

PB8337D

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

1. FEATURES

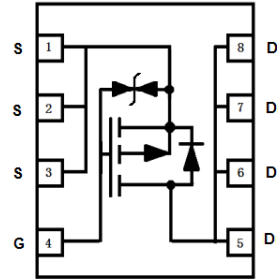
- Low RDS(on) trench technology.
- Low thermal impedance.
- Fast switching speed.
- We declare that the material of product are Halogen Free and compliance with RoHS requirements.
- ESD protected



DFN3333-8A

2. APPLICATION

- Load Switches
- DC/DC Conversion
- Motor Drives



3. ORDERING INFORMATION

Device	Marking	Shipping
PB8337D	A37	2000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25°C unless otherwise stated)

Parameter	Symbol	Limits	Unit
Drain-to-Source Voltage	VDSS	-30	V
Gate-to-Source Voltage	VGS	±25	V
Avalanche Current	IAS	35	A
Avalanche energy L=0.1mH	EAS	61.25	mJ
Continuous Drain Current(Note 1)	ID	TA =25°C	-9
		TA =70°C	-7
Pulsed Drain Current (Note 2)	IDM	-40	A
Power Dissipation(Note 5)	PD	TA =25°C	0.78
		TA =70°C	0.5
Operating Junction Temperature	TJ	-55 ~+150	°C
Storage Temperature Range	Tstg	-55 ~+150	

1.Surface-mounted on FR4 board using the minimum recommended pad size.

2.Pulse width limited by maximum junction temperature.

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Value	Unit
Junction-to-Case (Note 1)	RθJC	21	°C/W
Junction-to-Ambient – Steady State (Note 1)	RθJA	160	
Junction-to-Ambient – Steady State (Note 5)	RθJA	80	
Junction-to-Ambient – (t ≤ 10 s) (Note 5)	RθJA	33	



6. ELECTRICAL CHARACTERISTICS

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 = ±25 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
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	-	26.22	-
Gate-Source Charge		Qgs	-	3.48	-
Gate-Drain Charge		Qgd	-	13.26	-
Input Capacitance	(VDS = -15 V, VGS = 0 V, f = 1 MHz)	Ciss	-	4555	-
Output Capacitance		Coss	-	442	-
Reverse Transfer Capacitance		Crss	-	441	-
Turn-On Delay Time	(VDS=-15 V, RL=1.2 Ω, ID=- 13.6 A, VGEN=-10 V, RGEN=6 Ω)	td(on)	-	15	-
Rise Time		tr	-	46	-
Turn-Off Delay Time		td(off)	-	113.8	-
Fall Time		tf	-	120.9	-
Gate Resistance (VDS=0V ,VGS=0V, f=1.0MHz)	Rg	-	2.5	5.2	Ω
Source-Drain DIODE Ratings and Characteristics(Tc= 25°C)					
Continuous Current(Note 5)	IS	-	-	-25	A
Plused Current(Note 5)	ISM	-	-	-100	A
Reverse Recovery Time (IF=IS,dIf/dt=100A/us)	trr	-	62	-	ns
Reverse Recovery Charge (IF=IS,dIf/dt=100A/us)	Qrr	-	68	-	nC

