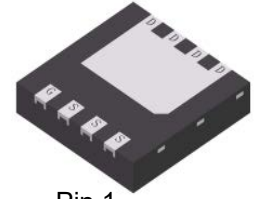
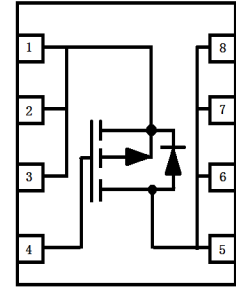


PB8415D

40V P-Channel (D-S) 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

- Load Switches
- DC/DC Conversion
- Motor Drives

3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
PB8415D	PB1	2000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Drain-Source Voltage	VDS	-40	V
Gate-Source Voltage	VGS	±20	V
Continuous Drain Current(Note 1)	ID	TA =25°C	-8
		TA =70°C	-6
Pulsed Drain Current(Note 2)	IDM	-32	A
Avalanche Current	IAS	25	A
Avalanche energy(L=0.1mH)	EAS	31.25	mJ
Power Dissipation(Note 1)	PD	TA =25°C	2.5
		TA =70°C	2
Junction and Storage Temperature Range	TJ,TSTG	-55~+150	°C

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Thermal Resistance,Junction-to-Ambient (Note 1)	RθJA	50	°C/W
Thermal Resistance,Junction-to-Ambient (Note 3)	RθJA	170	
Thermal Resistance,Junction-to-Case	RθJC	6	

- 1.Surface Mounted on 1.5" x 1.5" FR4 Board.
- 2.Pulse width limited by maximum junction temperature
- 3.Surface-mounted on FR4 board using the minimum recommended pad size.

