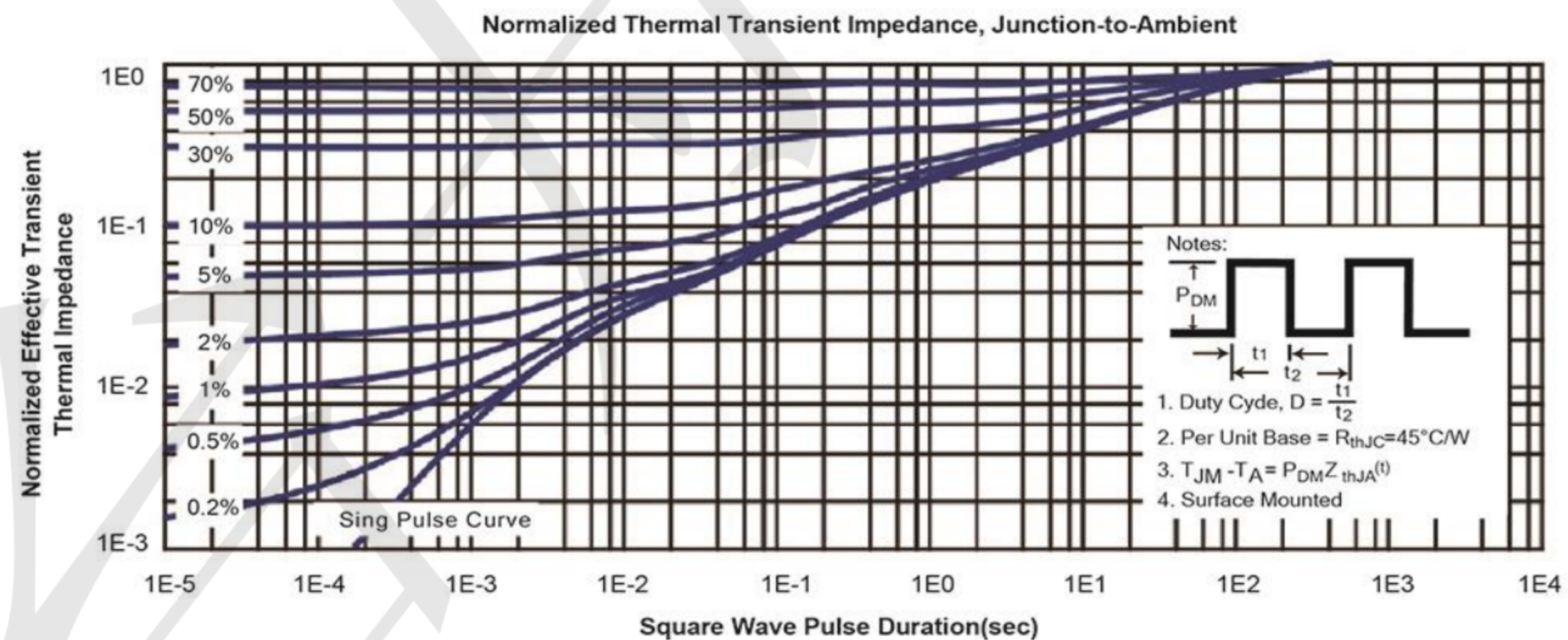
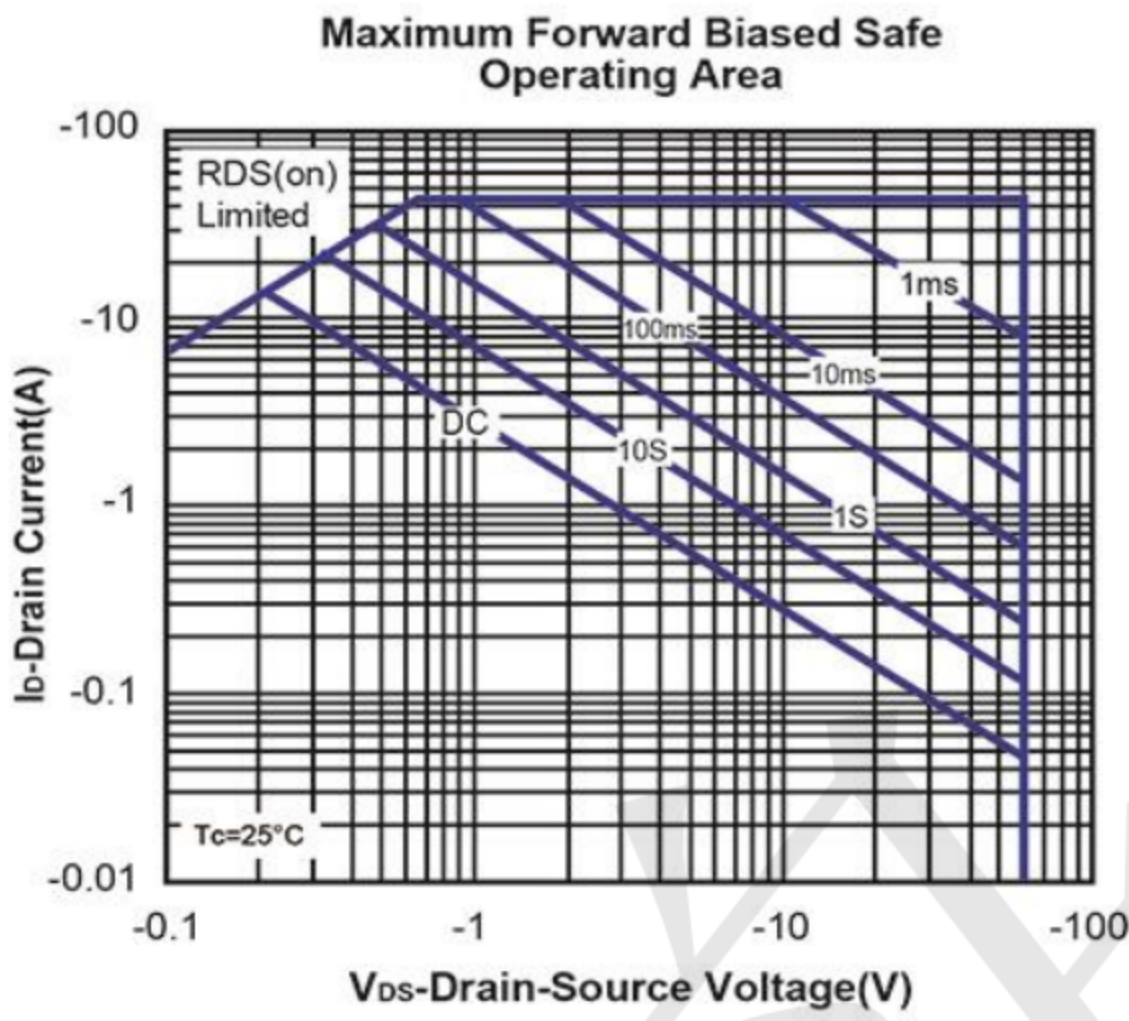
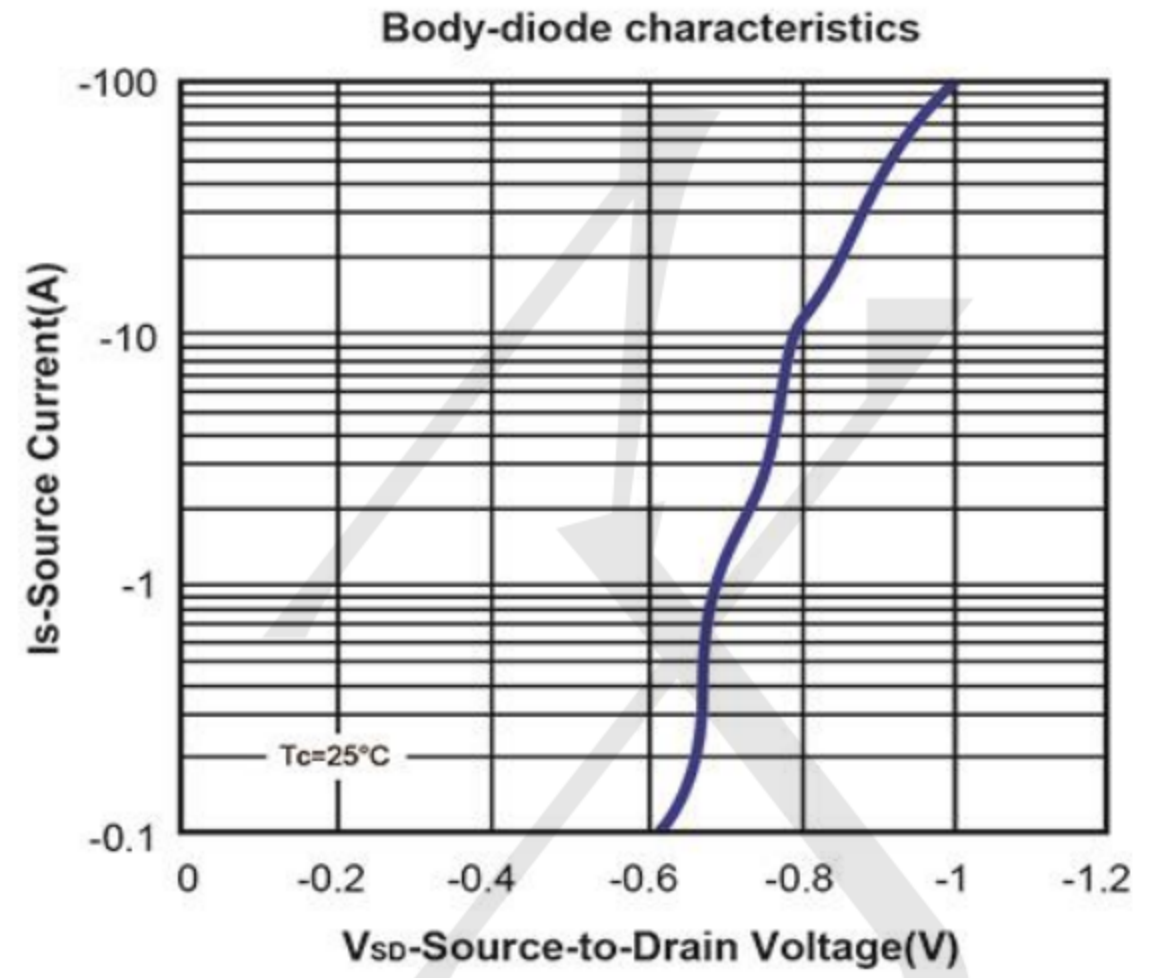
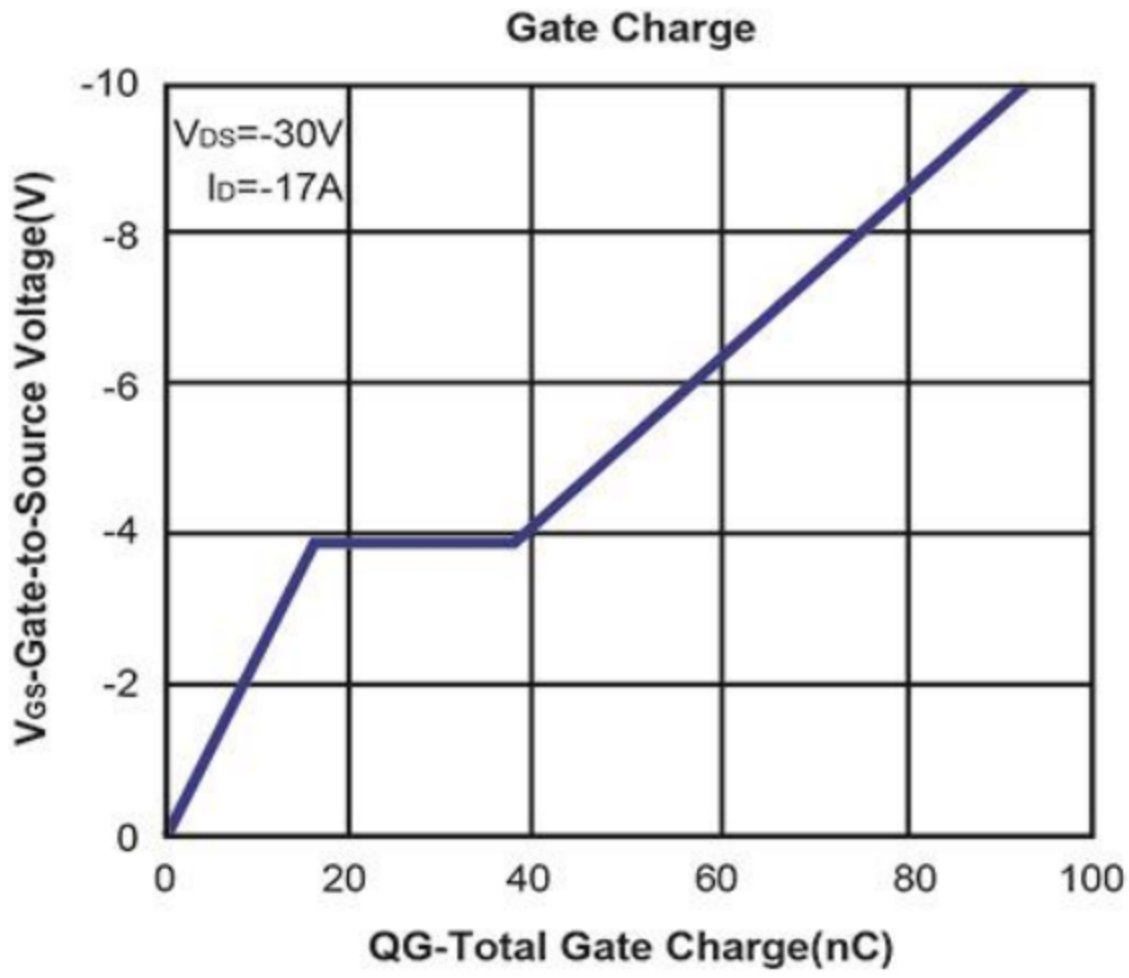
| Parameter | Symbol | Maximum Ratings | Unit |
|--------------------------------------|-----------------|--------------------|--------------|
| Drain-Source Voltage | V_{DS} | -60 | V |
| Gate-Source Voltage | V_{GS} | ± 20 | V |
| Continuous Drain Current* | I_D | $T_c = 25^\circ C$ | -11 |
| | | $T_c = 70^\circ C$ | -8.6 |
| Pulsed Drain Current | I_{DM} | -43 | A |
| Maximum Power Dissipation* | P_D | $T_c = 25^\circ C$ | 2.8 |
| | | $T_c = 70^\circ C$ | 1.8 |
| Operating Junction Temperature | T_J | -55 to 150 | $^\circ C$ |
| Thermal Resistance-Junction to Case* | $R_{\theta JC}$ | 45 | $^\circ C/W$ |

