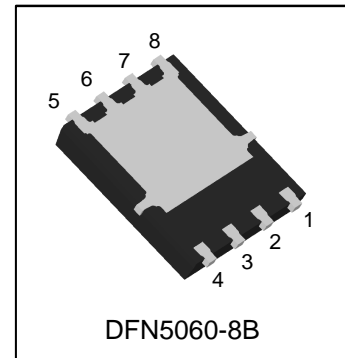


LN73030SDT1WG

30V N-Channel Power MOSFET



1. FEATURES

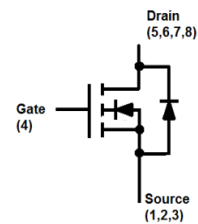
- Low thermal impedance.
- Fast switching.
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

2. APPLICATIONS

- Power Routing
- DC/DC Conversion
- Motor Drives

3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
LN73030SDT1WG	LN73030S	3000/Tape&Reel



4. MAXIMUM RATINGS(Ta = 25°C)

Parameter		Symbol	Limits	Unit
Drain-to-Source Voltage		VDS	30	V
Gate-to-Source Voltage		VGS	±20	V
Continuous Drain Current(Note 1)	TA=25°C	ID	21	A
	TA=75°C		16	
	TC=25°C		105	
	TC=75°C		82	
Pulsed Drain Current (Note 2)		IDM	84	A
Avalanche Current		IAS	38	A
Avalanche Energy(L=0.1mH)		EAS	72.2	mJ
Power Dissipation(Note 1)	TA=25°C	PD	2.5	W
	TC=25°C		62.5	
Operating Junction and Storage Temperature Range		Tj/Tstg	-55~+150	°C

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
Thermal Resistance,Junction-to-Ambient(Note 1)	RθJA	50	°C/W
Thermal Resistance,Junction-to-Ambient(Note 3)	RθJA	125	
Thermal Resistance,Junction-to-Case	RθJC	2	