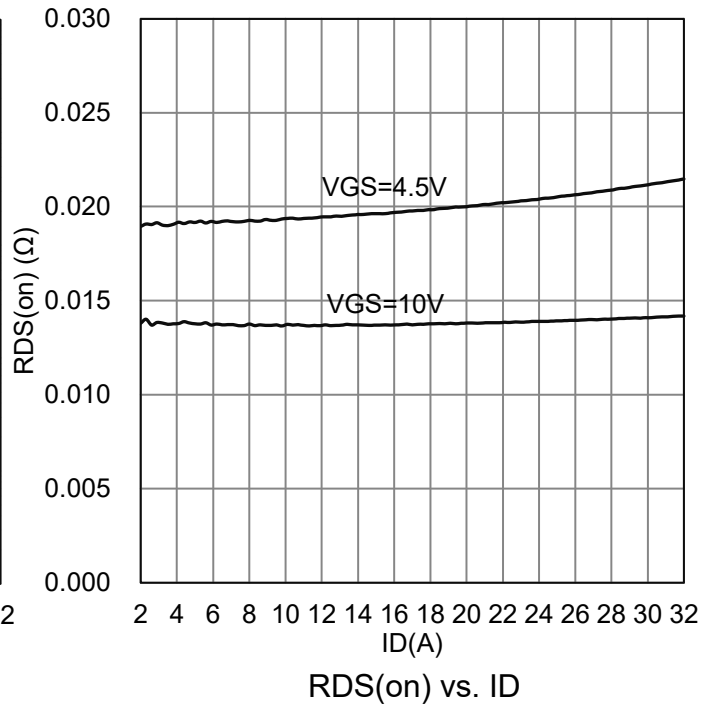
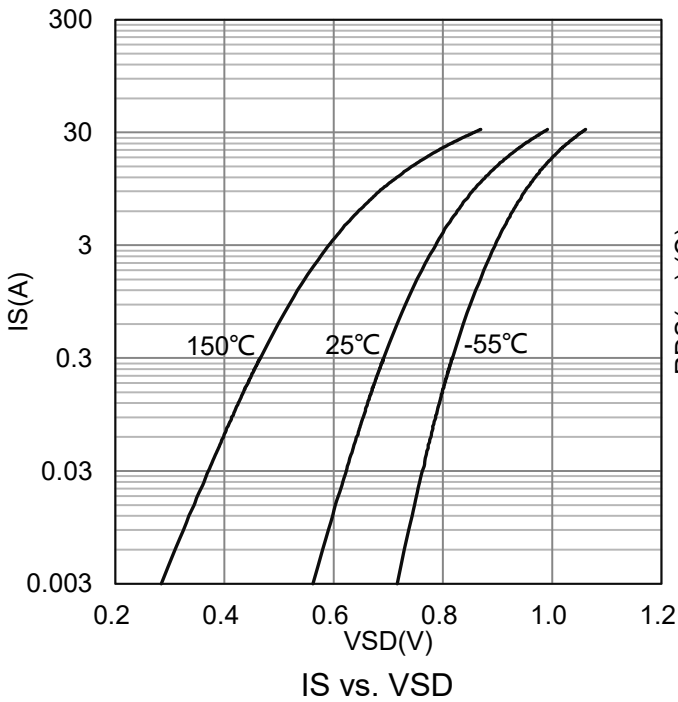
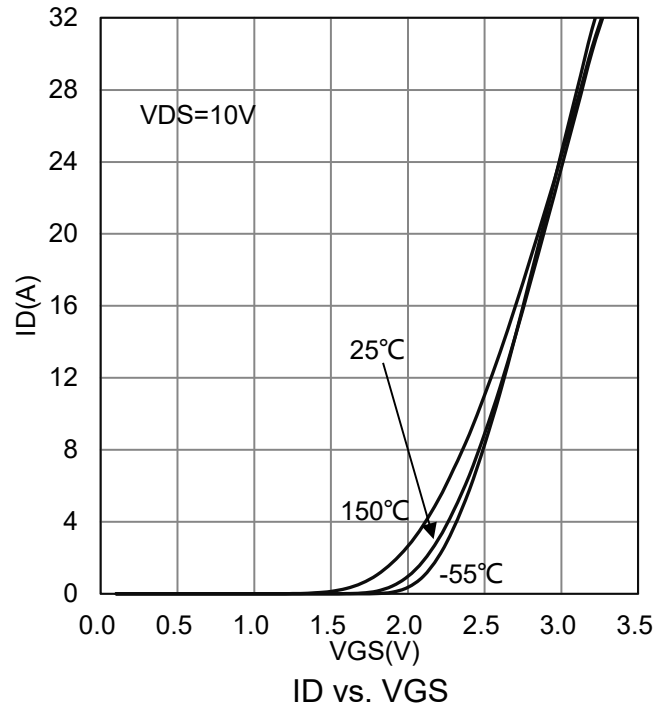
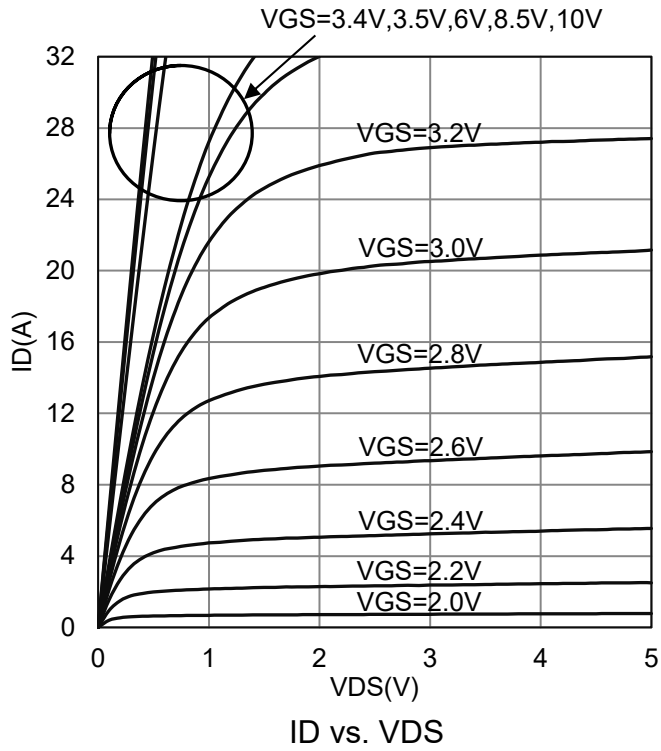


