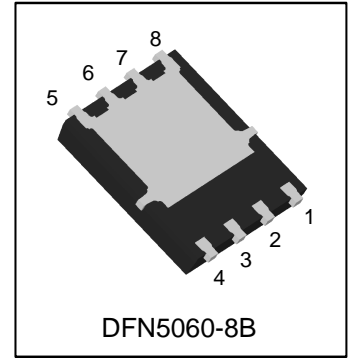


LP7411DT1WG

60V P-Channel (D-S) MOSFET



1. FEATURES

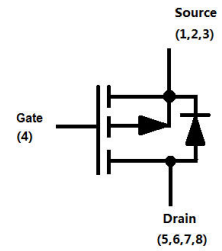
- Low RDS(on) trench technology
- Low thermal impedance
- Fast switching speed
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

2. APPLICATIONS

- Load Switches
- DC/DC Conversion
- Motor Drives

3. DEVICE MARKING AND ORDERING INFORMATION

| Device | Marking | Shipping |
|-------------|---------|----------------|
| LP7411DT1WG | LP7411 | 3000/Tape&Reel |



4. MAXIMUM RATINGS(Ta = 25°C)

| Parameter | | Symbol | Limits | Unit |
|--|-----------|---------|----------|------|
| Drain-Source Voltage | | VDS | -60 | V |
| Gate-Source Voltage | | VGS | ±20 | |
| Continuous Drain Current (Note1) | TA = 25°C | ID | -20 | A |
| | TA = 70°C | | -15 | |
| Pulsed Drain Current (Note2) | | IDM | -80 | |
| Avalanche Current(L=0.1mH) | | IAS | 49 | |
| Avalanche energy(L=0.1mH) | | EAS | 120.05 | mJ |
| Power Dissipation (Note1) | TA = 25°C | PD | 5 | W |
| | TA = 70°C | | 3.2 | |
| Operating Junction and Storage Temperature Range | | TJ,Tstg | -55~+150 | °C |

5. THERMAL CHARACTERISTICS

| Parameter | | Symbol | Limits | Unit |
|-------------------------------------|--------------|--------|--------|------|
| Maximum Junction-to-Ambient (Note1) | t ≤ 10 s | RθJA | 25 | °C/W |
| | Steady State | | 65 | |

1.Surface mounted on "1.5 x 1.5" FR4 board using 1 sq in pad, 2 oz Cu.

2.Pulse width limited by maximum junction temperature

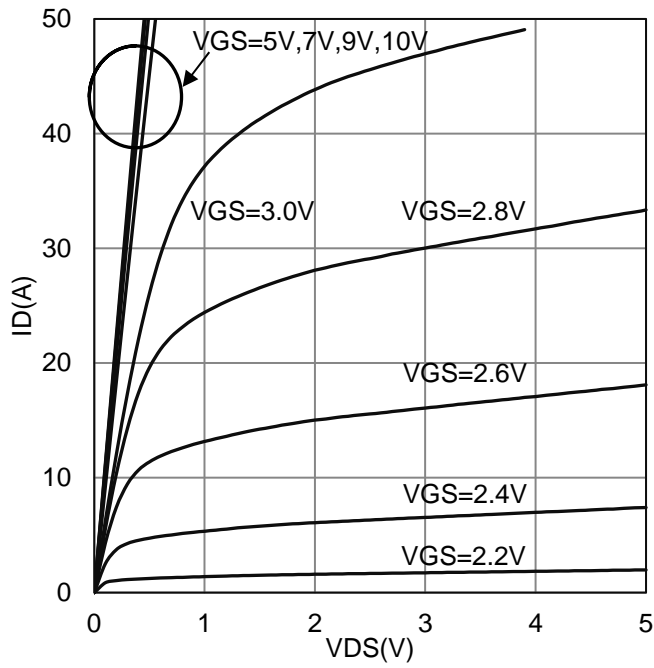
6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