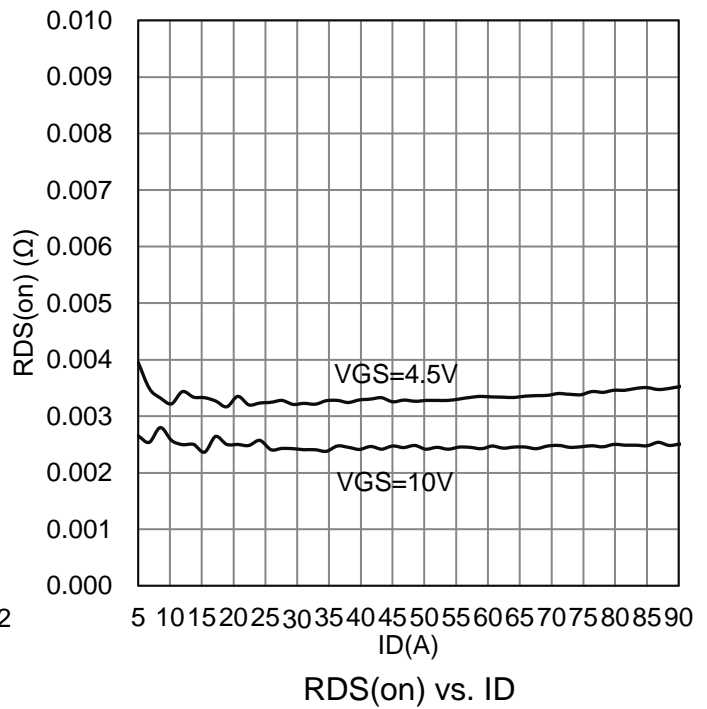
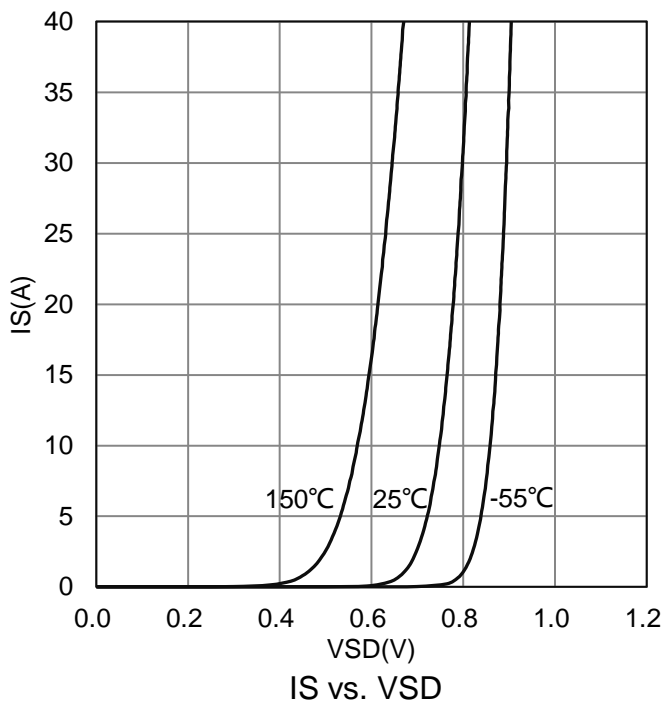
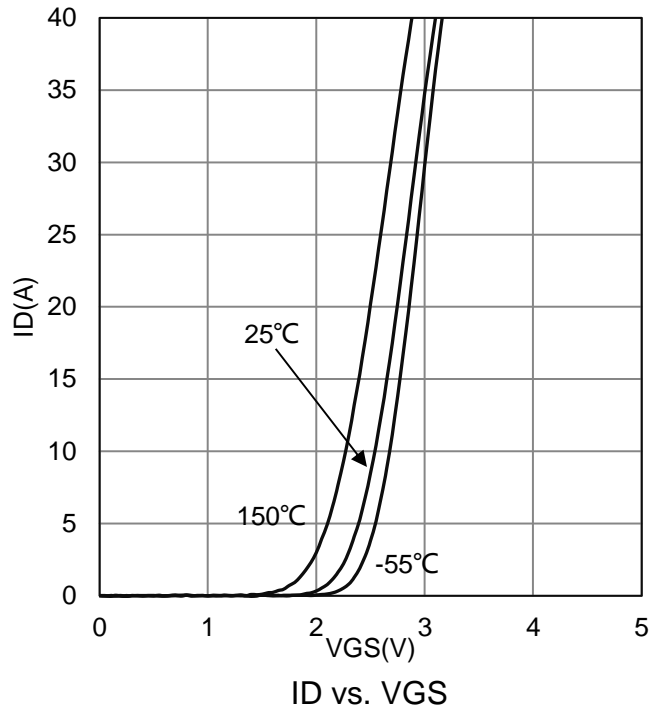
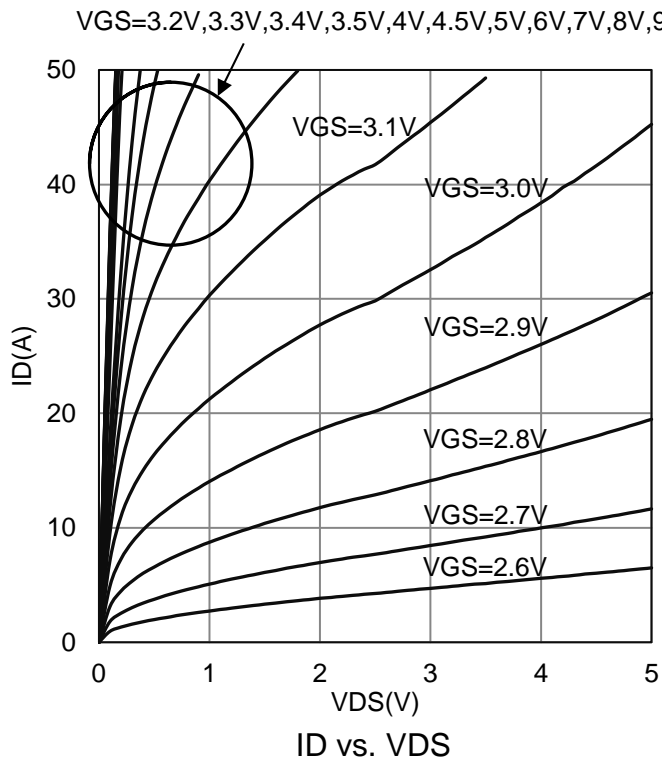
- 1.Surface mounted on "1.5 x 1.5" FR4 board using 1 sq in pad, 2 oz Cu.
- 2.Pulse width limited by maximum junction temperature.
- 3.Surface mounted on FR4 board using the minimum recommended pad size.