Electrical Characteristics (T =25°C unless otherwise specified)

| Symbol | TECH PUBLIC Parameter | Limit | Min | Typ | Max | Unit |
|----------------------|---|--|-----|------|------|------|
| STATIC | | | | | | |
| V _{(BR)DSS} | Drain-Source Breakdown Voltage | V _{GS} =0V, I _D =-250 μA | -60 | | | V |
| V _{GS(th)} | Gate Threshold Voltage | V _{DS} =V _{GS} , I _D =-250 μA | -1 | | -3 | V |
| I _{GSS} | Gate Leakage Current | V _{DS} =0V, V _{GS} =±20V | | | ±100 | nA |
| I _{DSS} | Zero Gate Voltage Drain Current | V _{DS} =-60V, V _{GS} =0V | | | -1 | μA |
| R _{DS(ON)} | Drain-Source On-State Resistance ^a | V _{GS} =-10V, I _D = -17A | | 13 | 15 | mΩ |
| | | V _{GS} =-4.5V, I _D = -14A | | 15 | 20 | |
| V _{SD} | Diode Forward Voltage | I _S =-17A, V _{GS} =0V | | -0.8 | -1.2 | V |
| DYNAMIC | | | | | | |
| Q _g | Total Gate Charge | V _{DS} =-30V, V _{GS} =-10V, I _D =-17A | | 92.6 | | nC |
| Q _g | Total Gate Charge | V _{DS} =-30V, V _{GS} =-4.5V, I _D =-17A | | 44.6 | | |
| Q _{gs} | Gate-Source Charge | | | 15.9 | | |
| Q _{gd} | Gate-Drain Charge | | | 20.3 | | |
| C _{iss} | Input capacitance | V _{DS} =-30V, V _{GS} =0V, F=1MHz | | 4765 | | pF |
| C _{oss} | Output Capacitance | | | 270 | | |
| C _{rss} | Reverse Transfer Capacitance | | | 234 | | |
| t _{d(on)} | Turn-On Delay Time | V _{DS} =-30V, R _L =1.8Ω V _{GS} =-10V, R _G =6Ω I _D =-17A | | 127 | | ns |
| t _r | Turn-On Rise Time | | | 103 | | |
| t _{d(off)} | Turn-Off Delay Time | | | 175 | | |
| t _f | Turn-Off Fall Time | | | 57.1 | | |

