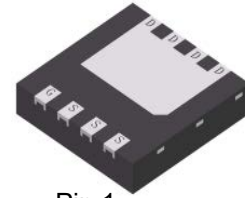
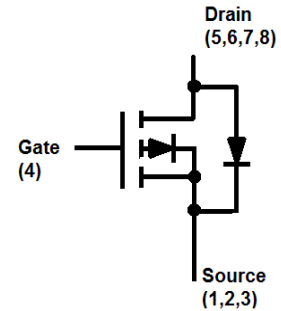


PB8630D

P-Channel 60-V Power MOSFET



Pin 1
DFN3333-8A



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

- Power Routing
- DC/DC Conversion
- Motor Drives

3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
PB8630D	P30	2000/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 (Note 1)	ID	TA = 25°C	-9	A
		TA = 70°C	-7	
Pulsed Drain Current (Note 2)	IDM	-36		
Avalanche Current (L = 0.1mH)	IAS	29	A	
Avalanche Energy (L = 0.1mH)	EAS	42.05	mJ	
Power Dissipation (Note 1)	PD	TA = 25°C	2.1	W
		TA = 70°C	1.3	
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	60	°C/W
Thermal Resistance,Junction-to-Ambient(Note 3)	RθJA	165	
Thermal Resistance,Junction-to-Case	RθJC	5	

- 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.



