

LP7337DT1WG

P-Channel 30-V (D-S) MOSFET

1. FEATURES

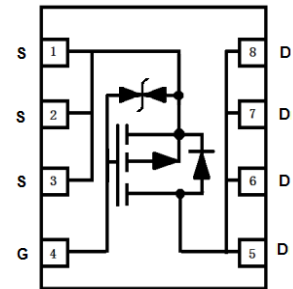
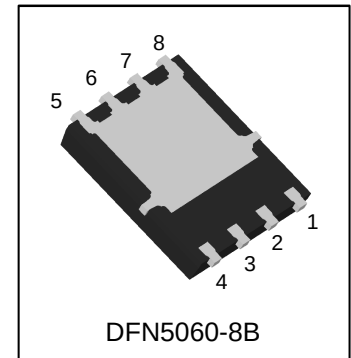
- Low RDS(on) trench technology.
- Low thermal impedance.
- Fast switching speed.
- Gate to Source ESD protected.
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

2. APPLICATIONS

- Load Switches.
- DC/DC Conversion.
- Motor Drives.

3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
LP7337DT1WG	LP7337	3000/Tape&Reel



4. MAXIMUM RATINGS(Ta = 25°C)

Parameter		Symbol	Limits	Unit
Drain-to-Source Voltage		VDSS	-30	V
Gate-to-Source Voltage		VGS	20/-25	V
Avalanche Current		IAS	35	A
Avalanche energy L=0.1mH		EAS	61.25	mJ
Continuous Drain Current(Note 1)	TA =25°C	ID	-18	A
	TA =70°C		-13	
	TC =25°C		-70	
	TC =70°C		-50	
Pulsed Drain Current (Note 2)	TC =25°C	IDM	-200	
Power Dissipation(Note 1)	TA =25°C	PD	5	W
	TA =70°C		3.2	
Operating Junction Temperature		TJ	-55 ~+150	°C
Storage Temperature Range		Tstg	-55 ~+150	

5. THERMAL CHARACTERISTICS

Parameter		Symbol	Limits	Units
Maximum Junction-to-Ambient(Note 1)	t ≤ 10 sec	RθJA	25	°C/W
	Steady State		65	
Maximum Junction-to-Case		RθJC	2.5	°C/W

1.Surface Mounted on 1" x 1" FR4 Board.

