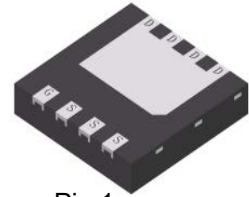
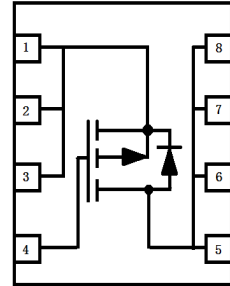


PB83085D

30-V 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
PB83085D	PB5	2000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Drain-Source Voltage	VDS	-30	V
Gate-Source Voltage	VGS	±25	
Continuous Drain Current (Note1)	ID	TA = 25°C	-17
		TA = 100°C	-13
		TC = 25°C	-40
		TC = 100°C	-25
Pulsed Drain Current (Note 2)	IDM	-68	A
Continuous Source Current (Diode Conduction) (Note1)	IS	-40	
Avalanche Current(L=0.1mH)	IAS	32	A
Avalanche energy(L=0.1mH)	EAS	51.2	mJ
Power Dissipation (Note1)	PD	TA = 25°C	2.5
		TA = 100°C	1.6
		TC = 25°C	20
		TC = 100°C	12
Operating Junction and Storage Temperature Range	TJ,Tstg	-55~+150	°C

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Maximum Junction-to-Ambient(Note 1)	RθJA	50	°C/W
Maximum Junction-to-Case	RθJC	6	

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.