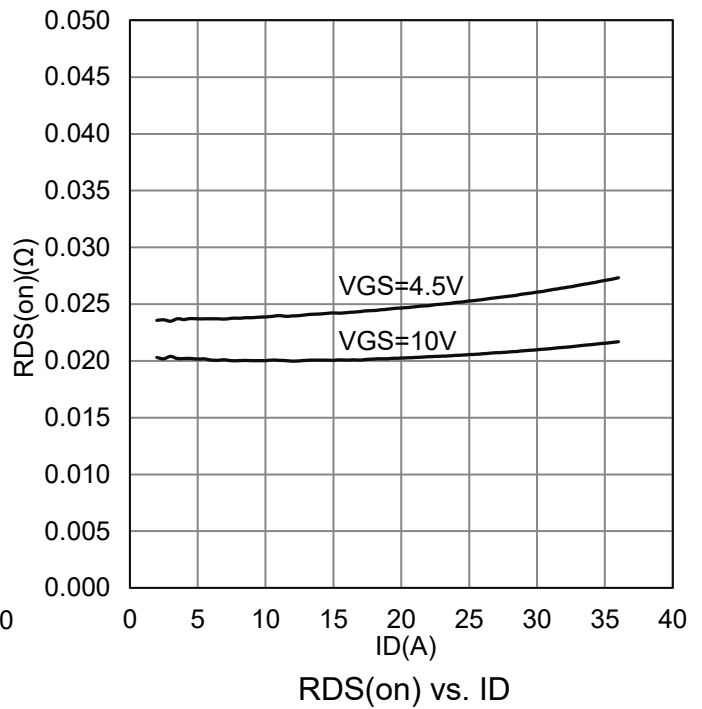
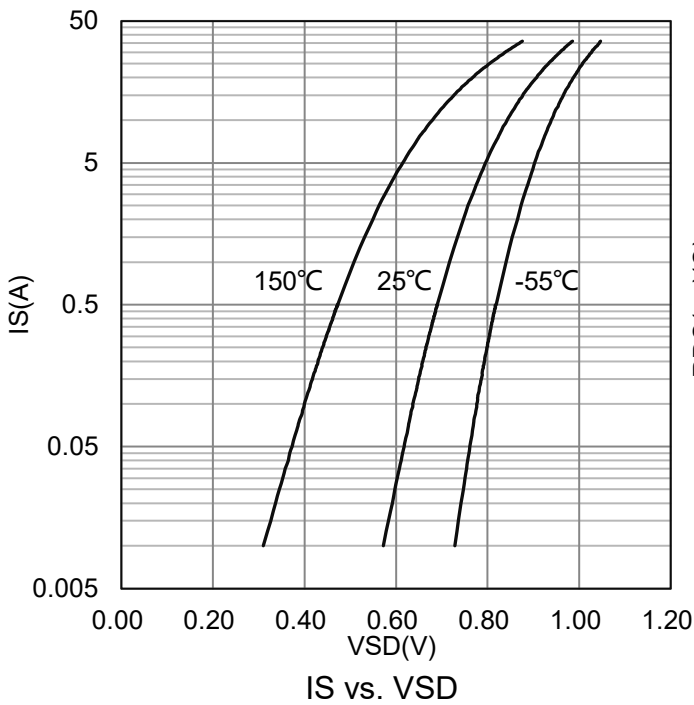
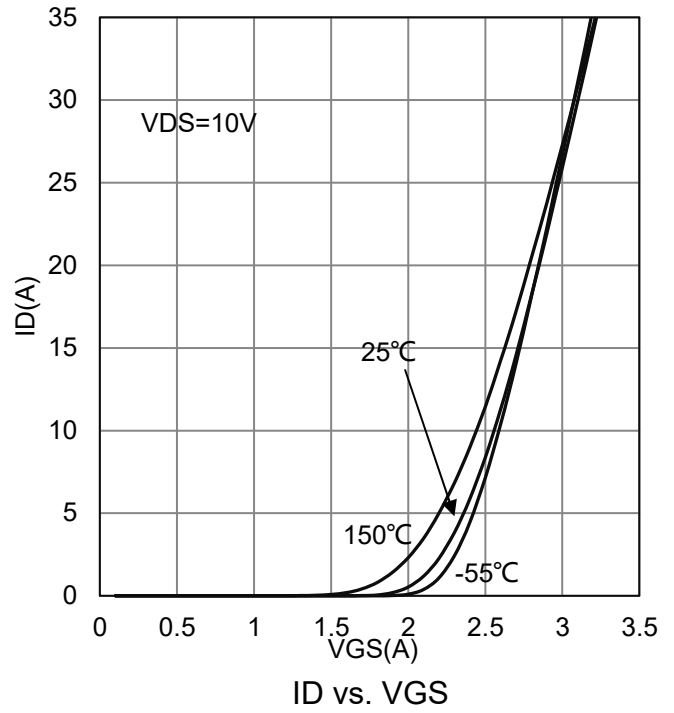
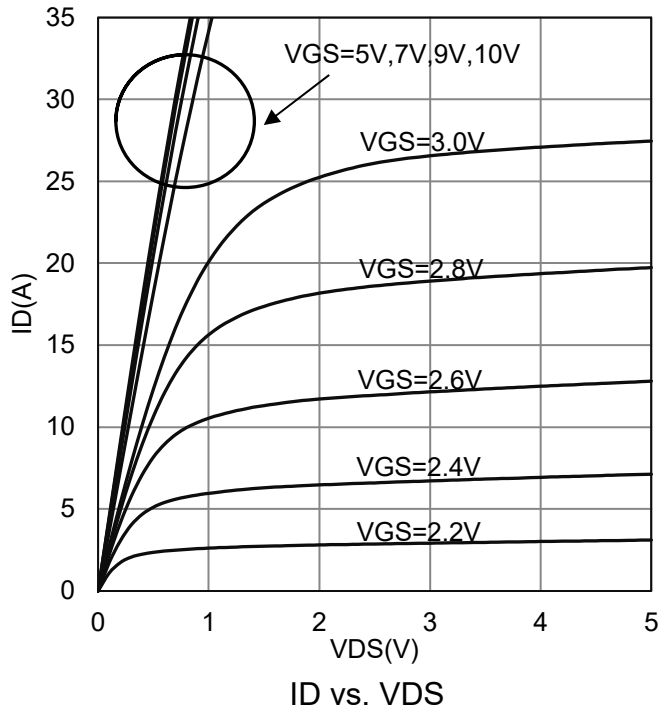
6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Static					
Drain-Source Breakdown Voltage (VGS = 0, ID = -250μA)	VBRDSS	-60	-	-	V
Gate Threshold Voltage (VDS =VGS , ID =-250μA)	VGS(th)	-1	-	-3	V
Gate Leakage Current (VDS =0V, VGS =±20V)	IGSS	-	-	±10	uA
Zero Gate Voltage Drain Current (VDS = -48 V, VGS = 0 V) (VDS = -48 V, VGS = 0 V, TJ = 55°C)	IDSS	-	-	-1 -25	μA
Drain-Source On-Resistance(Note 4) (VGS = -10 V, ID = -4 A) (VGS = -4.5 V, ID = -4 A)	RDS(ON)	-	-	26 34	mΩ
Diode Forward Voltage (IS = -2 A, VGS = 0 V)	VSD	-	-	-1.2	V
Dynamic					
Total Gate Charge	(VDS = -30 V, VGS = -4.5 V, ID = -4 A)	Qg	-	29.6	-
Gate-Source Charge		Qgs	-	7.4	-
Gate-Drain Charge		Qgd	-	9.7	-
Turn-On Delay Time	(VDS = -30 V, RL = 7.5 Ω, ID = -4 A, VGEN = -10 V, RGEN = 6 Ω)	td(on)	-	15	-
Rise Time		tr	-	18	-
Turn-Off Delay Time		td(off)	-	136	-
Fall Time		tf	-	76	-
Input Capacitance	(VDS = -30 V, VGS = 0 V, f = 1 MHz)	Ciss	-	3571	-
Output Capacitance		Coss	-	162	-
Reverse Transfer Capacitance		Crss	-	146	-
Gate Resistance (VDS = 0 V, VGS = 0 V, f = 1 MHz)	Rg	-	3	-	Ω

