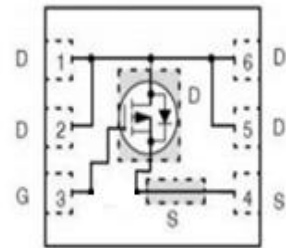
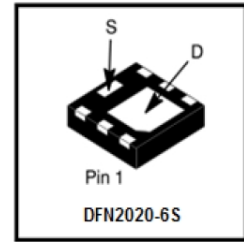


LP2707DT2AG

20V P-Channel Enhancement-Mode MOSFET

1. FEATURES

- $V_{DS} = -20V$
- $R_{DS(ON)} \leq 70m\Omega, V_{GS}@-4.5V, I_{DS}@-4.7A$
- $R_{DS(ON)} \leq 110m\Omega, V_{GS}@-2.5V, I_{DS}@-1.0A$
- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.



2. APPLICATIONS

- Advanced trench process technology
- High Density Cell Design For Ultra Low On-Resistance
- ESD Rating of Class 0 (<100V) per Human Body Model

3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LP2707DT2AG	1E	4000/Tape&Reel

4. MAXIMUM RATINGS($T_a = 25^\circ C$)

Parameter	Symbol	Limits	Unit
Drain-Source Voltage	V_{DSS}	-20	V
Gate-to-Source Voltage – Continuous	V_{GS}	± 12	V
Continuous Drain Current	I_D	-7	A
Pulsed Drain Current(Note1)	I_{DM}	-25	A
Maximum Power Dissipation	PD	$T_A = 25^\circ C$	1.9
		$T_A = 75^\circ C$	0.7
Operating and Storage Temperature Range	T_J, T_{stg}	$-55 \sim +150$	$^\circ C$
Thermal Resistance-Junction to Ambient (Note2)	$R_{\theta JA}$	70	$^\circ C/W$

Note:1. Repetitive Rating: Pulse width limited by the Maximum junction temperature.
2.1-in² 2oz Cu PCB board