6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

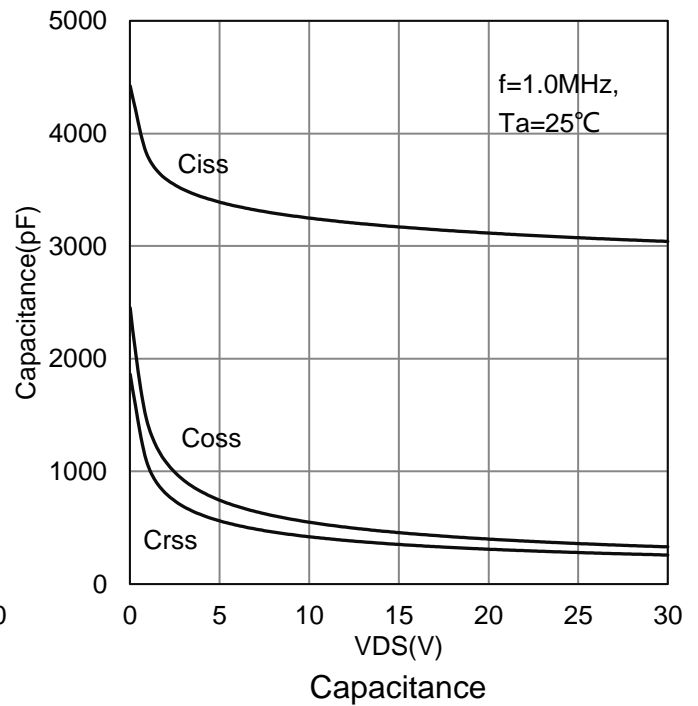
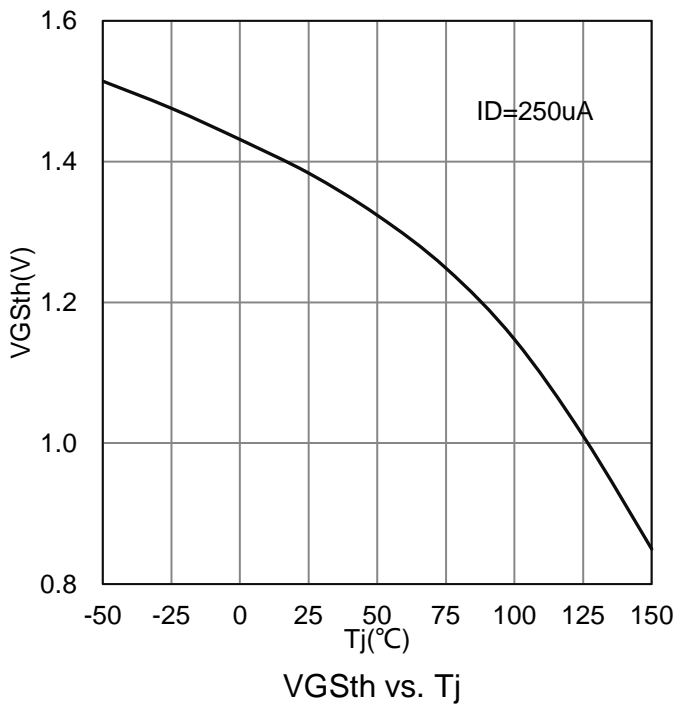
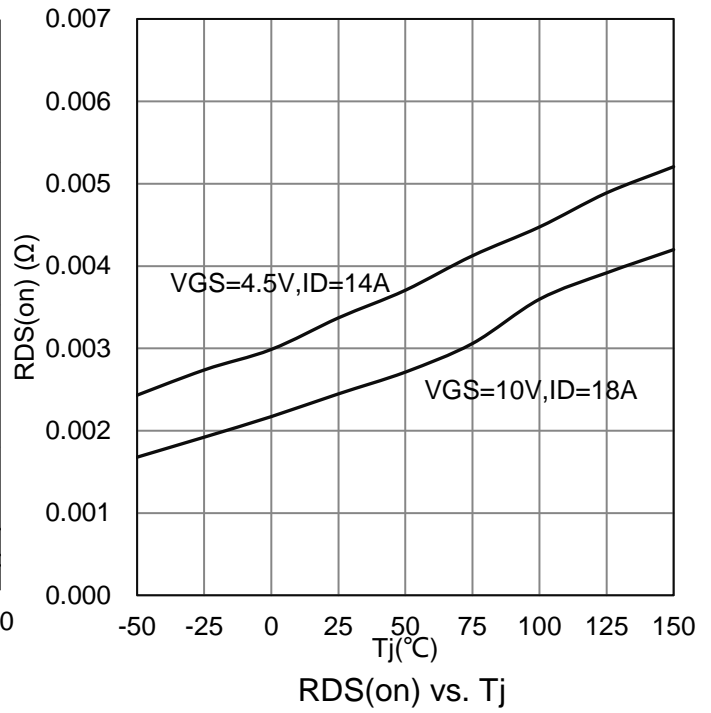
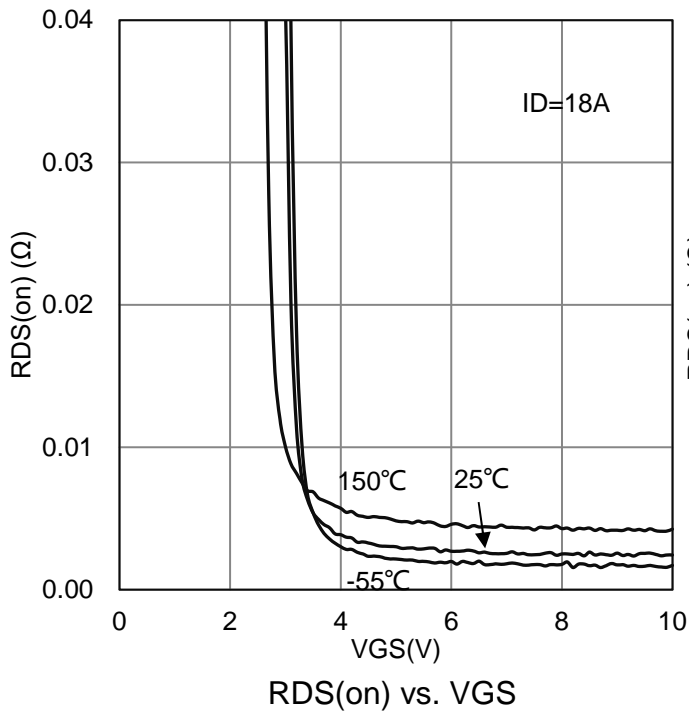
Characteristic	Symbol	Min.	Typ.	Max.	Unit
STATIC					
Drain-Source Breakdown Voltage (VGS = 0 V, ID = 250 μA)	V(BR)DSS	30	-	-	V
Gate-Source Threshold Voltage (VDS = VGS, ID = 250 μA)	VGS(th)	1	1.5	3	V
Gate-Body Leakage (VDS = 0 V, VGS = ±20 V)	IGSS	-	-	±100	nA
Zero Gate Voltage Drain Current (VDS = 24 V, VGS = 0 V)	IDSS	-	-	1	μA
Drain-Source On-Resistance(Note 4) (VGS = 10 V, ID = 18 A) (VGS = 4.5 V, ID = 14 A)	RDS(on)	-	2.5 3	3.3 4.3	mΩ
Forward Voltage (IS= 18 A, VGS = 0 V)	VSD	-	-	1.3	V
DYNAMIC					
Input Capacitance	Ciss (VDS = 15 V, VGS = 0 V, f = 1MHz)	-	3170	-	pF
Output Capacitance		-	457	-	
Reverse Transfer Capacitance		-	352	-	
Total Gate Charge	Qg (VDS = 15V, VGS = 10 V, ID = 18 A)	-	62	-	nC
Gate-Source Charge		-	8.6	-	
Gate-Drain Charge		-	14.5	-	
Turn-On Delay Time	td(on) (VDS = 15 V, RL = 15 Ω, ID = 1 A, VGS = 10 V, RG = 2.7 Ω)	-	13.5	-	ns
Rise Time		-	13	-	
Turn-Off Delay Time		-	85	-	
Fall Time		-	38	-	