6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

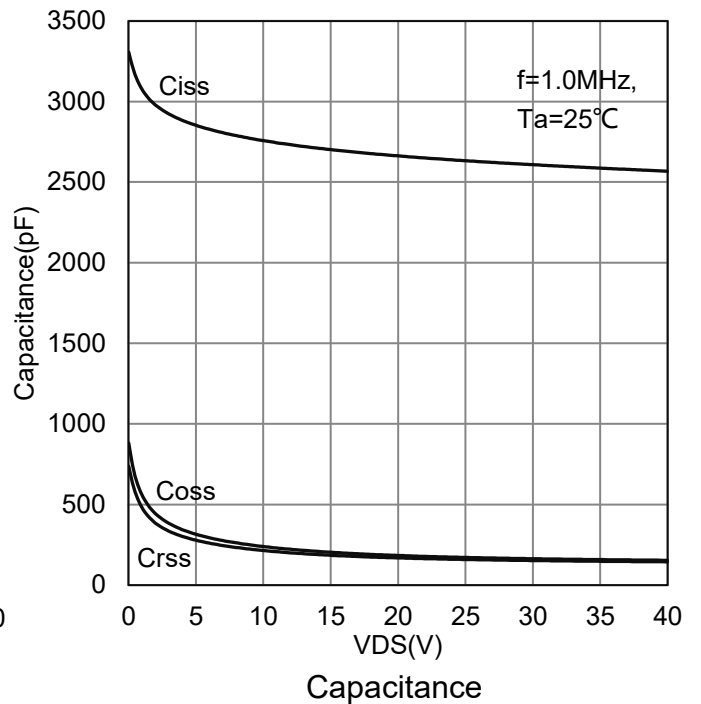
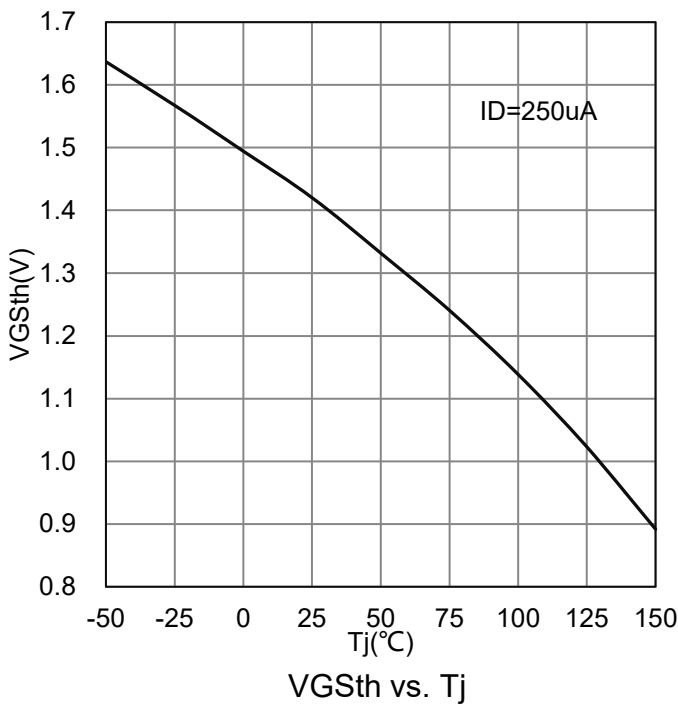
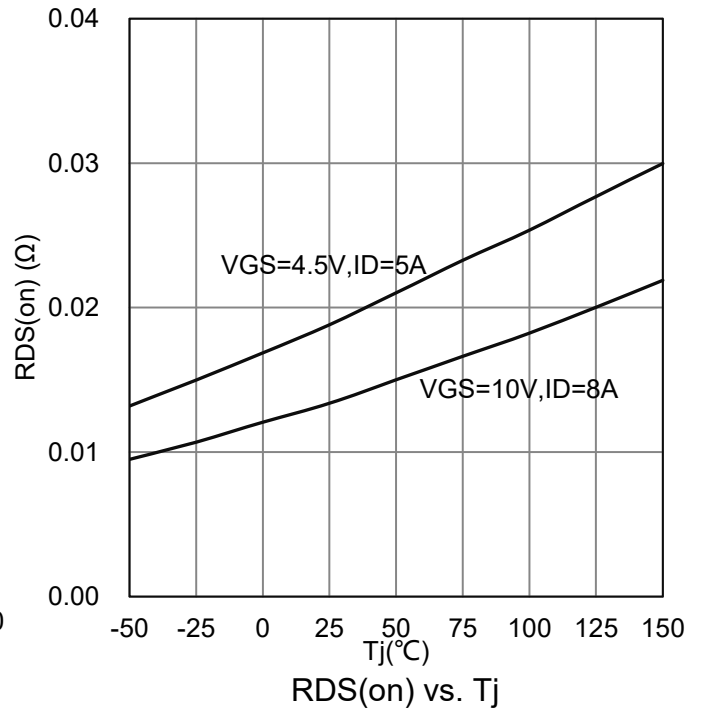
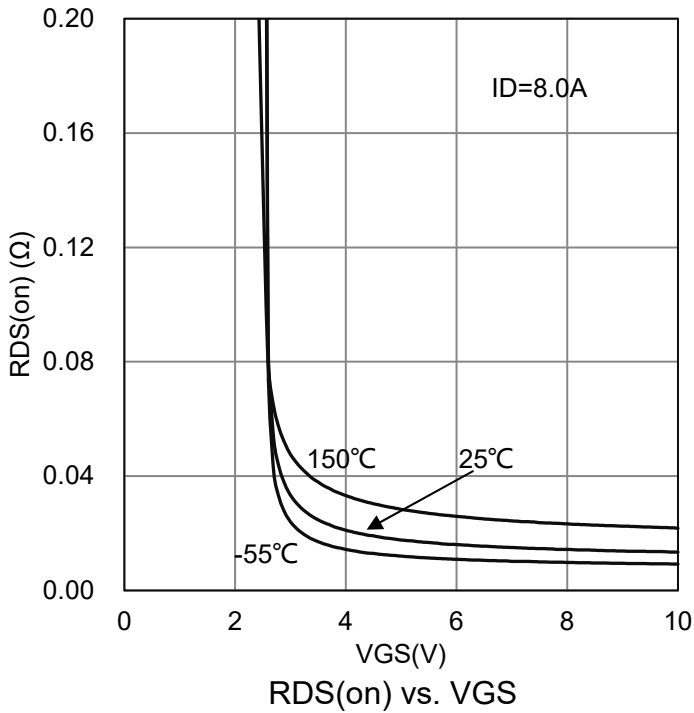
Characteristic	Symbol	Min.	Typ.	Max.	Unit	
Static						
Drain–Source Breakdown Voltage (VGS = 0, ID = -250μA)	VBRDSS	-40	-	-	V	
Gate Threshold Voltage (VDS = VGS, ID = -250μA)	VGS(th)	-1	-	-	V	
Zero Gate Voltage Drain Current (VGS = 0, VDS = -32 V)	IDSS	-	-	-1	μA	
Gate–Body Leakage Current (VDS = 0V, VGS = ±20V)	IGSS	-	-	±100	nA	
Static Drain–Source On–State Resistance (VGS = -10 V, ID = -8 A) (VGS = -4.5 V, ID = -5 A)	RDS(on)	-	15 22	19.5 28	mΩ	
Diode Forward Voltage (IS = -1A, VGS = 0V)	VSD	-	-0.8	-	V	
Dynamic						
Input Capacitance	(VGS = 0V, VDS = -15V, f=1MHz)	Ciss	-	2700	-	pF
Output Capacitance		Coss	-	202	-	
Reverse Transfer Capacitance		Crss	-	184	-	
Total Gate Charge	(VDS = -15 V, VGS = -5 V, ID = -1 A)	Qg	-	23.3	-	nC
Gate Source Charge		Qgs	-	4.4	-	
Gate Drain Charge		Qgd	-	6.4	-	
Turn-On DelayTime	(VDD=-15 V, RL = 6Ω, ID = -1 A, VGEN = -10 V)	td(on)	-	11.7	-	ns
Turn-On Rise Time		tr	-	11.8	-	
Turn-Off DelayTime		td(off)	-	99	-	
Turn-Off Fall Time		tf	-	45.1	-	