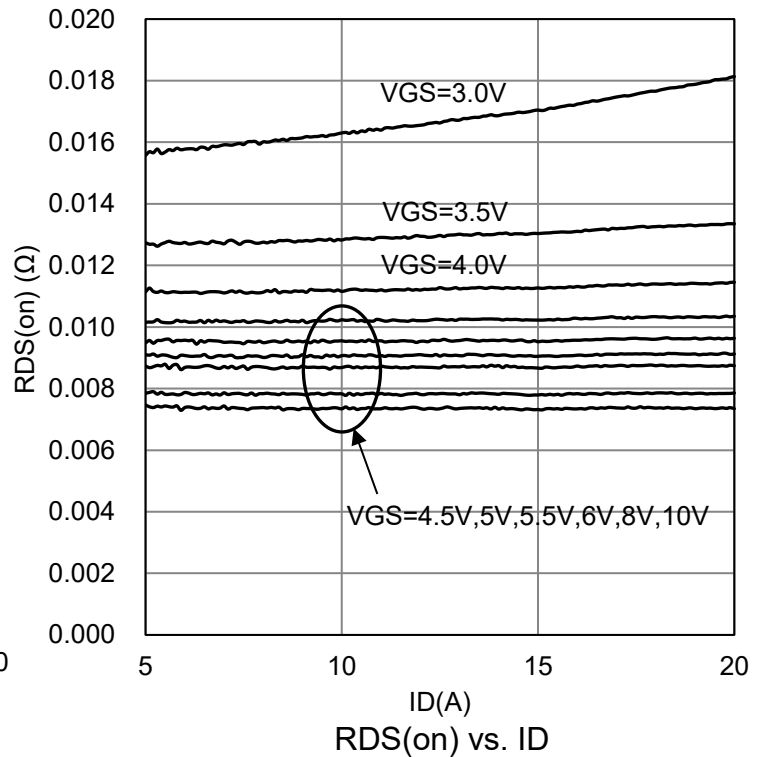
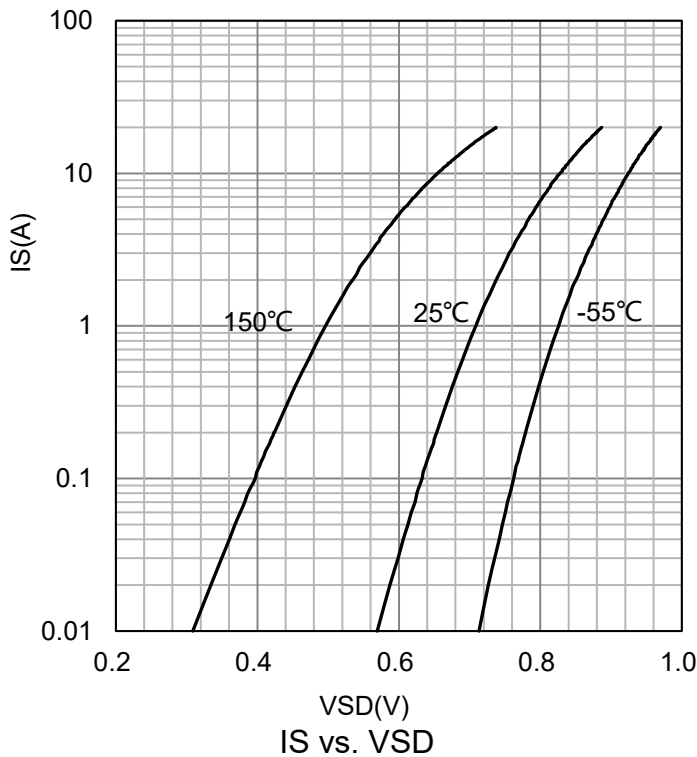
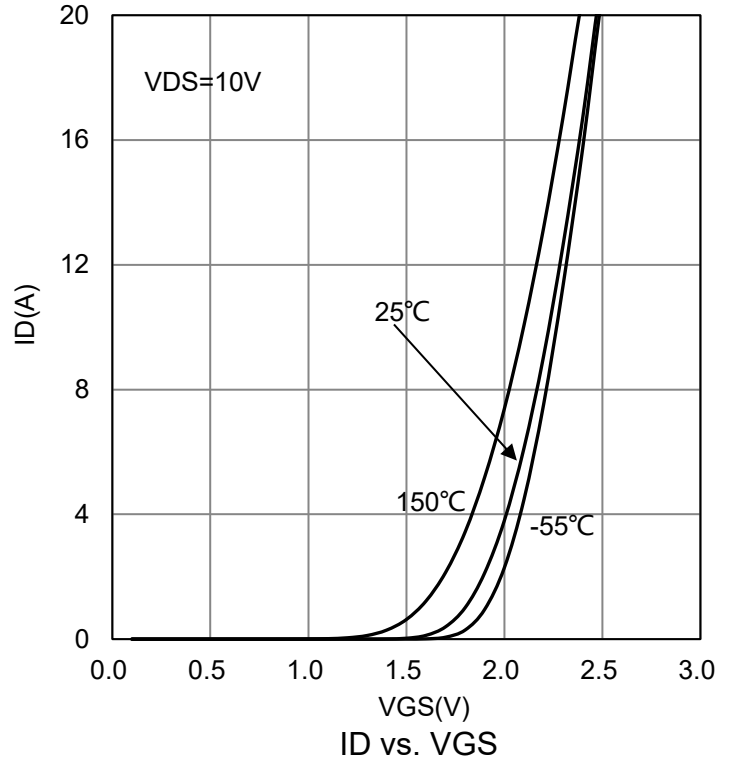
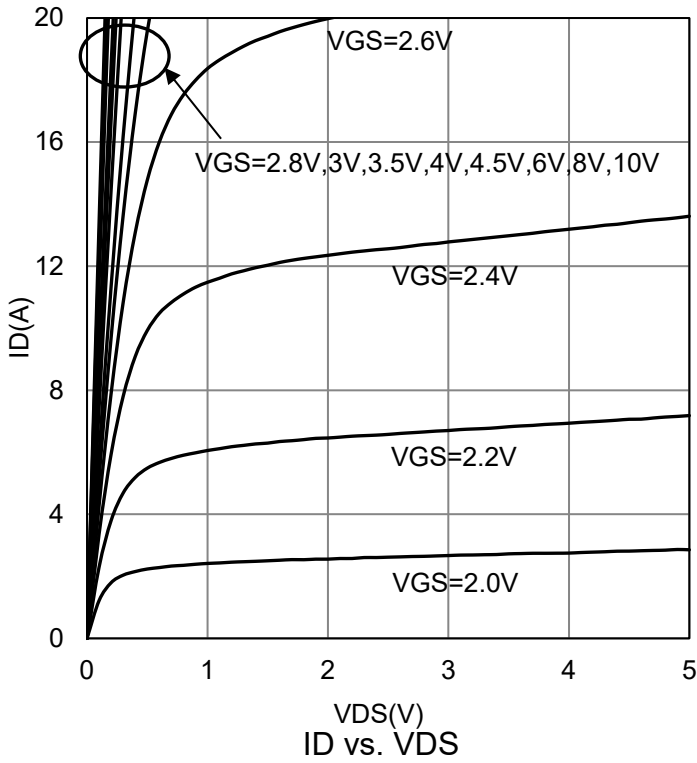
3.Pulse test: PW ≤ 300µs duty cycle ≤ 2%.