2.Pulse width limited by maximum junction temperature

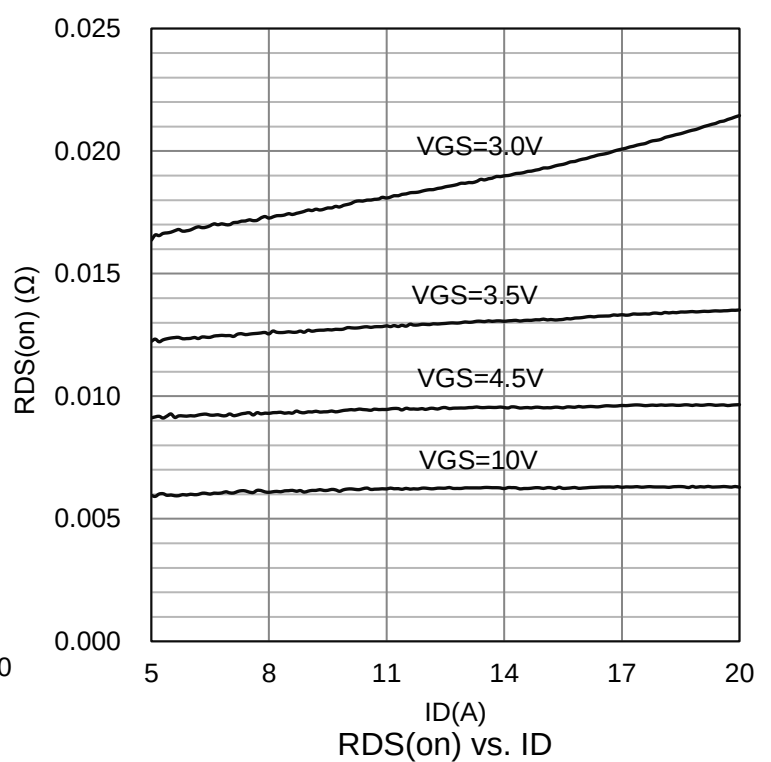
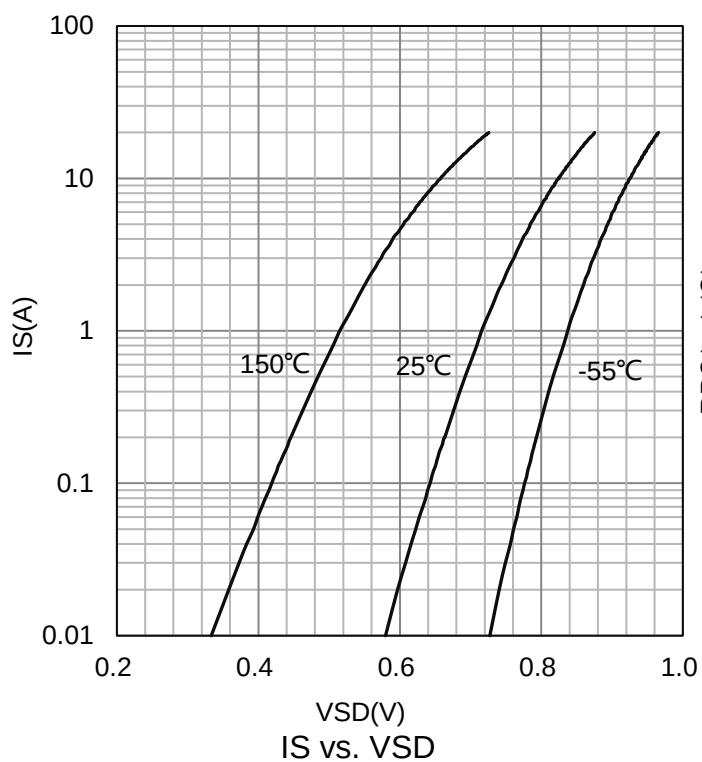
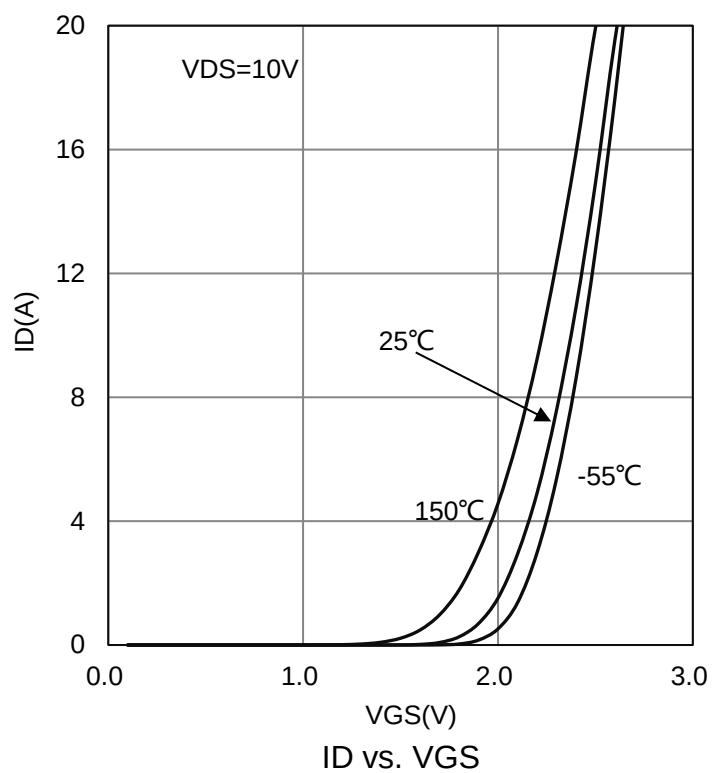
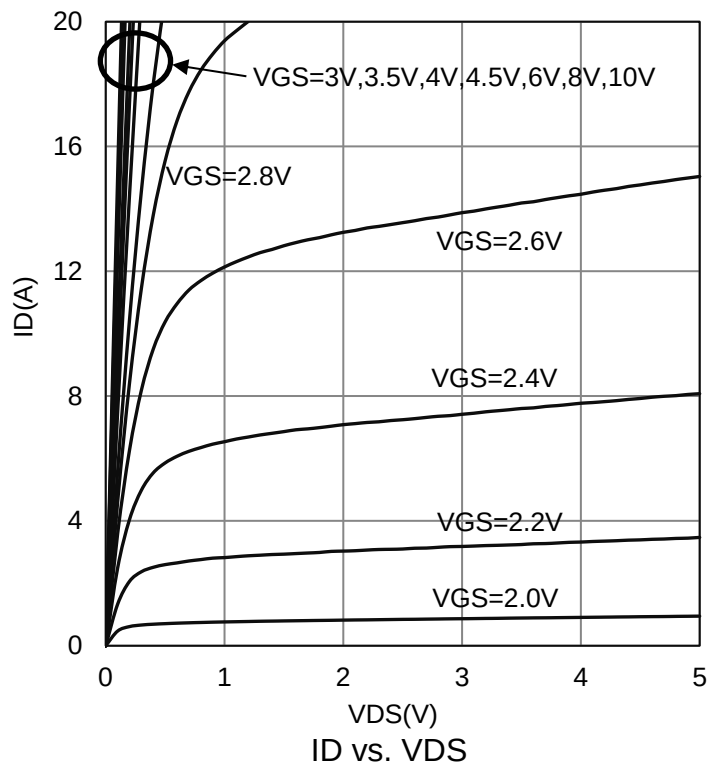
6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic		Symbol	Min.	Typ.	Max.	Unit
Static						
Drain-Source Breakdown Voltage (VGS=0 , ID = -250 uA)		V(BR)DSS	-30	-	-	V
Gate-Source Threshold Voltage (VDS = VGS , ID = -250 uA)		VGS(th)	-1	-1.3	-3	V
Gate-Body Leakage (VDS = 0 V, VGS = ± 20 V)		IGSS	-	-	± 10	μA
Zero Gate Voltage Drain Current (VDS = -24 V, VGS = 0 V) (VDS = -24 V, VGS = 0 V, TJ = 55° C)		IDSS	- -	- -	-1 -25	μA
Drain-Source On-Resistance(Note 3) (VGS = -10 V, ID = -13.6 A) (VGS = -4.5 V, ID = -10.9 A)		RDS(on)	- -	7.5 10.5	9 13	mΩ
Forward Transconductance(Note 3) (VDS = -15 V, ID = -13.6 A)		gfs	-	16.9	-	S