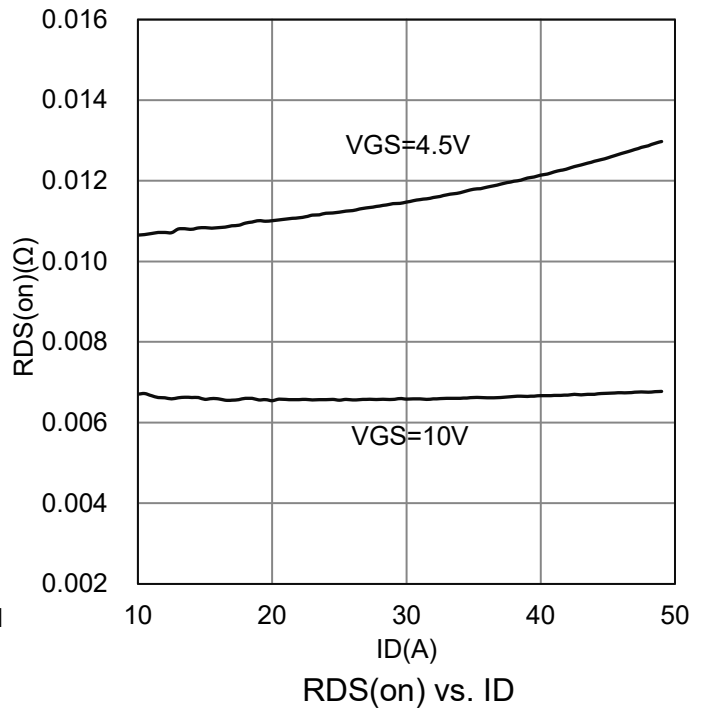
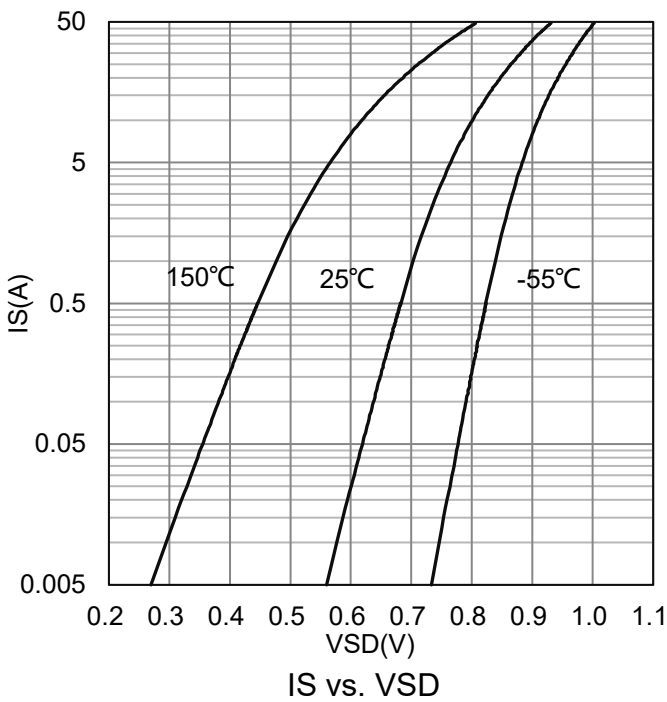
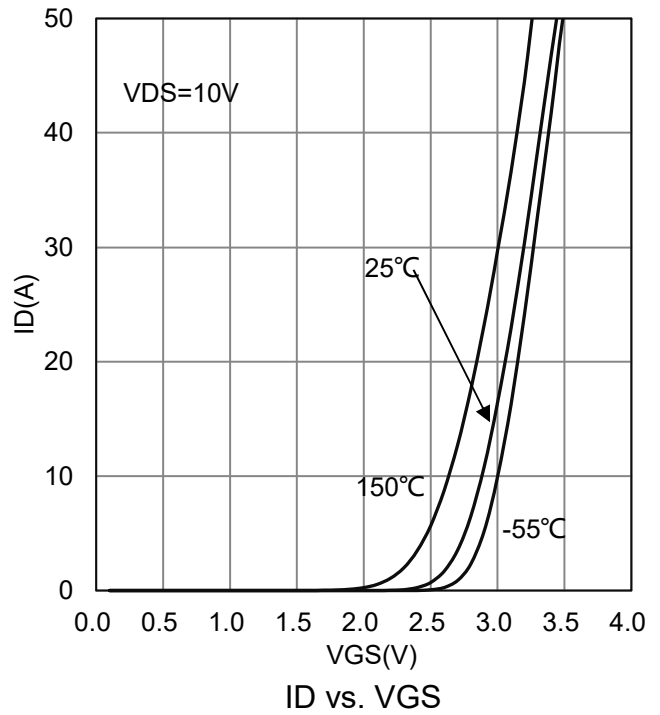
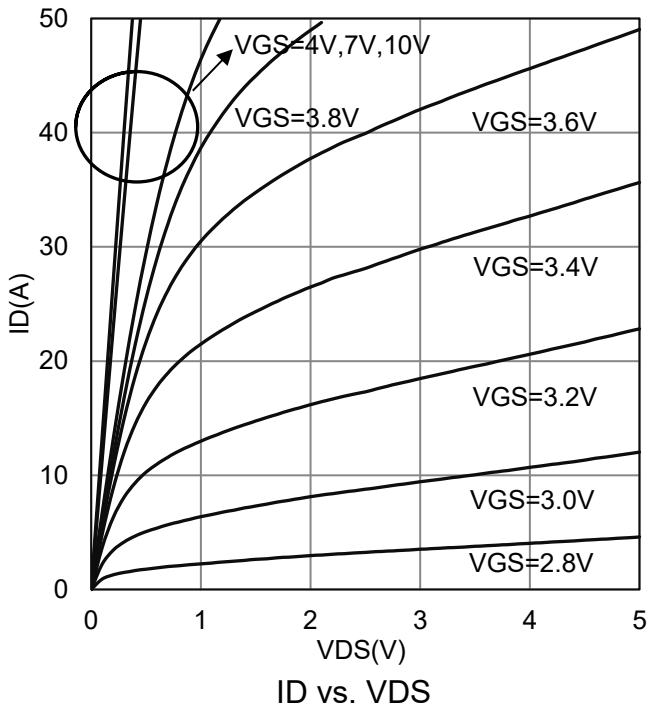
6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit	
Static						
Drain-Source Breakdown Voltage (VDS =0V , ID =-250μA)	VBRDSS	-30	-	-	V	
Gate Threshold Voltage (VDS =VGS , ID =-250μA)	VGS(th)	-1.2	-1.7	-2.5	V	
Gate Leakage Current (VDS =0V, VGS =±25V)	IGSS	-	-	±100	nA	
Zero Gate Voltage Drain Current (VDS = -30 V, VGS = 0 V)	IDSS	-	-	-1	μA	
Drain-Source On-Resistance(Note 3) (VGS = -10 V, ID = -20A) (VGS = -4.5 V, ID = -16 A)	RDS(ON)	-	6.3 9.8	8 12.5	mΩ	
Diode Forward Voltage (Note 3) (IS = -1 A, VGS = 0 V)	VSD	-	-0.7	-1	V	
Dynamic						
Total Gate Charge	(VDS = -15 V, VGS = -10 V, ID = -20 A)	Qg(10V)	-	54	-	nC
Total Gate Charge		Qg(4.5V)	-	27	-	
Gate-Source Charge		Qgs	-	9	-	
Gate-Drain Charge		Qgd	-	13	-	
Input Capacitance	(VDS = -15 V, VGS = 0 V, f = 1 MHz)	Ciss	-	2723	-	pF
Output Capacitance		Coss	-	448	-	
Reverse Transfer Capacitance		Crss	-	395	-	
Turn-On Delay Time	(VGS=-10V,VDS =-15V, RL=0.75 Ω ,RGEN=3Ω)	td(on)	-	12.5	-	ns
Rise Time		tr	-	18	-	
Turn-Off Delay Time		td(off)	-	125	-	
Fall Time		tf	-	66	-	