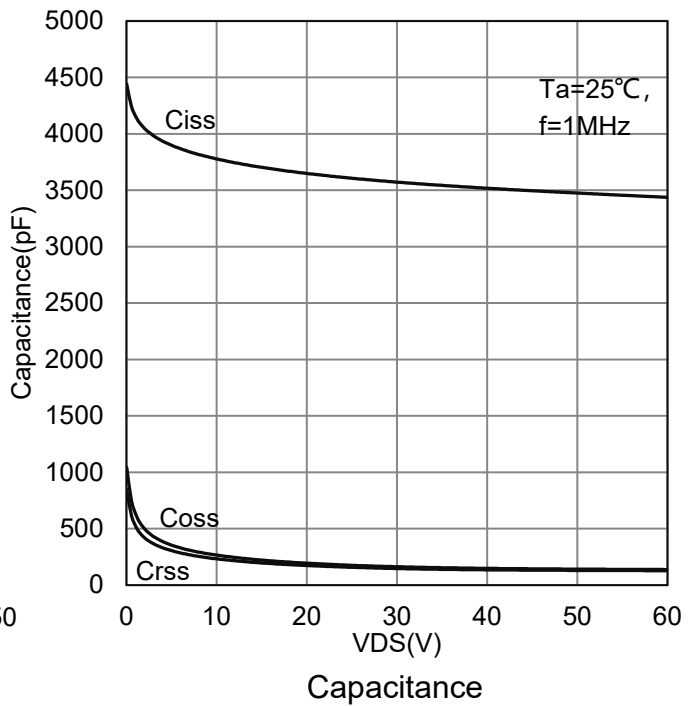
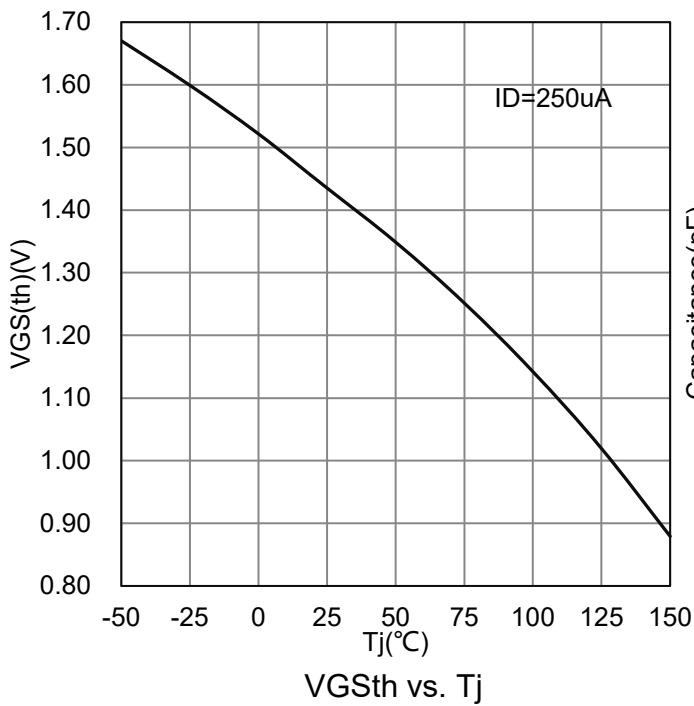
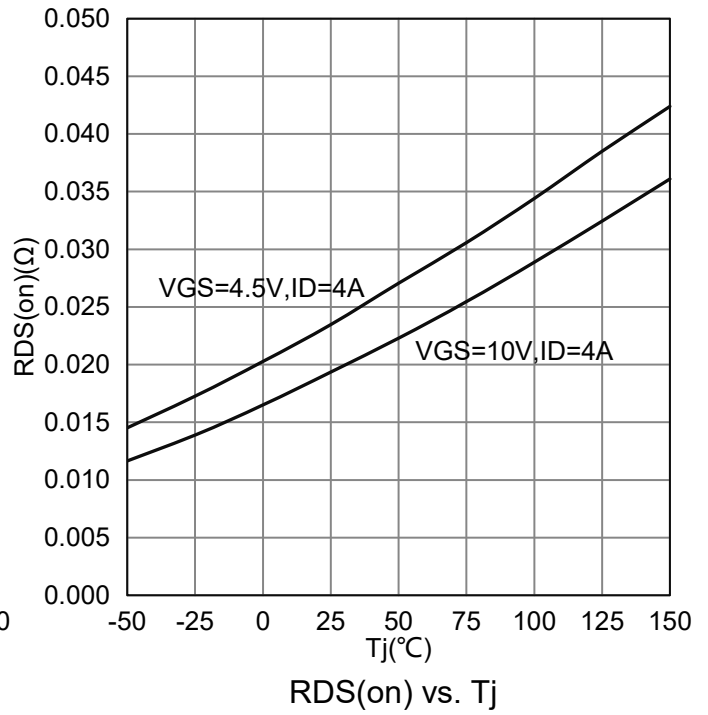
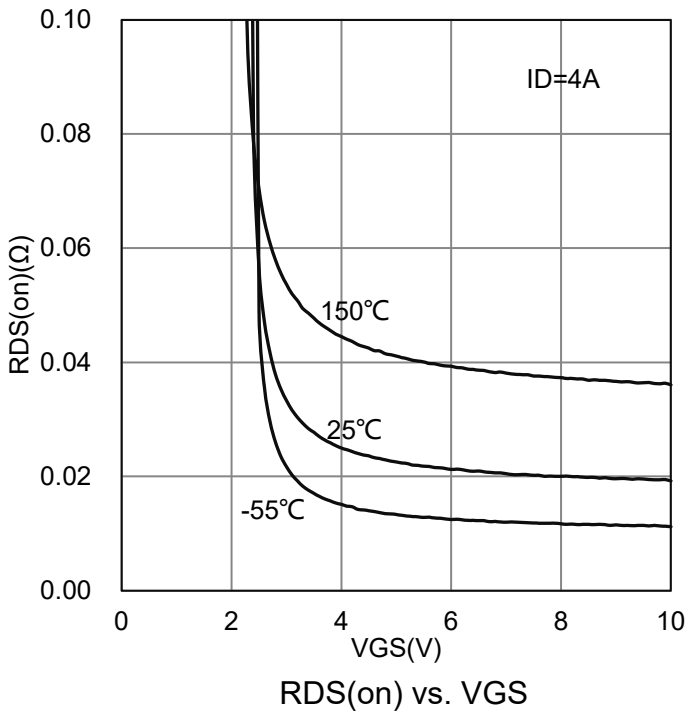
4.Pulse test: PW ≤ 300us duty cycle ≤ 2%.