Diode Forward Voltage(Note 3) (IS = -2.3 A, VGS = 0 V)		VSD	-	-0.76	-1.2	V
Dynamic(Note 4)						
Total Gate Charge	(VDS = -15 V, VGS = -4.5 V, ID = -13.6 A)	Qg	-	35	-	nC
Gate-Source Charge		Qgs	-	10	-	
Gate-Drain Charge		Qgd	-	12.3	-	
Input Capacitance	(VDS = -15 V, VGS = 0 V, f = 1 MHz)	Ciss	-	4391	-	pF
Output Capacitance		Coss	-	440	-	
Reverse Transfer Capacitance		Crss	-	372	-	
Turn-On Delay Time	(VDS=-15 V, RL=1.2 Ω, ID=- 13.6 A, VGEN=-10 V, RGEN=6 Ω)	td(on)	-	14	-	ns
Rise Time		tr	-	37	-	
Turn-Off Delay Time		td(off)	-	124	-	
Fall Time		tf	-	55	-	
Source-Drain DIODE Ratings and Characteristics(Tc= 25° C)						
Continuous Current(Note 1)		IS	-	-	-25	A
Plused Current(Note 1)		ISM	-	-	-100	A
Reverse Recovery Time (IF=IS, dI/dt=100A/us)		trr	-	62	-	ns
Reverse Recovery Charge (IF=IS, dI/dt=100A/us)		Qrr	-	68	-	nC