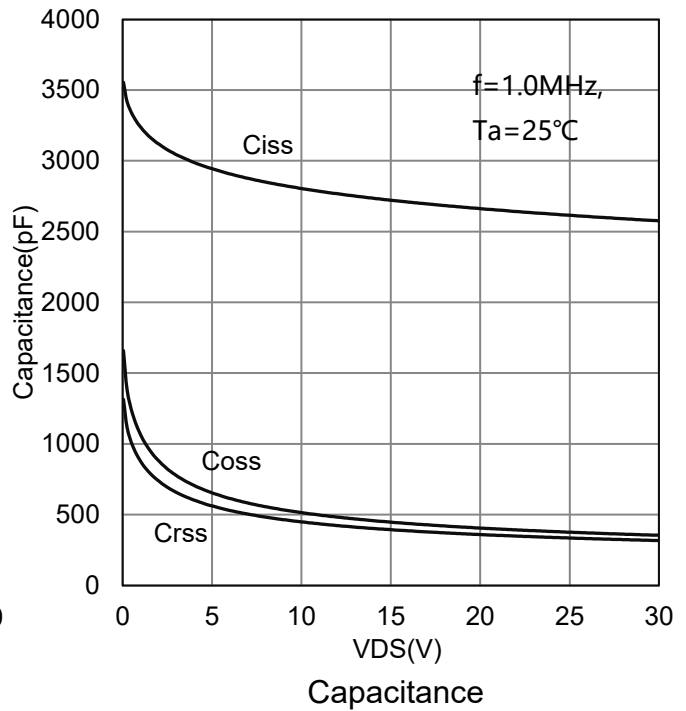
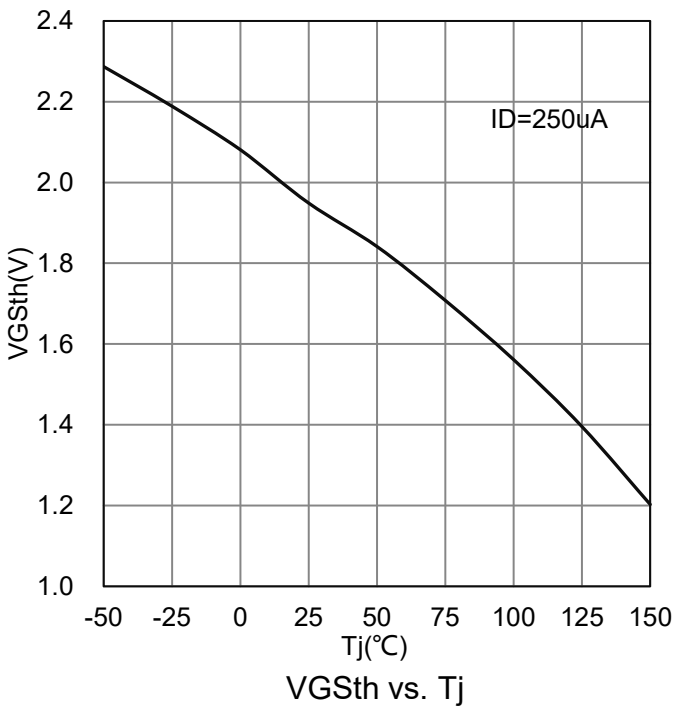
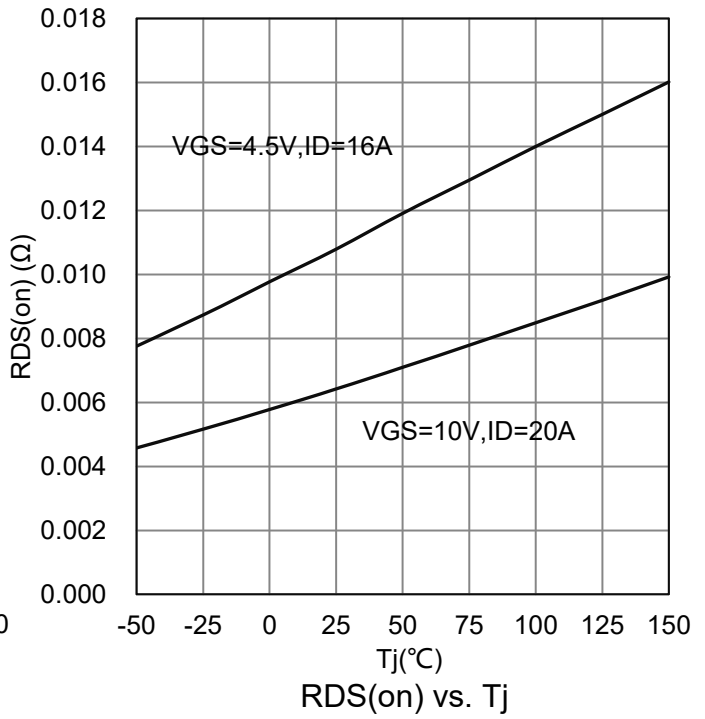
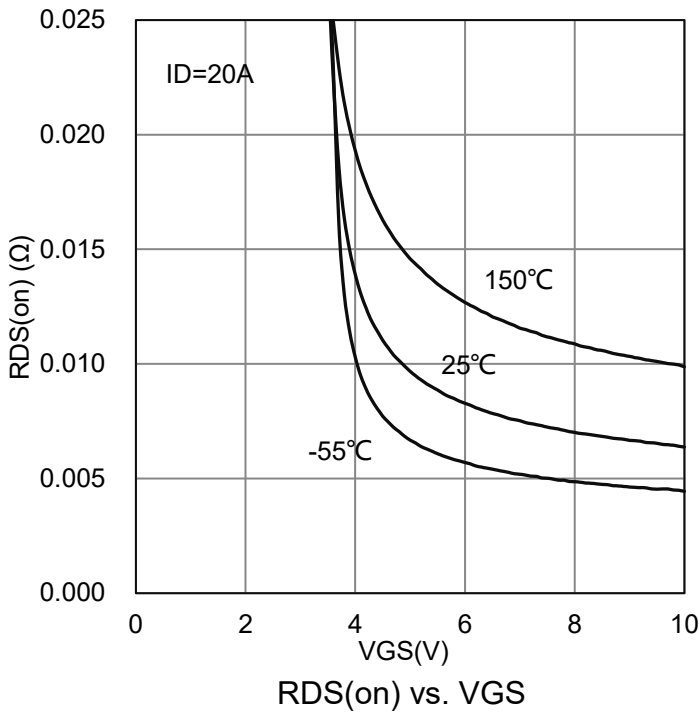
3.Pulse test: PW≤300us,duty cycle≤2%.