| Characteristic | Symbol | Min. | Typ. | Max. | Unit | |
|---|--|---------|-------|-------------|------|----|
| Static | | | | | | |
| Drain–Source Breakdown Voltage (VGS = 0, ID = -250μA) | VBRDSS | -60 | - | - | V | |
| Gate Threshold Voltage (VDS =VGS , ID =-250μA) | VGS(th) | -1 | - | - | V | |
| Gate Leakage Current (VDS =0V, VGS =±20V) | IGSS | - | - | ±100 | nA | |
| Zero Gate Voltage Drain Current (VDS = -48 V, VGS = 0 V) | IDSS | - | - | -1 | μA | |
| Drain-Source On-Resistance(Note 3) (VGS = -10 V, ID = -9 A) (VGS = -4.5 V, ID = -8 A) | RDS(ON) | - | - | 9.8 11.2 | mΩ | |
| Diode Forward Voltage (Note 3) (IS = -3.6 A, VGS = 0 V) | VSD | - | -0.72 | - | V | |
| Dynamic(Note 4) | | | | | | |
| Total Gate Charge | (VDS=-30V,VGS=-4.5V,ID=-9A) | Qg | - | 66 | - | nC |
| Gate-Source Charge | | Qgs | - | 17 | - | |
| Gate-Drain Charge | | Qgd | - | 26 | - | |
| Turn-On Delay Time | (VDS = -30 V, RL = 3.3 Ω, ID = -9 A, VGEN = -10 V, RGEN = 6 Ω) | td(on) | - | 15 | - | ns |
| Rise Time | | tr | - | 21 | - | |
| Turn-Off Delay Time | | td(off) | - | 255 | - | |
| Fall Time | | tf | - | 90 | - | |
| Input Capacitance | (VDS = -30 V, VGS = 0 V, f = 1 MHz) | Ciss | - | 7044 | - | pF |
| Output Capacitance | | Coss | - | 382 | - | |
| Reverse Transfer Capacitance | | Crss | - | 321 | - | |

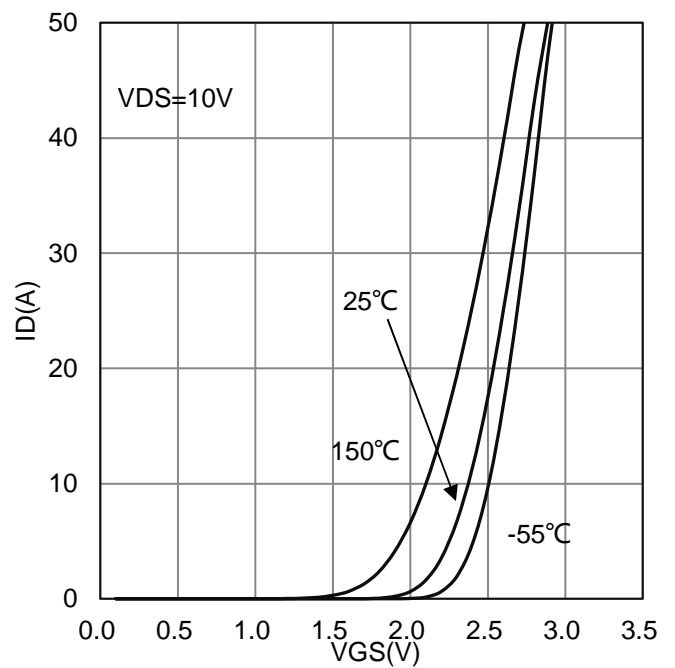
3.Pulse test: PW ≤ 300us duty cycle ≤ 2%.

4.Guaranteed by design, not subject to production testing.