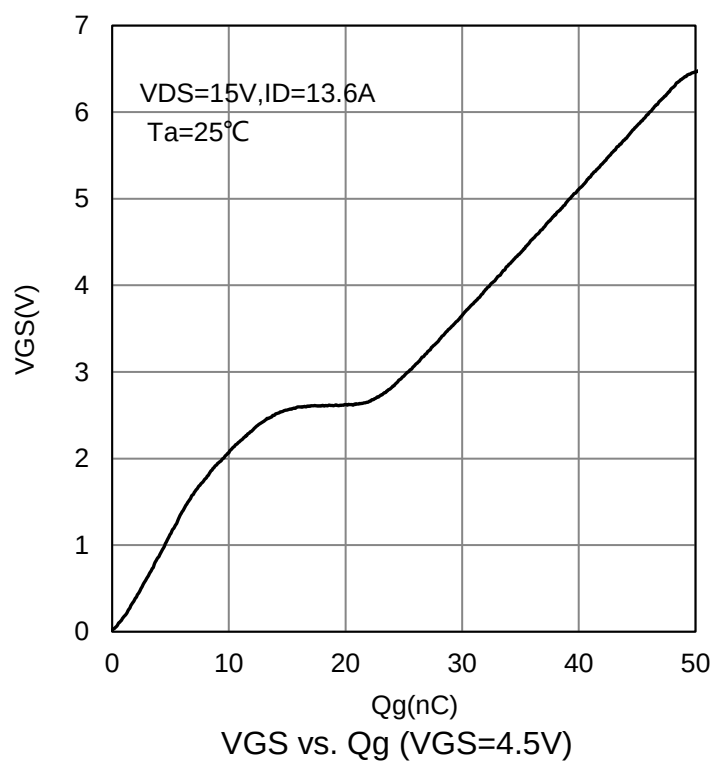
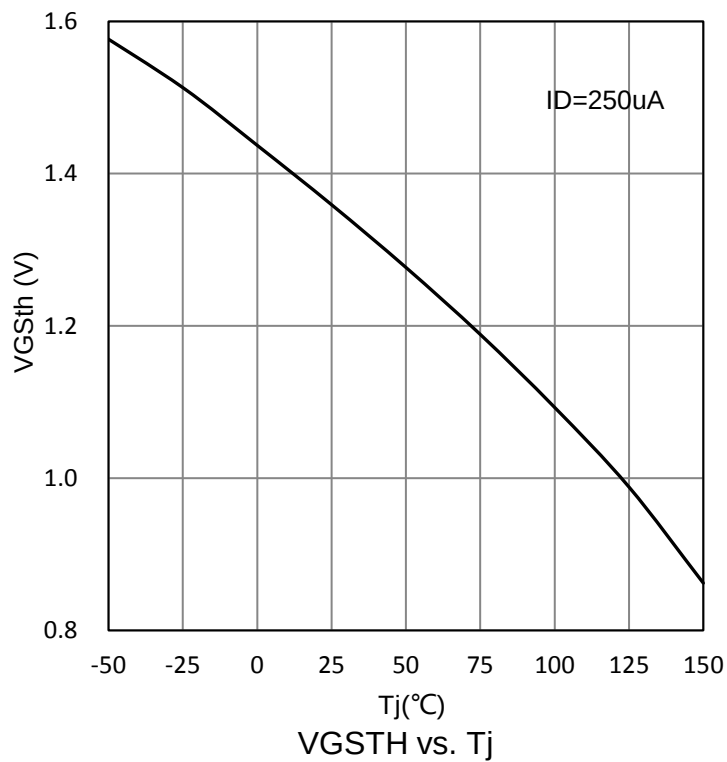
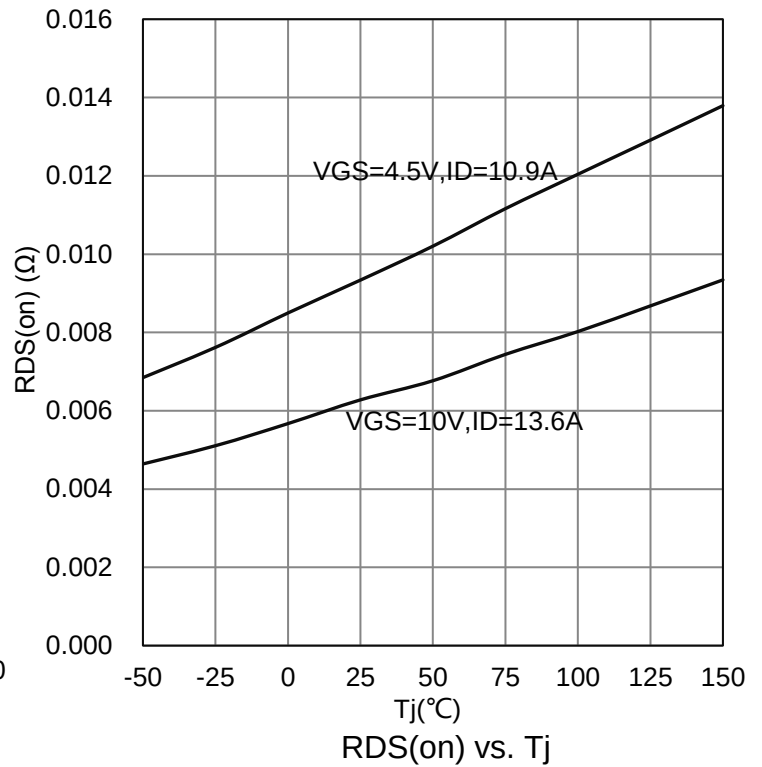