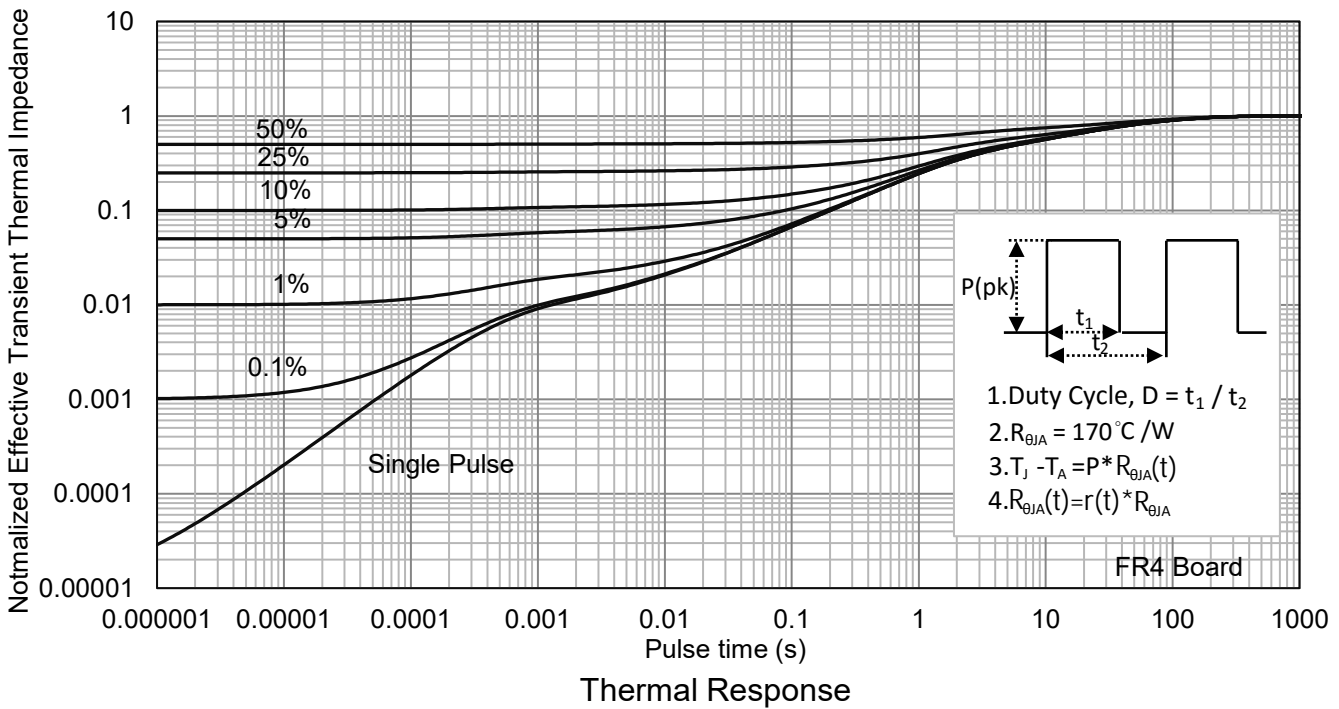
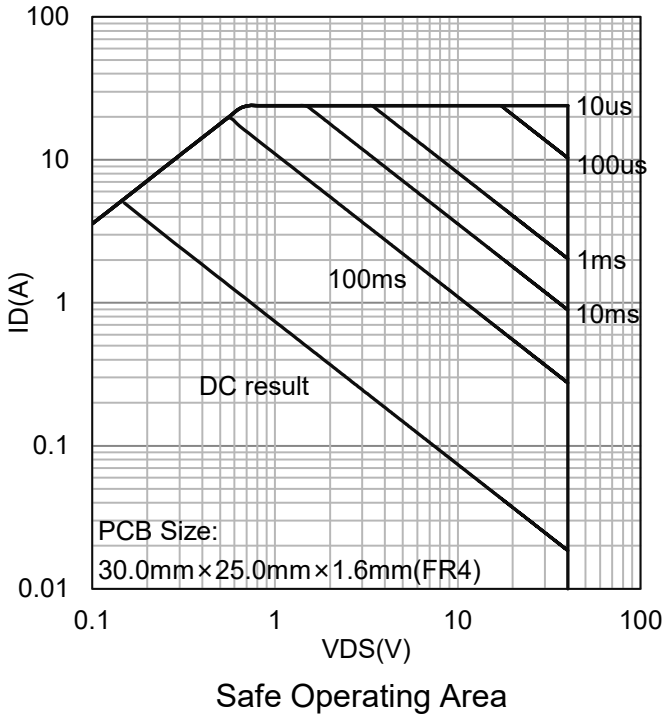
7. ELECTRICAL CHARACTERISTICS CURVES