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

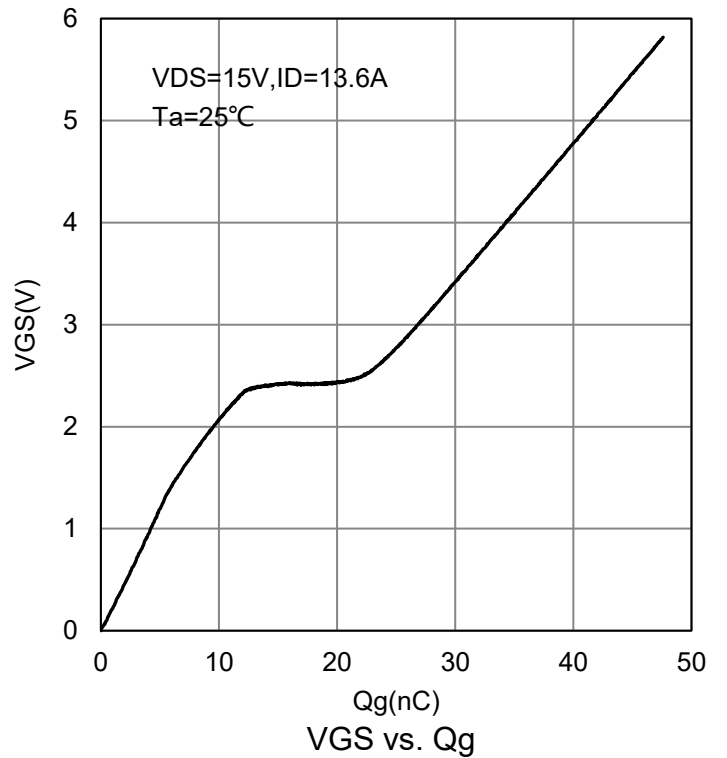
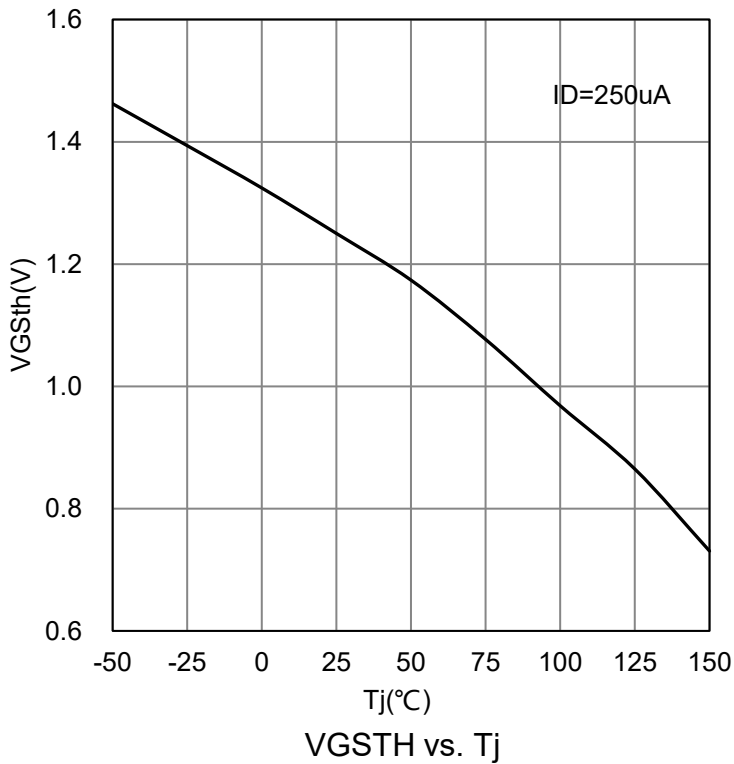