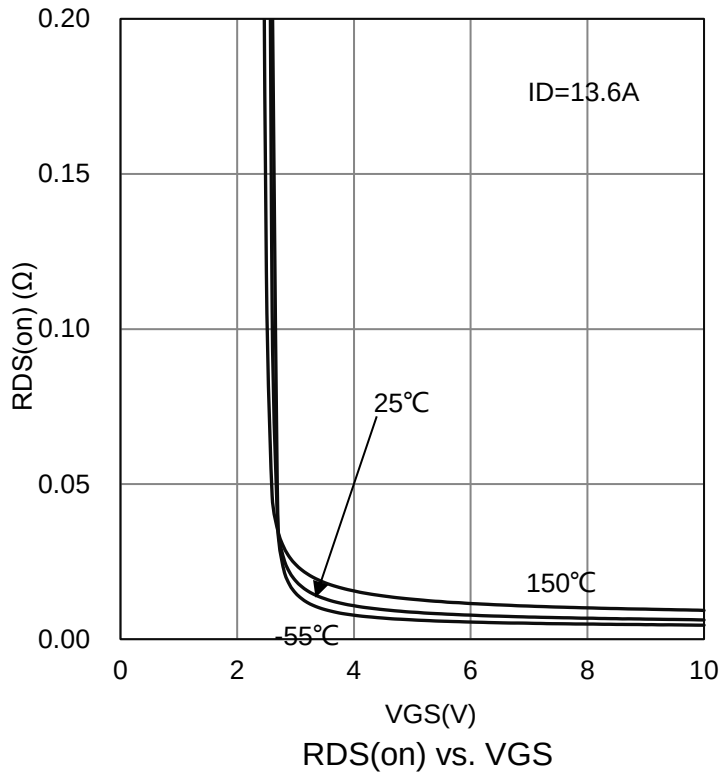
3. Pulse test: PW $\leq$ 300 μ s duty cycle $\leq$ 2%.