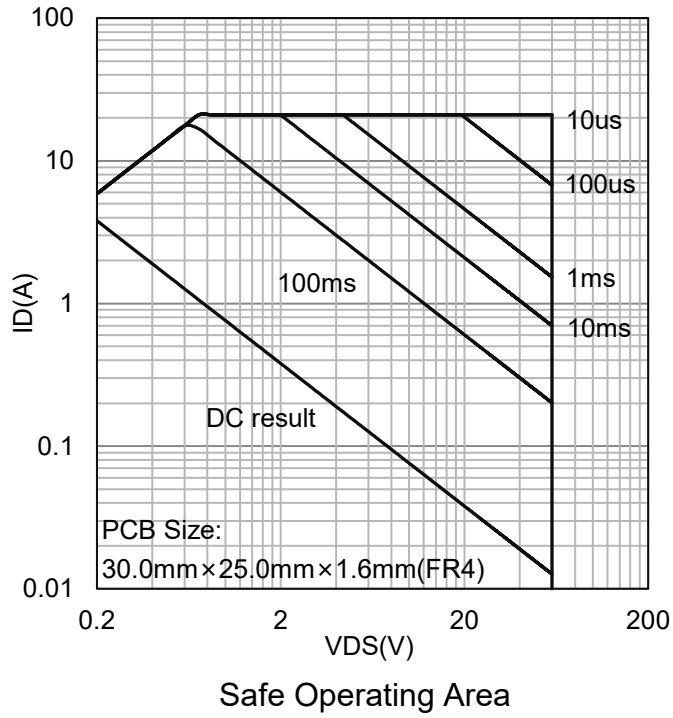
7. ELECTRICAL CHARACTERISTICS CURVES

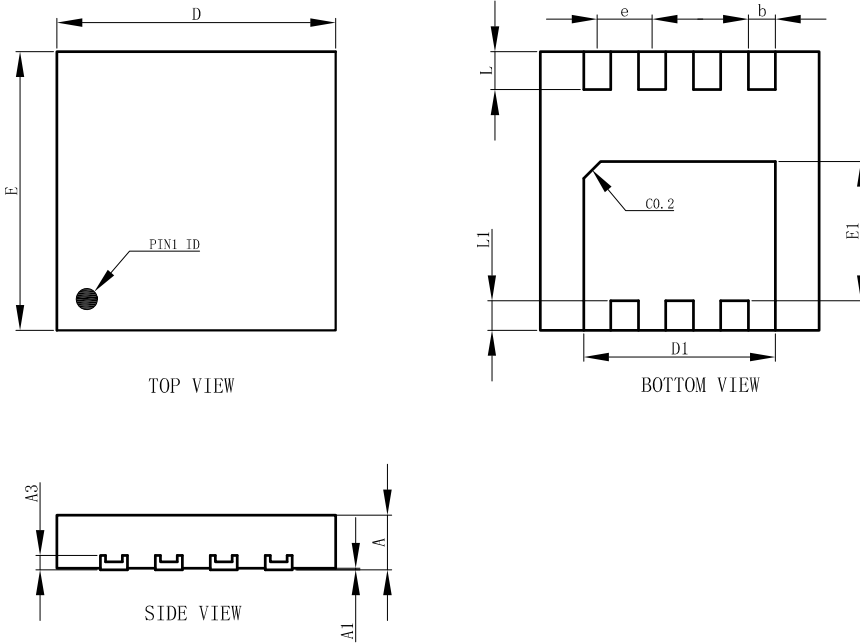


7. ELECTRICAL CHARACTERISTICS CURVES(Con.)

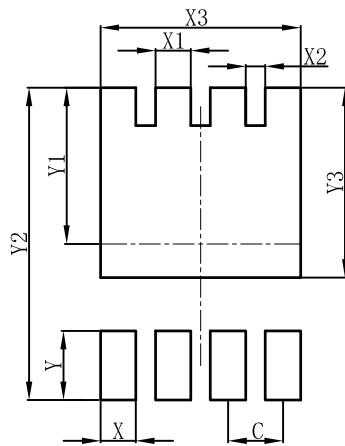


7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



8. OUTLINE AND DIMENSIONS
DFN3333-8A


DFN3333-8A			
DIM	MIN	NOR	MAX
A	0.60	0.65	0.70
A1	0.00	0.03	0.05
b	0.27	0.32	0.37
D	3.25	3.30	3.35
E	3.25	3.30	3.35
D1	2.22	2.27	2.32
E1	1.60	1.65	1.70
e	0.65BSC		
L	0.40	0.45	0.50
L1	0.30	0.35	0.40
A3	0.152REF.		
All Dimensions in mm			

9. SOLDERING FOOTPRINT
DFN3333-8A


DFN3333-8A	
DIM	(mm)
C	0.65
X	0.42
X1	0.42
X2	0.23
X3	2.37
Y	0.70
Y1	1.85
Y2	3.70
Y3	2.25