4. Pulse test: PW ≤ 300μs duty cycle ≤ 2%.

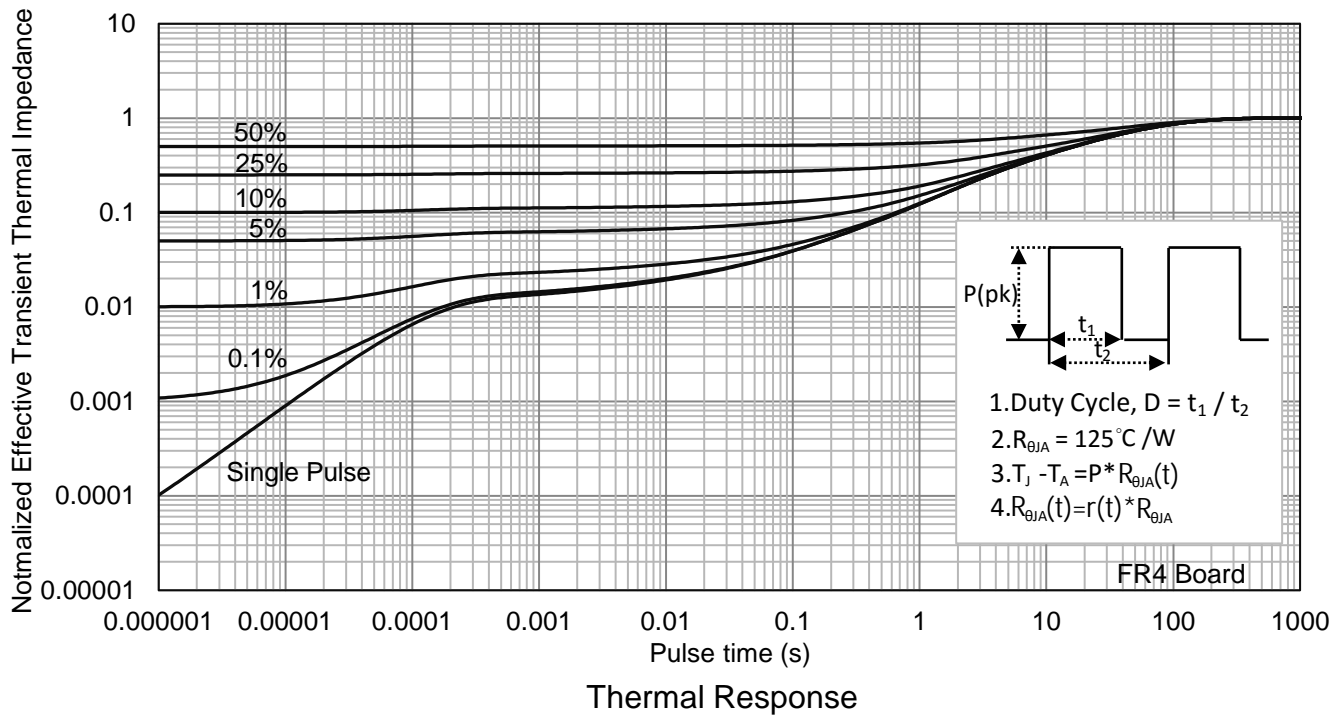
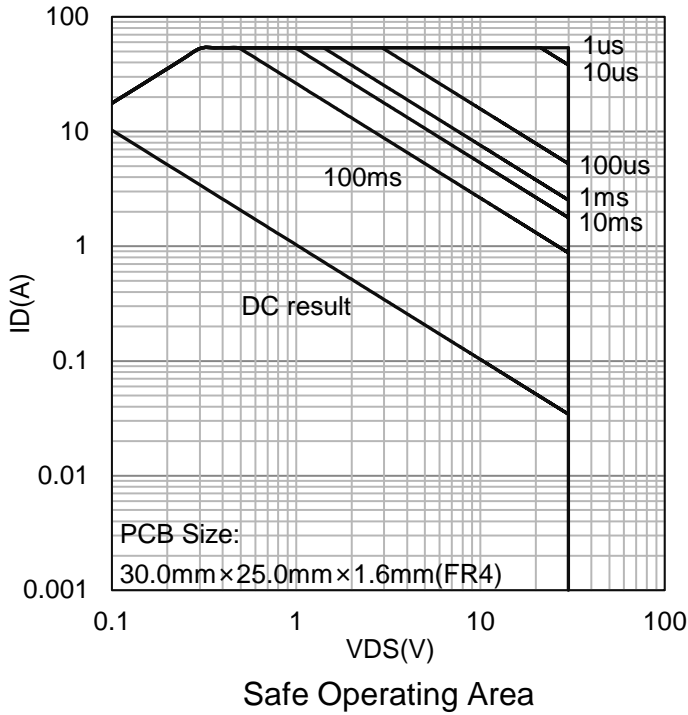
7. ELECTRICAL CHARACTERISTICS CURVES



7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.
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