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

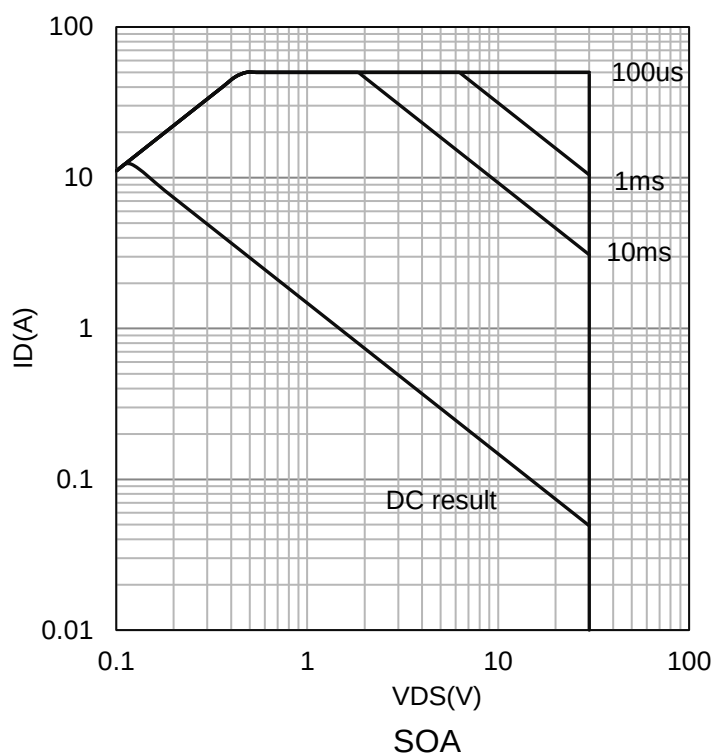
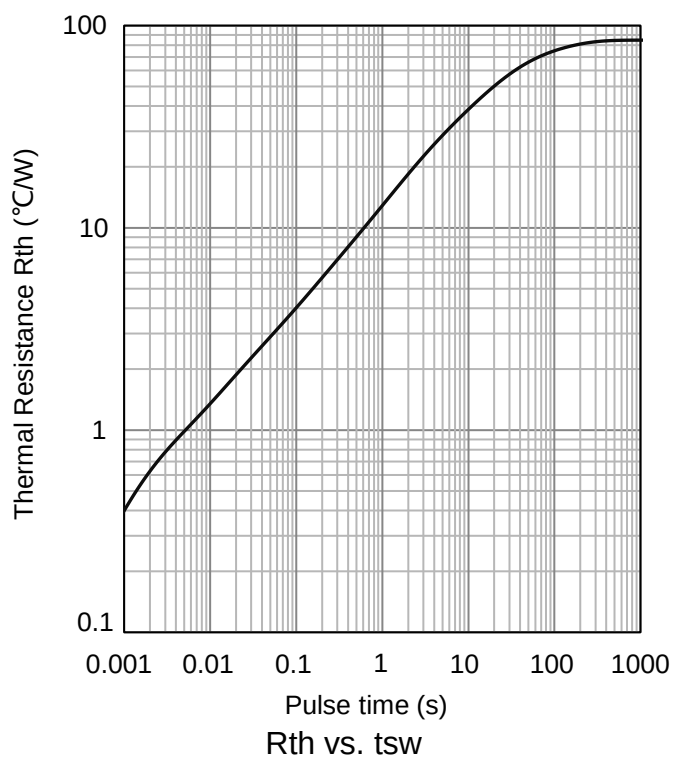
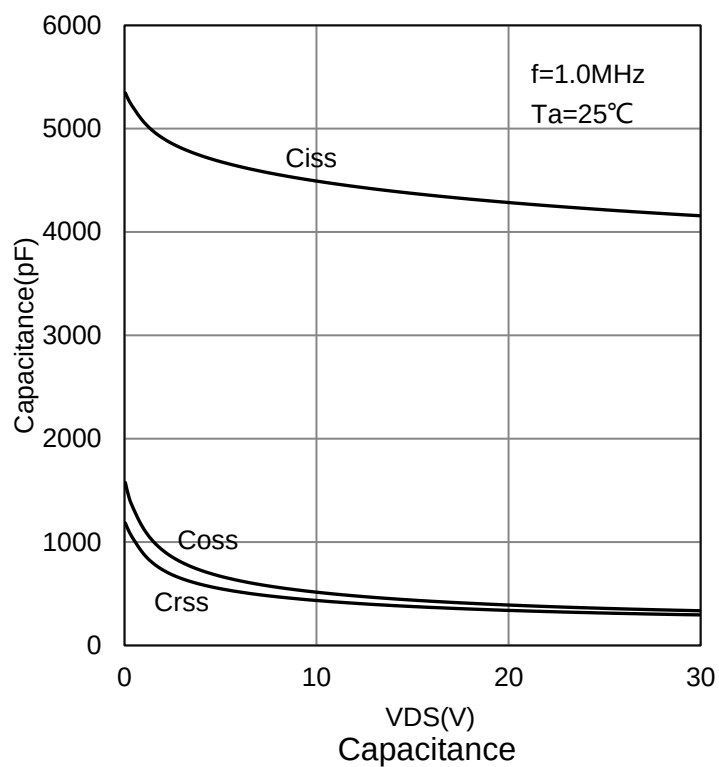
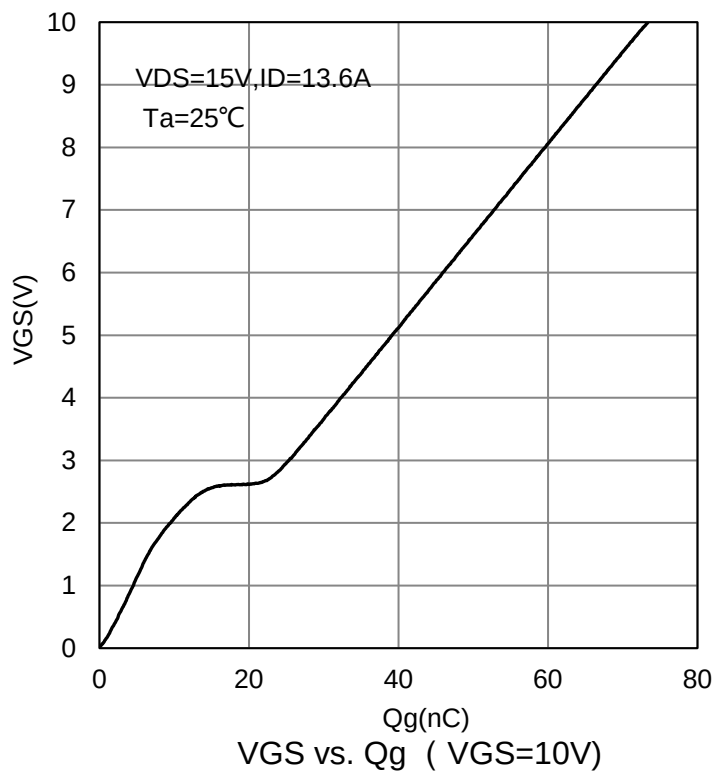
7.ELECTRICAL CHARACTERISTICS CURVES