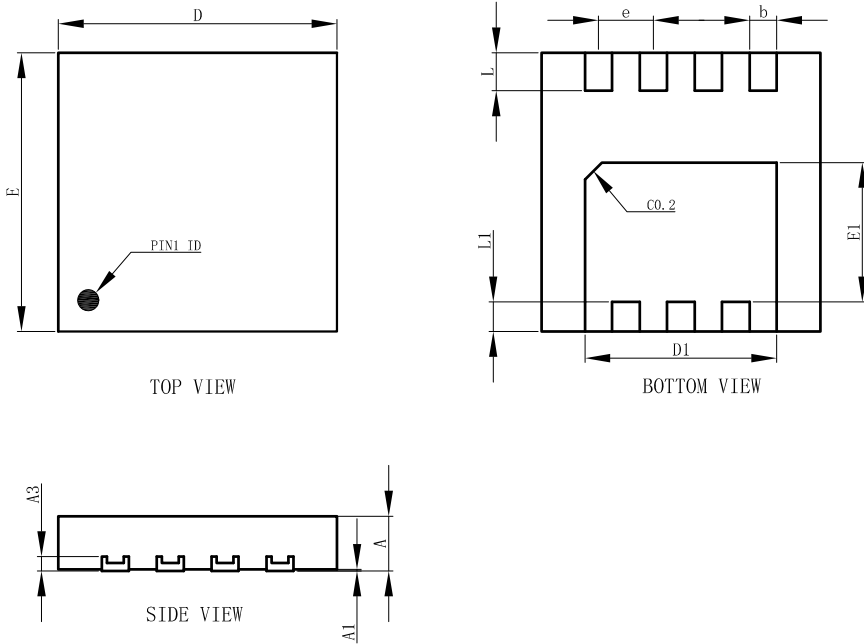


7. ELECTRICAL CHARACTERISTICS CURVES(Con.)

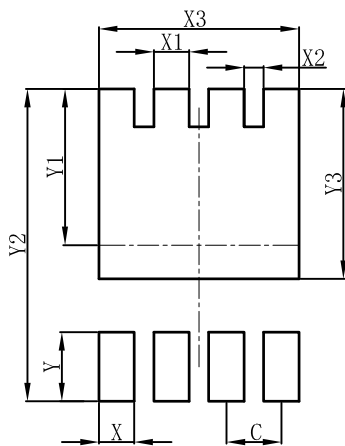


7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



8.OUTLINE AND DIMENSIONS


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	
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