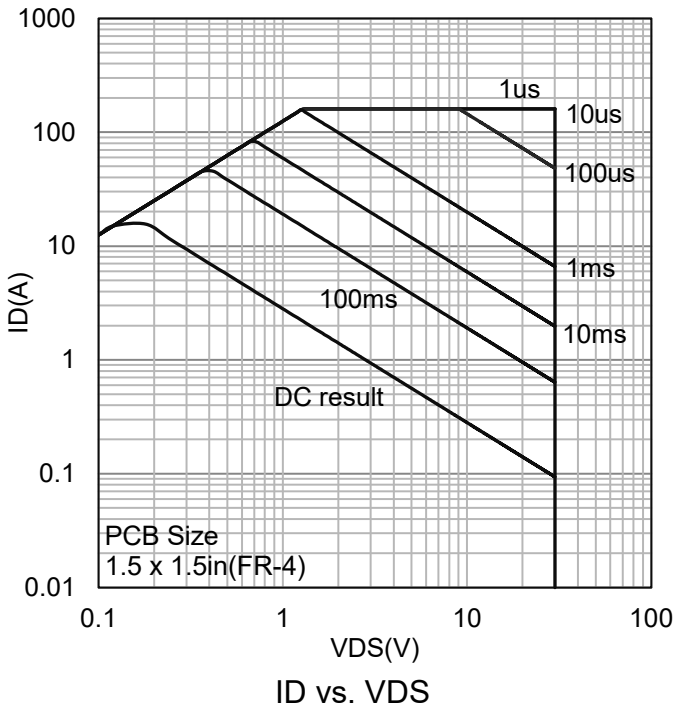
7.ELECTRICAL CHARACTERISTICS CURVES

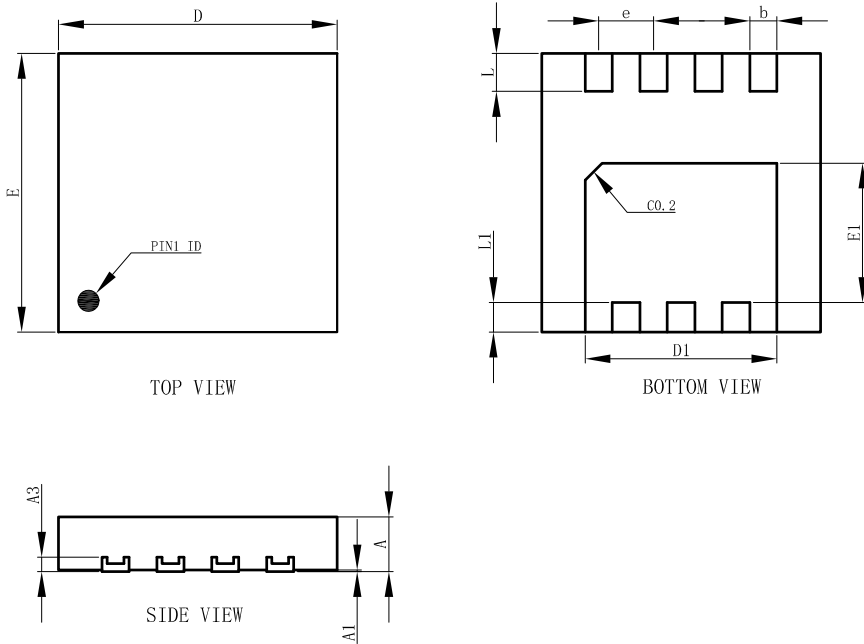


7.ELECTRICAL CHARACTERISTICS CURVES(Con.)

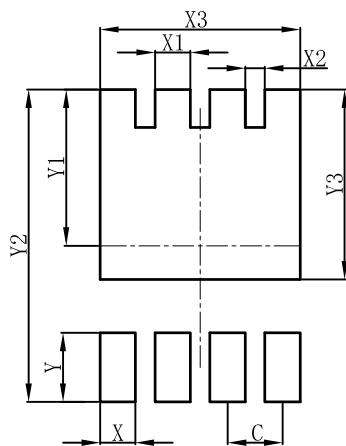


7.ELECTRICAL CHARACTERISTICS CURVES(Con.)



8.OUTLINE AND DIMENSIONS


DFN3333-8A			
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