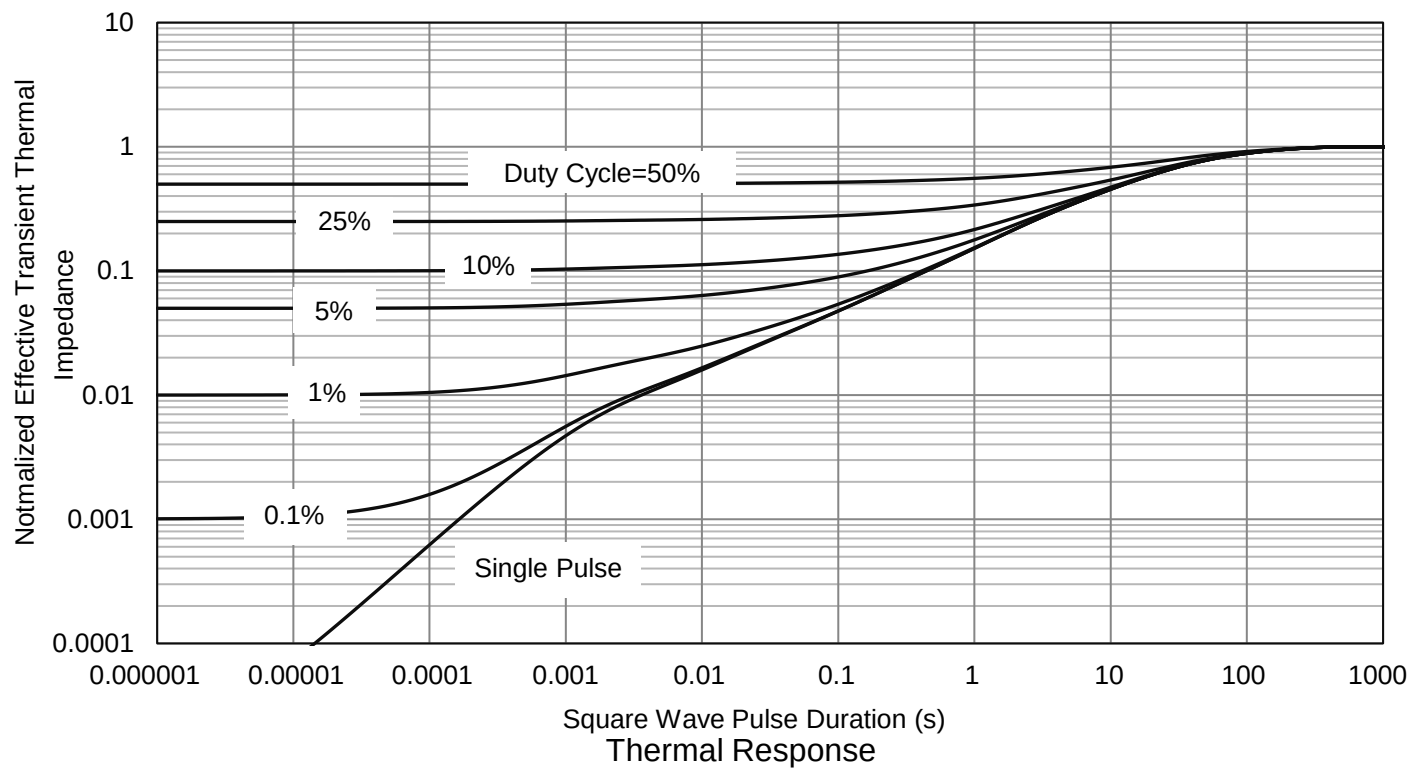
7.ELECTRICAL CHARACTERISTICS CURVES(Con.)