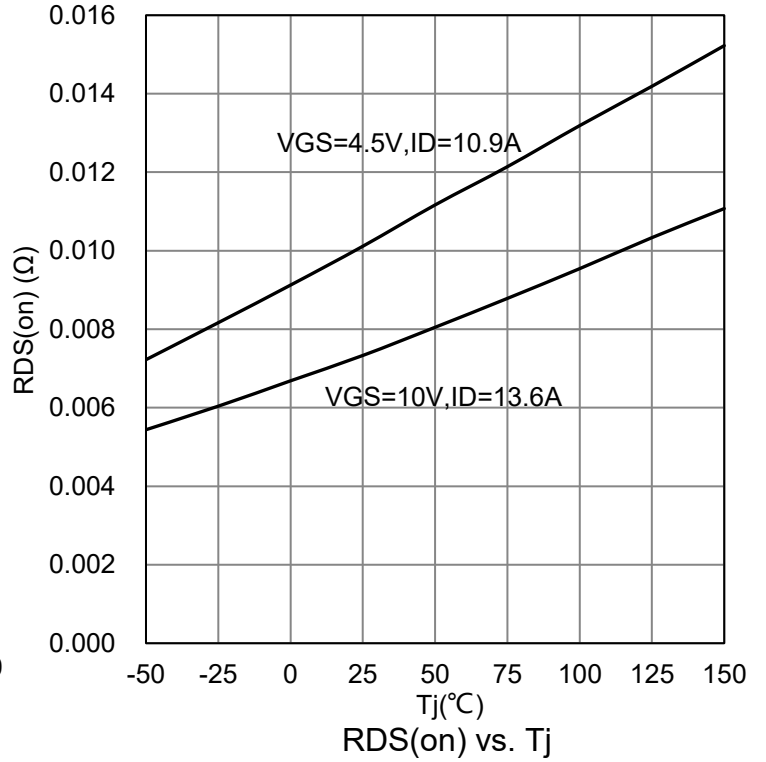
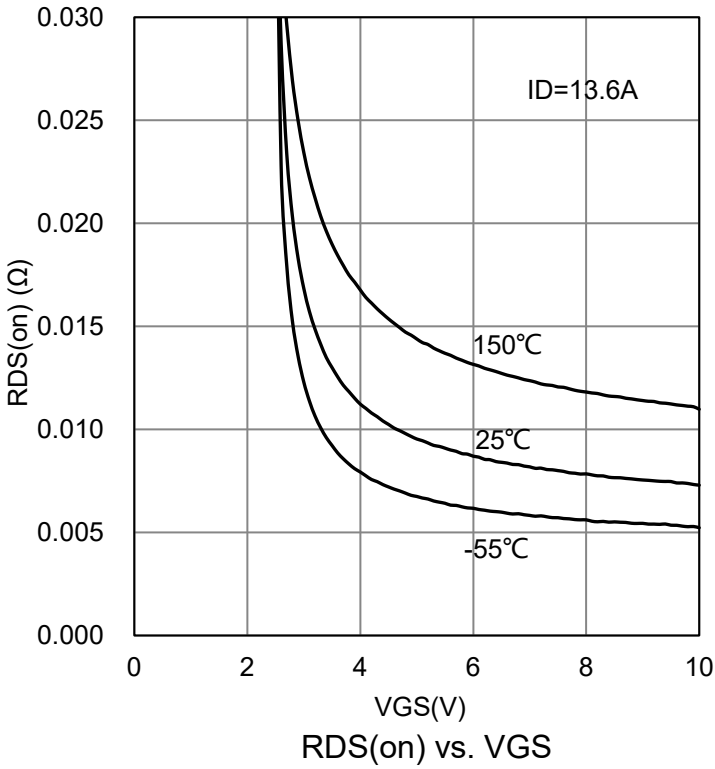
5.Surface-mounted on FR4 board using 1 sq-in pad, 1 oz Cu.