Typical Electrical and Thermal Characteristic Curves







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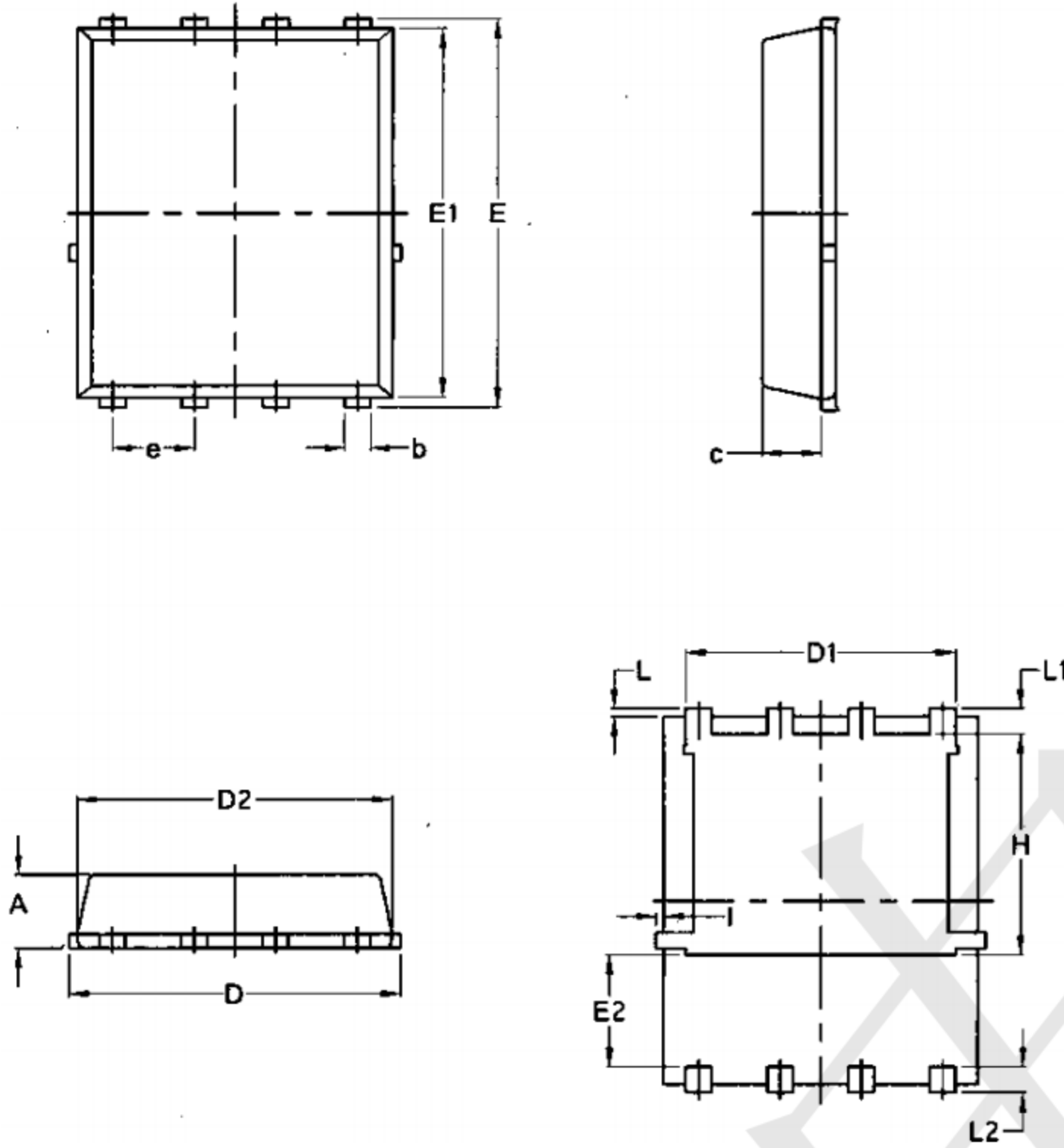
—台丹电子—

SI7461DP

P- Channel 60-V (D-S) MOSFET

www.sot23.com.tw

Package Outline Dimensions PDFN5x6-8L



| Symbol | Common | | | |
|--------|----------|--------|----------|--------|
| | mm | | Inch | |
| | Min | Max | Min | Max |
| A | 1.03 | 1.17 | 0.0406 | 0.0461 |
| b | 0.34 | 0.48 | 0.0134 | 0.0189 |
| c | 0.824 | 0.0970 | 0.0324 | 0.082 |
| D | 4.80 | 5.40 | 0.1890 | 0.2126 |
| D1 | 4.11 | 4.31 | 0.1618 | 0.1697 |
| D2 | 4.80 | 5.00 | 0.1890 | 0.1969 |
| E | 5.95 | 6.15 | 0.2343 | 0.2421 |
| E1 | 5.65 | 5.85 | 0.2224 | 0.2303 |
| E2 | 1.60 | / | 0.0630 | / |
| e | 1.27 BSC | | 0.05 BSC | |
| L | 0.05 | 0.25 | 0.0020 | 0.0098 |
| L1 | 0.38 | 0.50 | 0.0150 | 0.0197 |
| L2 | 0.38 | 0.50 | 0.0150 | 0.0197 |
| H | 3.30 | 3.50 | 0.1299 | 0.1378 |
| l | / | 0.18 | / | 0.0070 |

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