5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

STATIC

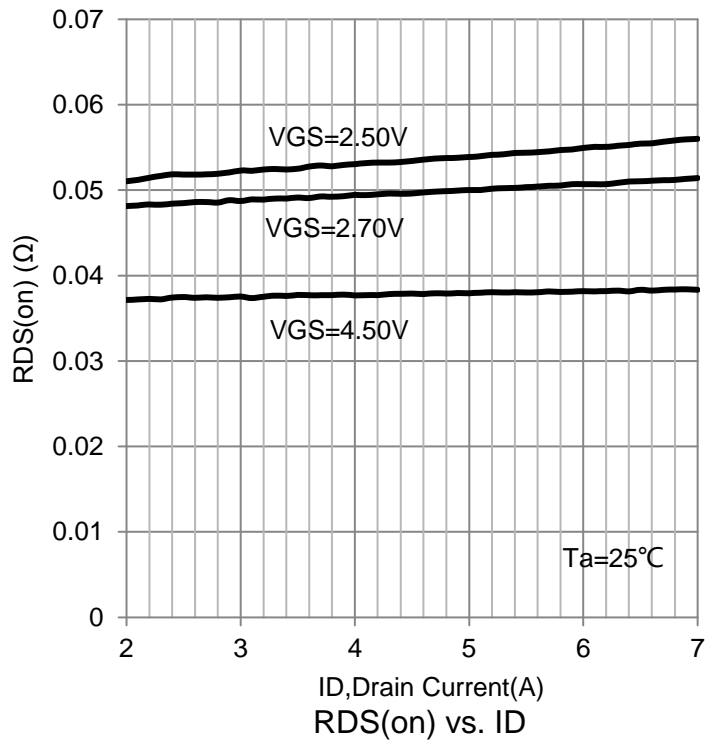
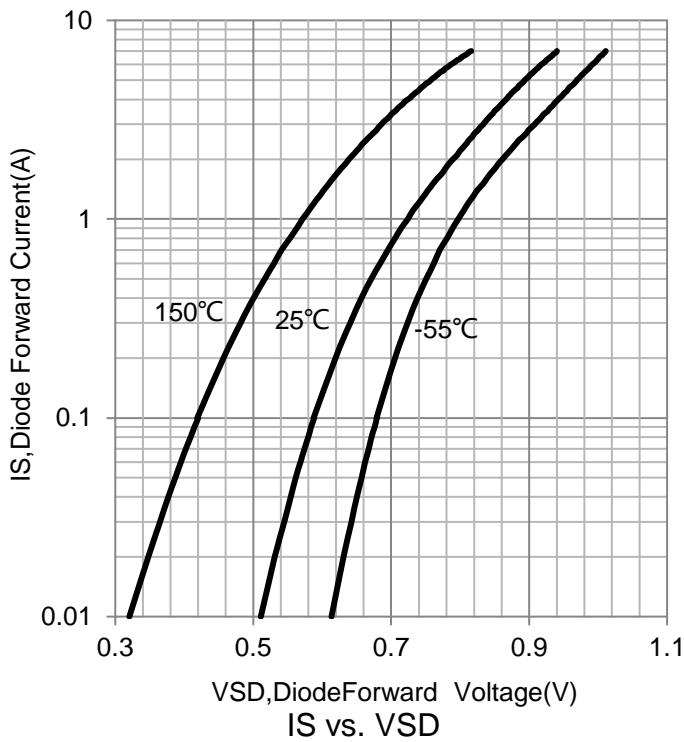
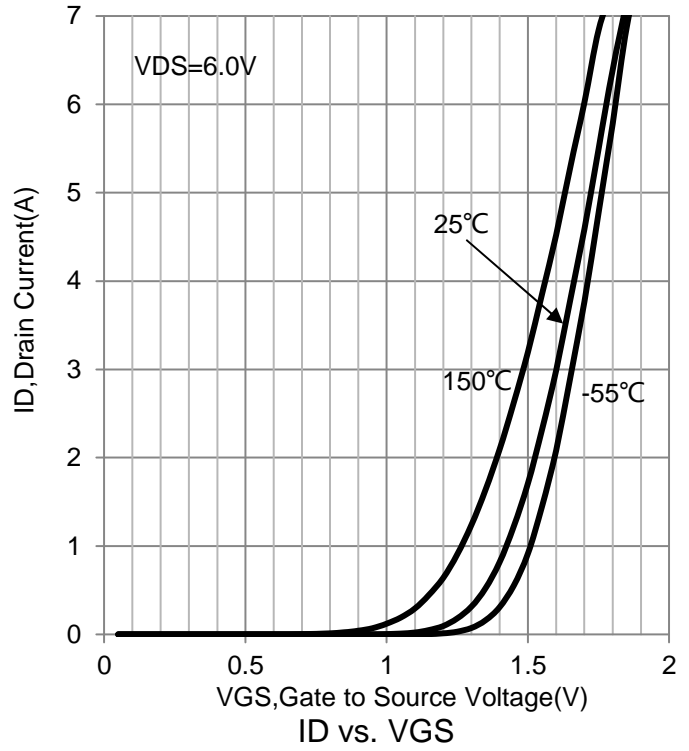
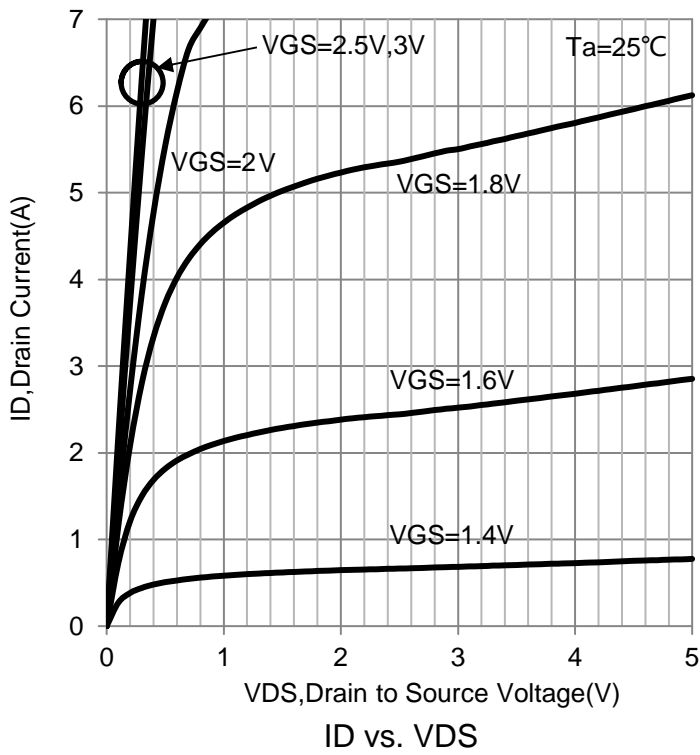
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Drain–Source Breakdown Voltage (VGS = 0, ID = -250μA)	VBRDSS	-20	-	-	V
Zero Gate Voltage Drain Current (VDS = -20V, VGS = 0V)	IDSS	-	-	-1	μA
Gate–to–Source Leakage Current (VDS = 0 V, VGS = ±12 V)	IGSS	-	-	±100	nA
Gate Threshold Voltage (VGS = VDS , ID = -250μA)	VGS(th)	-0.6	-0.85	-1.4	V
Static Drain–Source On–State Resistance (VGS = -4.5V, ID = -4.7 A) (VGS = -2.7V, ID = -3.8 A) (VGS = -2.5 V, ID = -1 A)	RDS(on)	-	-	70 100 110	mΩ
Forward Diode Voltage (VGS = 0 V, ISD = -1.7A)	VSD	-	-	-1.2	V