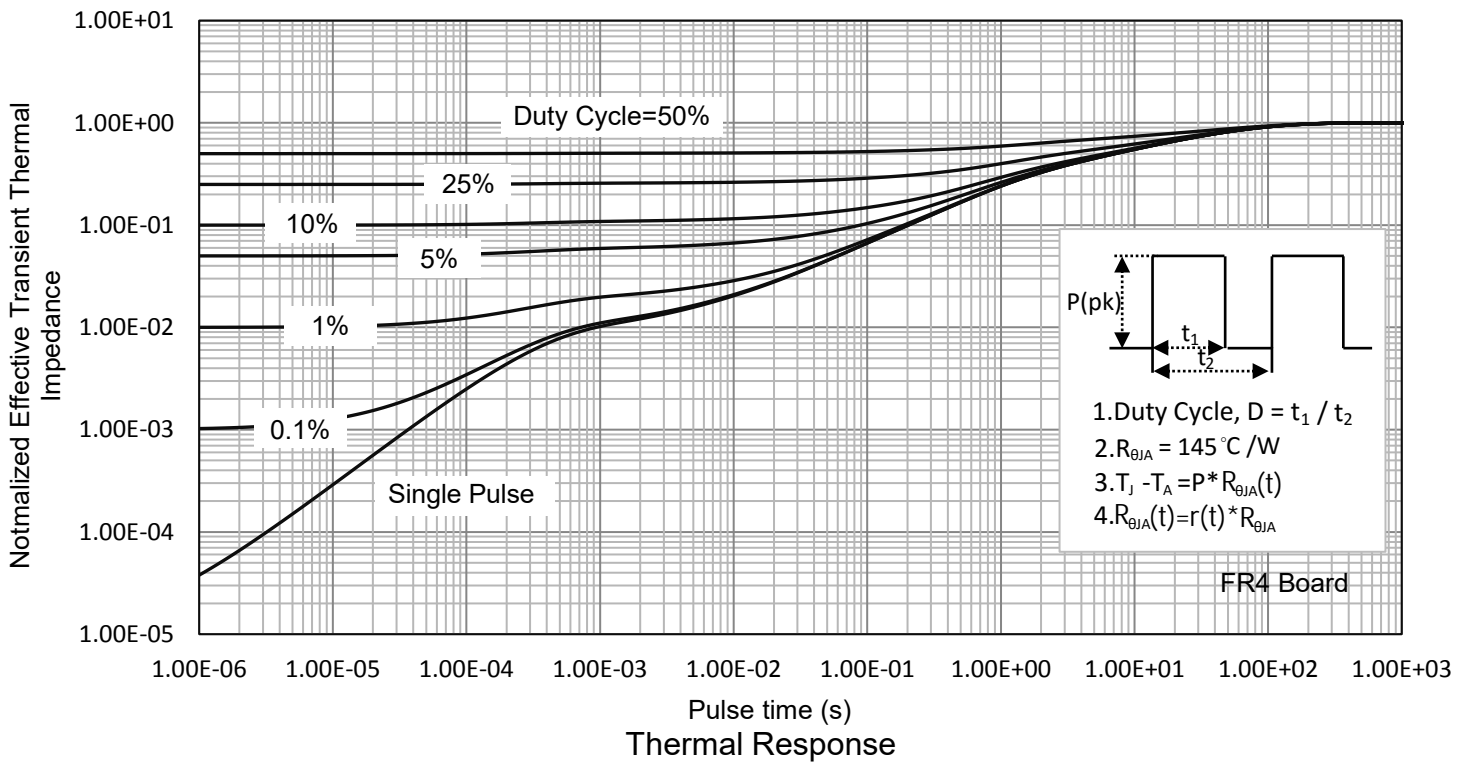
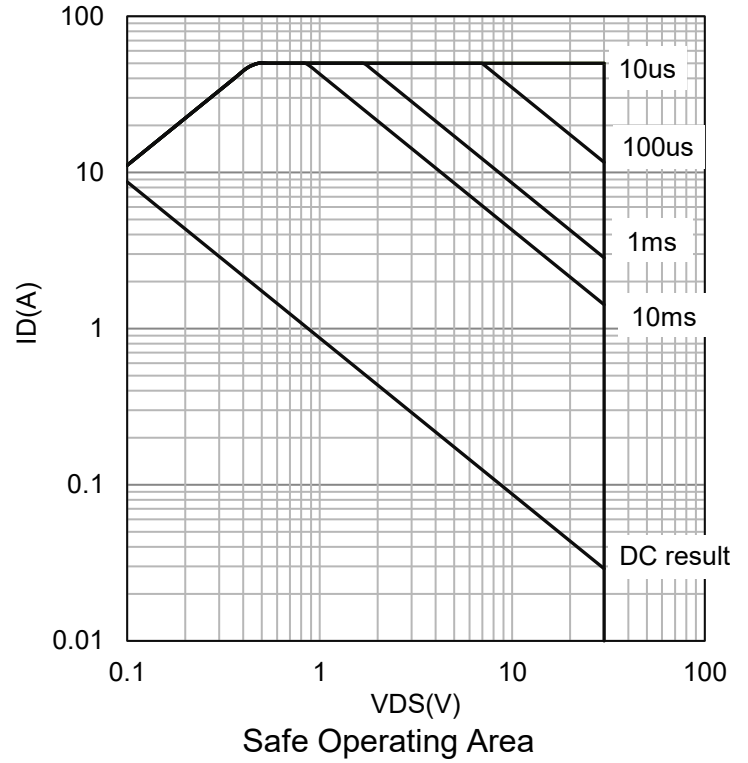