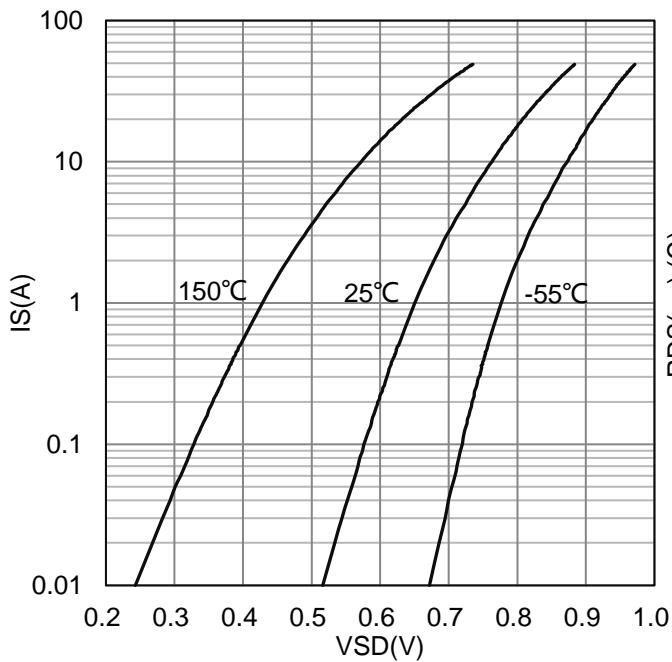
7. ELECTRICAL CHARACTERISTICS CURVES



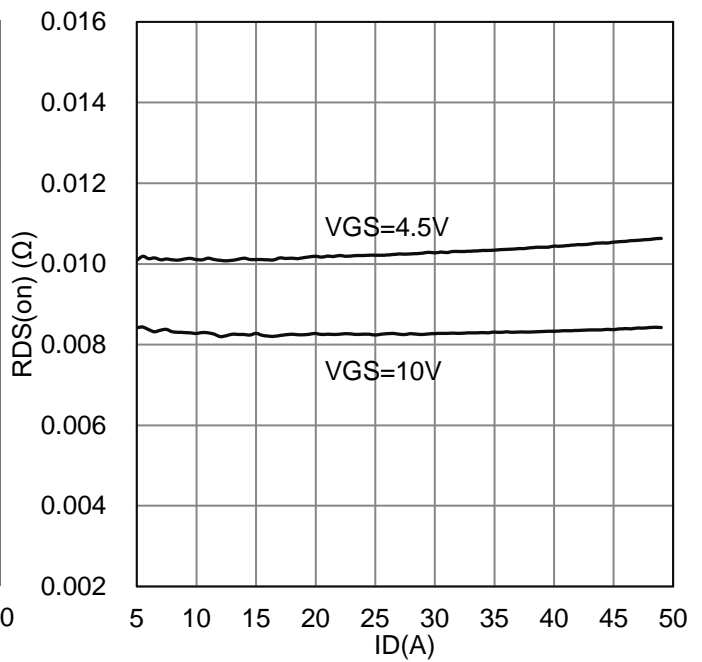
ID vs. VDS



ID vs. VGS

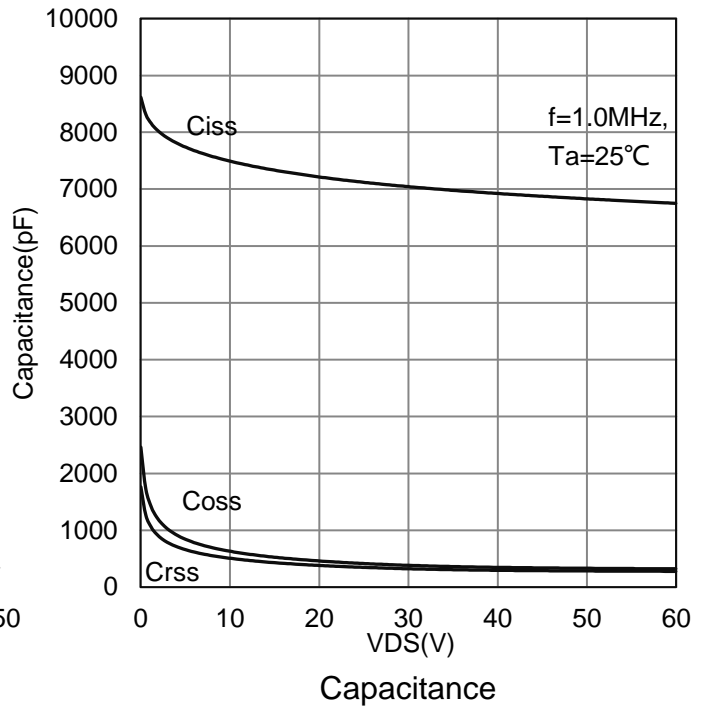
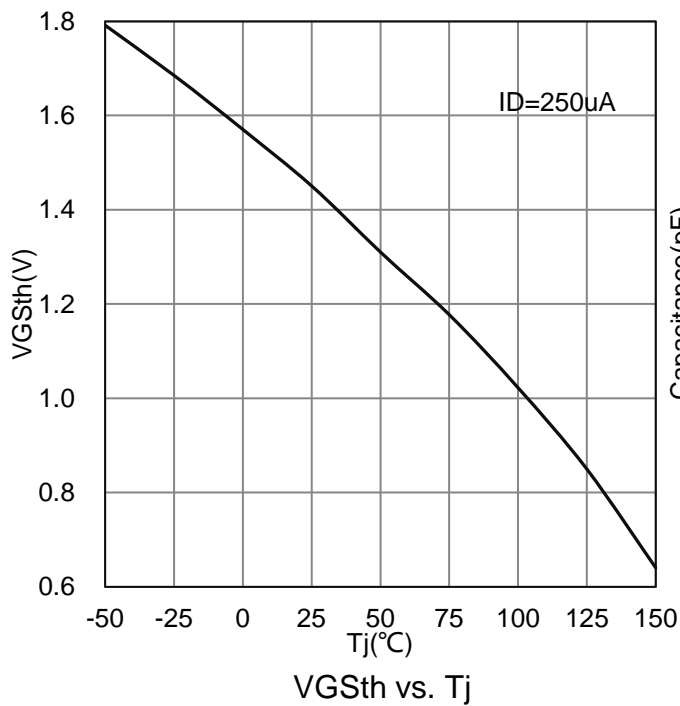