DYNAMIC

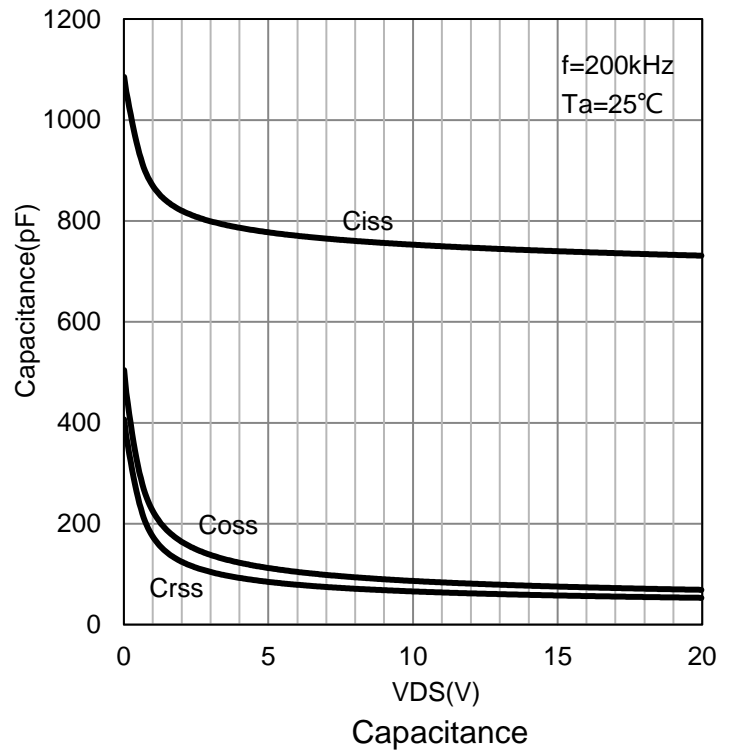
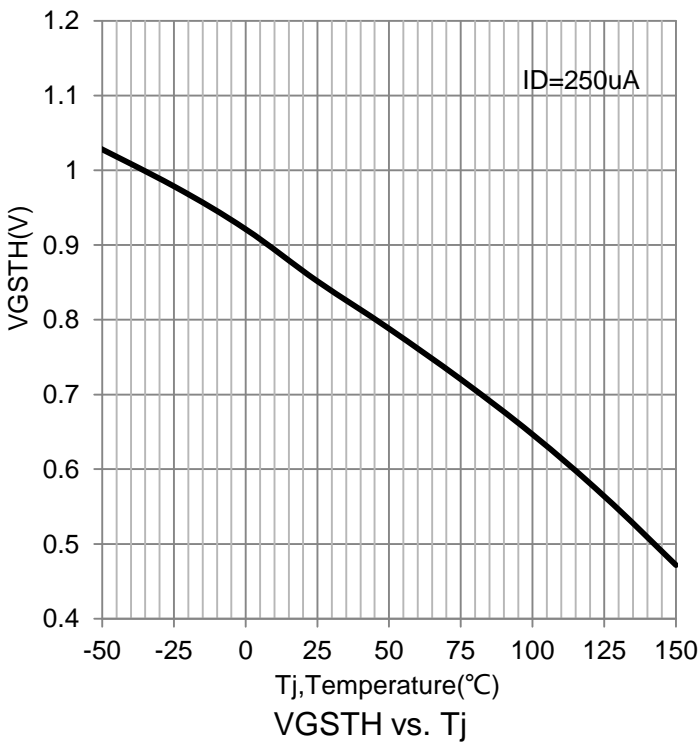
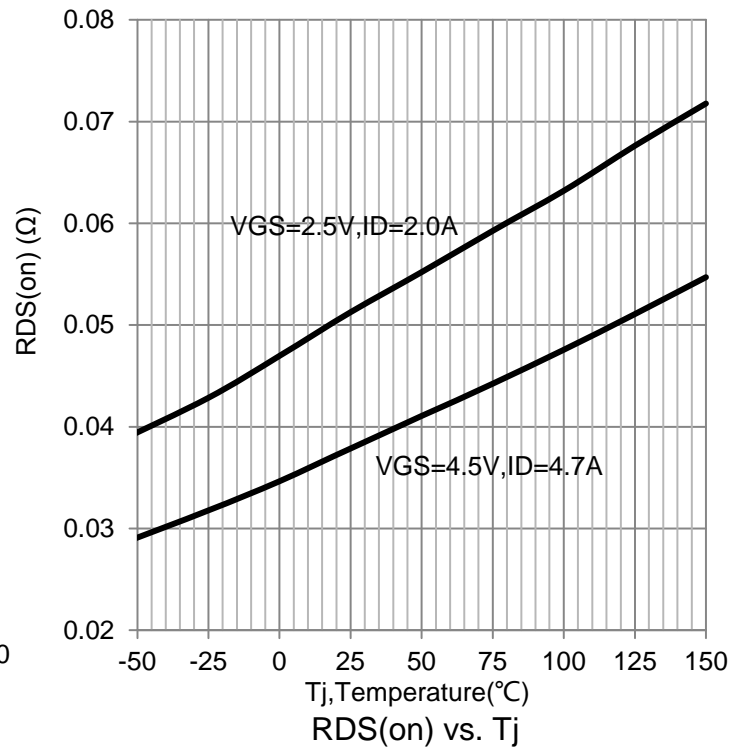
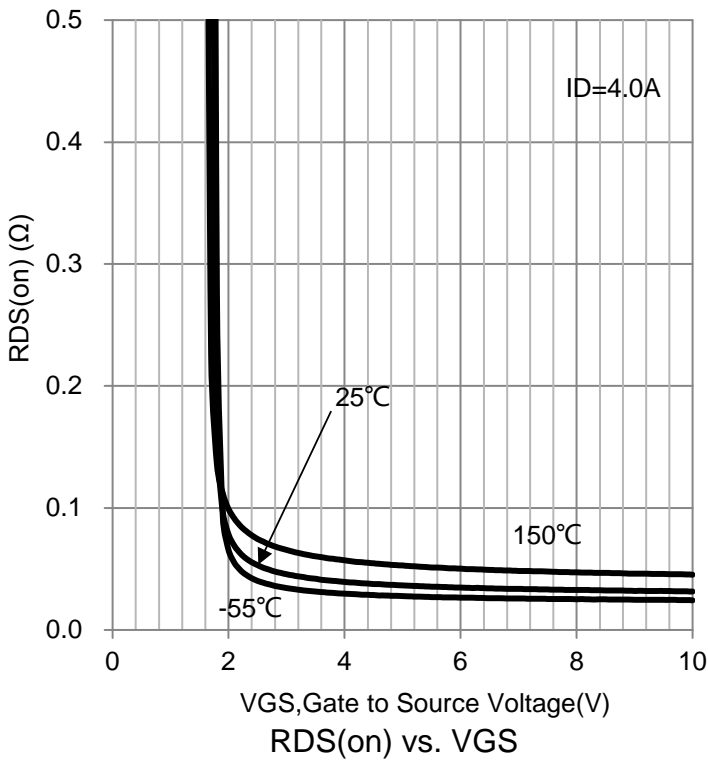
Total Gate Charge	(VGS = -10V, VDS = -4.7V, ID = -4.5A)	QG	-	16	24	nC
Gate–to–Source Gate Charge		QGS	-	0.9	-	
Gate–to–Drain Charge		QGD	-	2.7	-	
Turn–On Delay Time	(VDD = -10V, RL = 10Ω, ID = -1A, VGEN = -4.5V, RG = 6Ω)	td(on)	-	16	25	ns
Rise Time		tr	-	35	55	
Turn–Off Delay Time		td(off)	-	70	95	
Fall Time		tf	-	25	40	
Input Capacitance	(VGS=0V, VDS=-10V, f=200kHz)	Ciss	-	797.3	-	pF
Output Capacitance		Coss	-	88.5	-	
Reverse Transfer Capacitance		Crss	-	74.8	-	
Forward Transconductance (VDS = -10 V, ID = -4.7 A)		gFS	-	8	-	S

3. Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%.

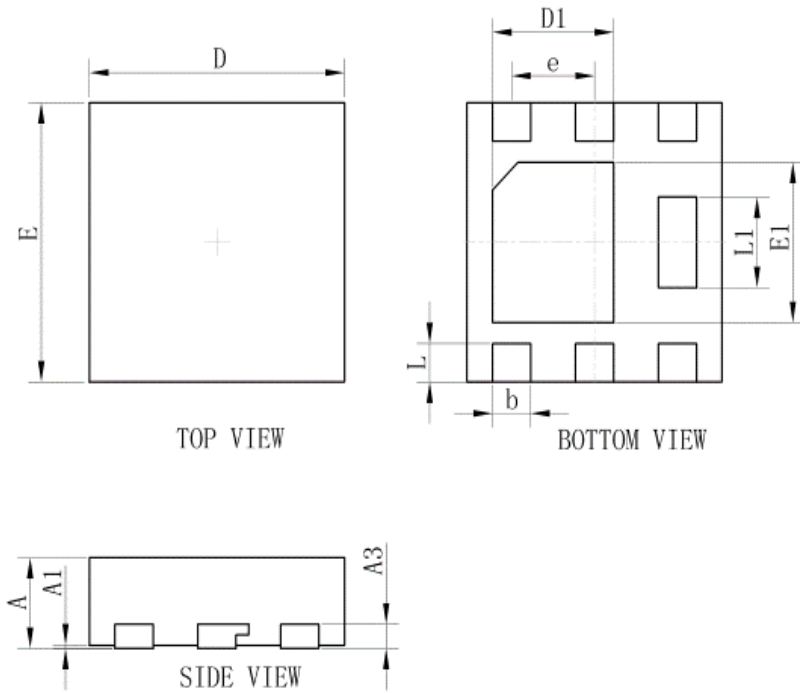
6. ELECTRICAL CHARACTERISTICS CURVES



6. ELECTRICAL CHARACTERISTICS CURVES(Con.)

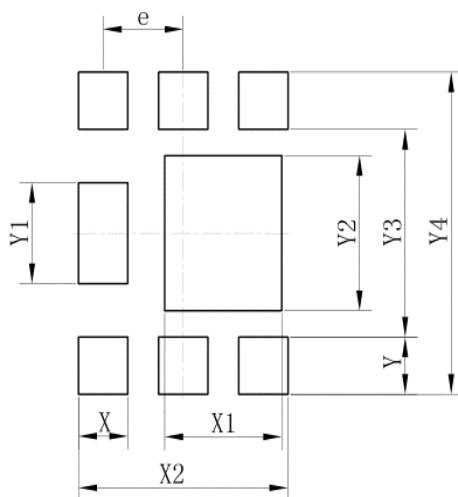


7. OUTLINE AND DIMENSIONS



DFN2020-6S			
DIM	MIN	NOR	MAX
A	0.60	0.65	0.70
A1	0.01	0.03	0.05
b	0.25	0.30	0.35
D	1.95	2.00	2.05
E	1.95	2.00	2.05
e	0.65TYP.		
L	0.23	0.28	0.33
L1	0.60	0.65	0.65
D1	0.90	0.95	1.00
E1	1.10	1.15	1.20
A3	0.152REF		
All Dimensions in mm			

8. SOLDERING FOOTPRINT



DFN2020-6S	
Dim	(mm)
X	0.40
X1	0.95
X2	1.70
e	0.65
Y	0.43
Y1	0.75
Y2	1.15
Y3	1.54
Y4	2.39