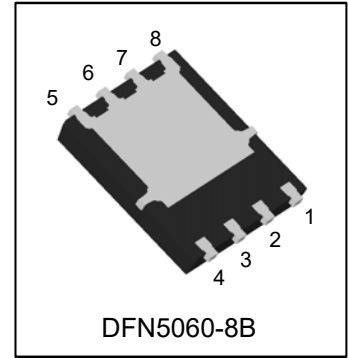


P7411D

60V P-Channel (D-S) MOSFET

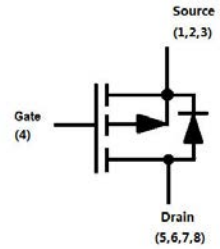


1. FEATURES

- 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
P7411D	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)

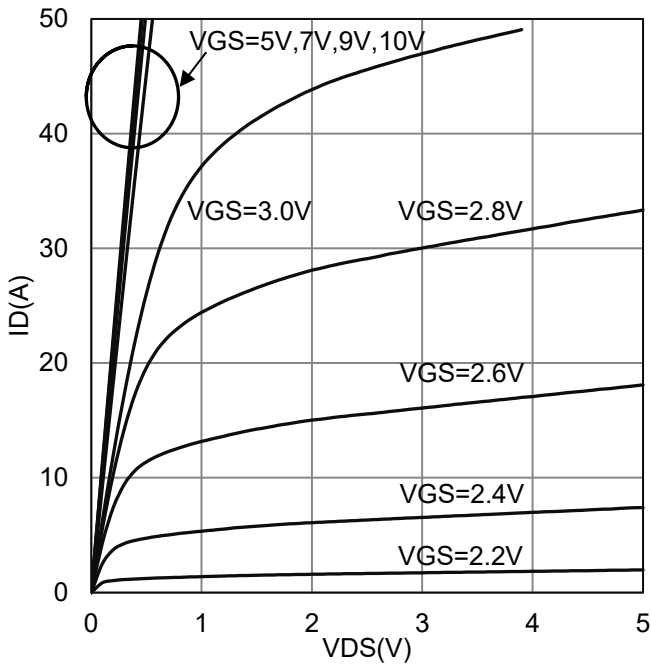
Characteristic	Symbol	Min.	Typ.	Max.	Unit	
Static						
Drain–Source Breakdown Voltage (VGS = 0, ID = -250μA)	VBRDSS	-60	-	-	V	
Gate Threshold Voltage (VDS =VGS , ID =-250μA)	VGS(th)	-1	-	-	V	
Gate Leakage Current (VDS =0V, VGS =±20V)	IGSS	-	-	±100	nA	
Zero Gate Voltage Drain Current (VDS = -48 V, VGS = 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%.

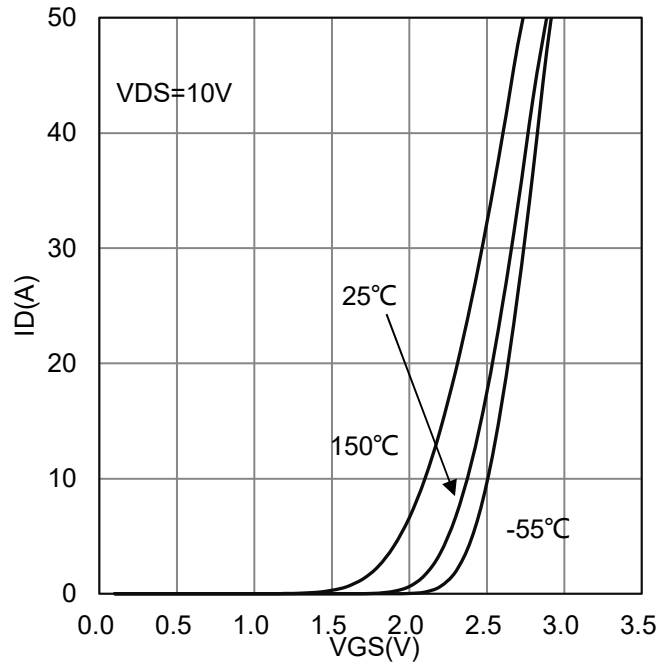
4.Guaranteed by design, not subject to production testing.



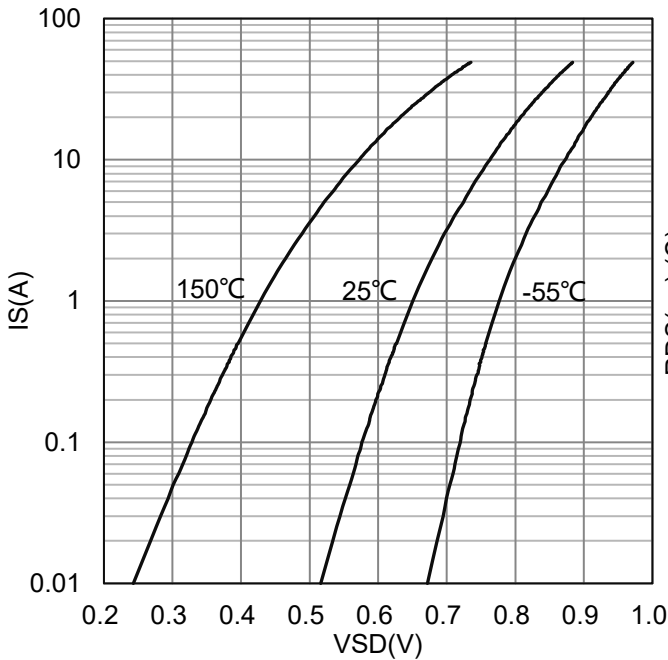
7. ELECTRICAL CHARACTERISTICS CURVES



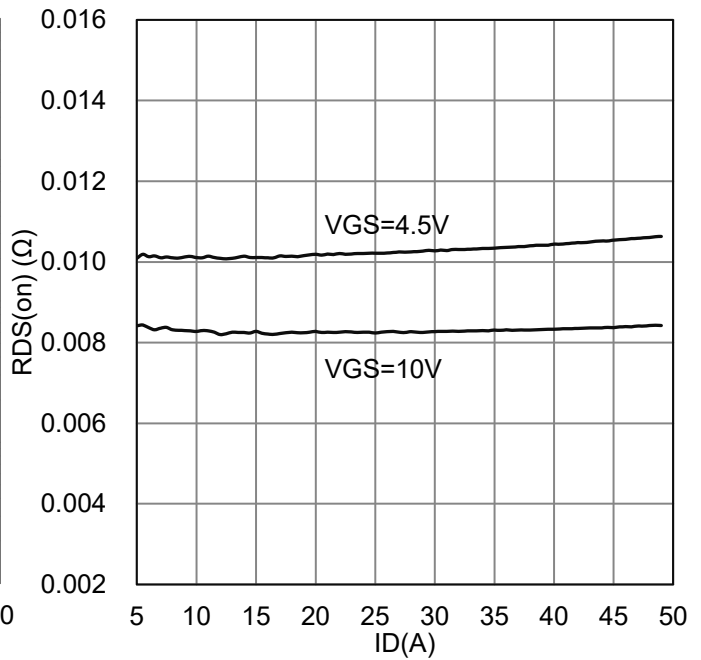
ID vs. VDS



ID vs. VGS



IS vs. VSD



RDS(on) vs. ID



7. ELECTRICAL CHARACTERISTICS CURVES(Con.)