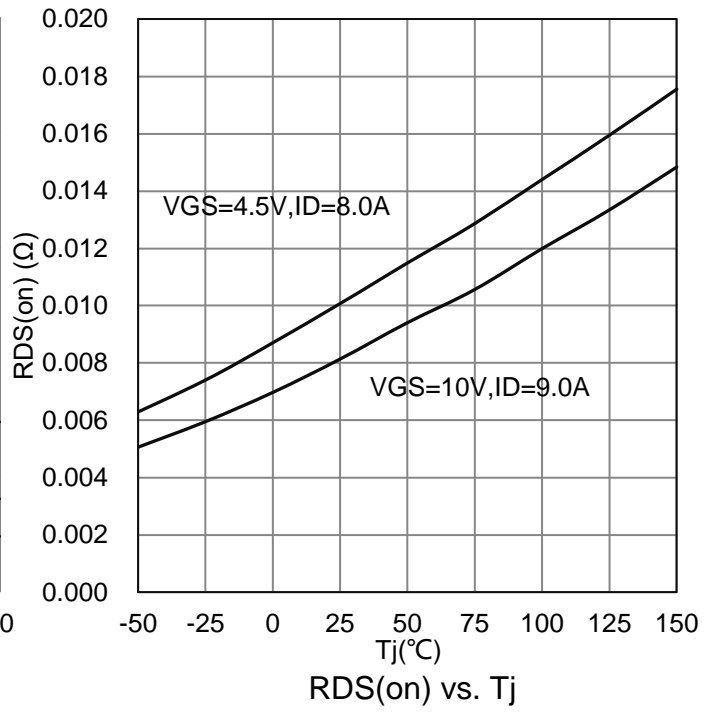
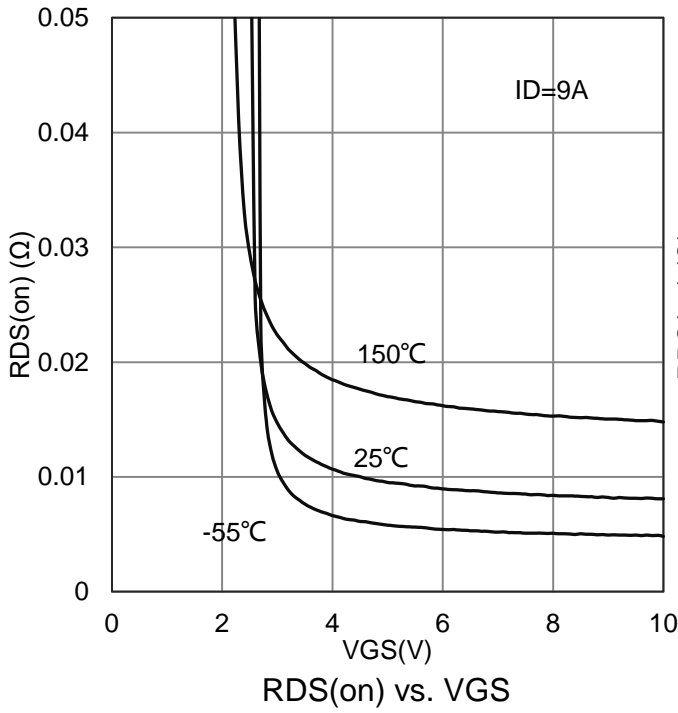


IS vs. VSD



RDS(on) vs. ID

7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



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