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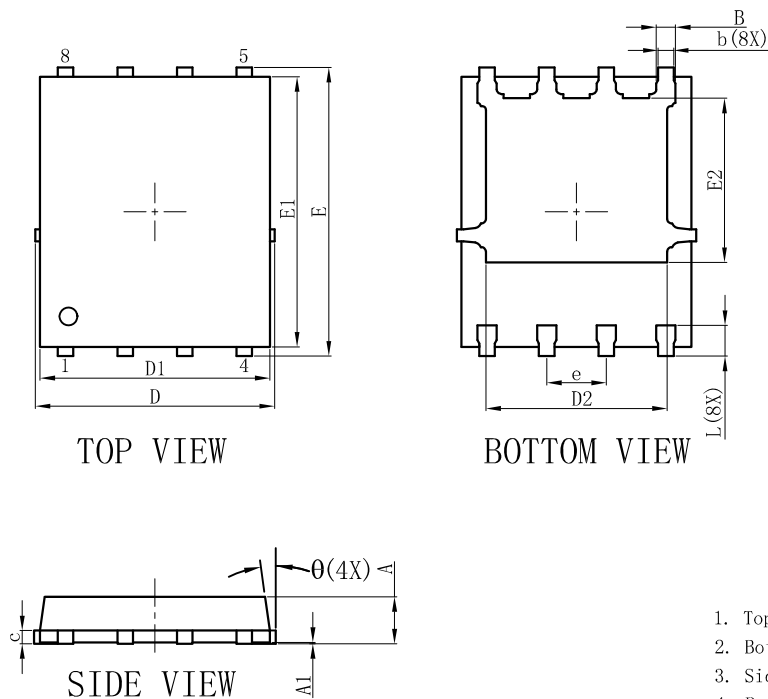


7.ELECTRICAL CHARACTERISTICS CURVES(Con.)



8.OUTLINE AND DIMENSIONS

DFN5060-8B

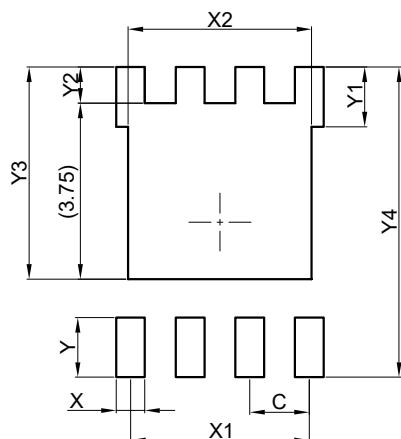


DFN5060-8B			
DIM	MIN	NOR	MAX
A	0.90	1.00	1.10
A1	0.00	0.02	0.05
E	6.00	6.15	6.30
E1	5.66	5.76	5.86
E2	3.40	3.50	3.60
D	4.95	5.10	5.25
D1	4.80	4.90	5.00
D2	3.76	3.86	3.96
b	0.30	0.35	0.40
B	0.36	0.41	0.46
L	0.56	0.66	0.76
e	1.27BSC		
c	0.254REF.		
θ	0°	-	12°
All Dimensions in mm			

GENERAL NOTES

1. Top package surface finish $Ra0.4 \pm 0.2\mu m$
2. Bottom package surface finish $Ra0.7 \pm 0.2\mu m$
3. Side package surface finish $Ra0.4 \pm 0.2\mu m$
4. Protrusion or Gate Burrs shall not exceed 0.05mm per side.
5. Offcenter Max0.038mm; Mismatch Max 0.038mm.

9.SOLDERING FOOTPRINT



DFN5060-8B	
DIM	(mm)
C	1.27
X	0.61
X1	3.81
X2	3.91
Y	1.27
Y1	1.27
Y2	0.77
Y3	4.52
Y4	6.61