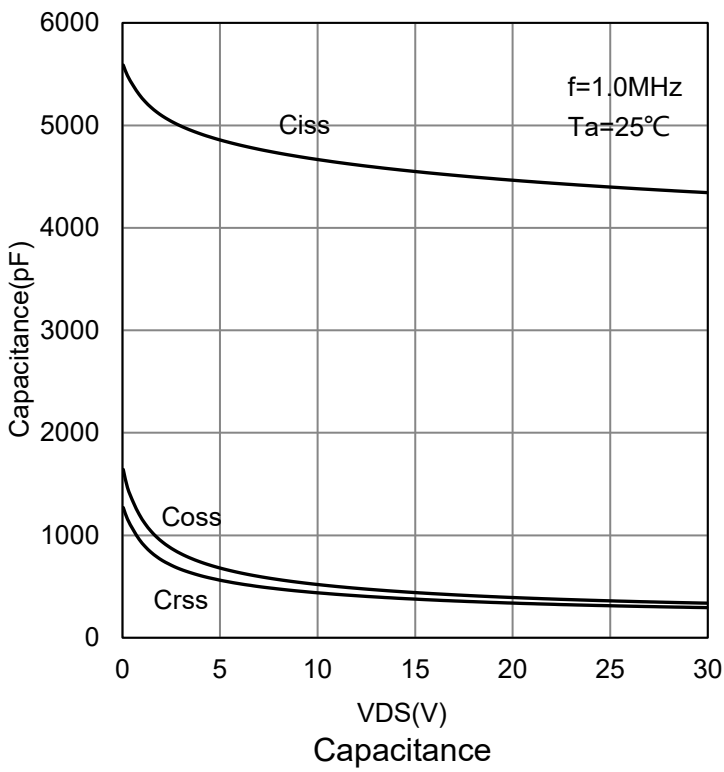
7.ELECTRICAL CHARACTERISTICS CURVES

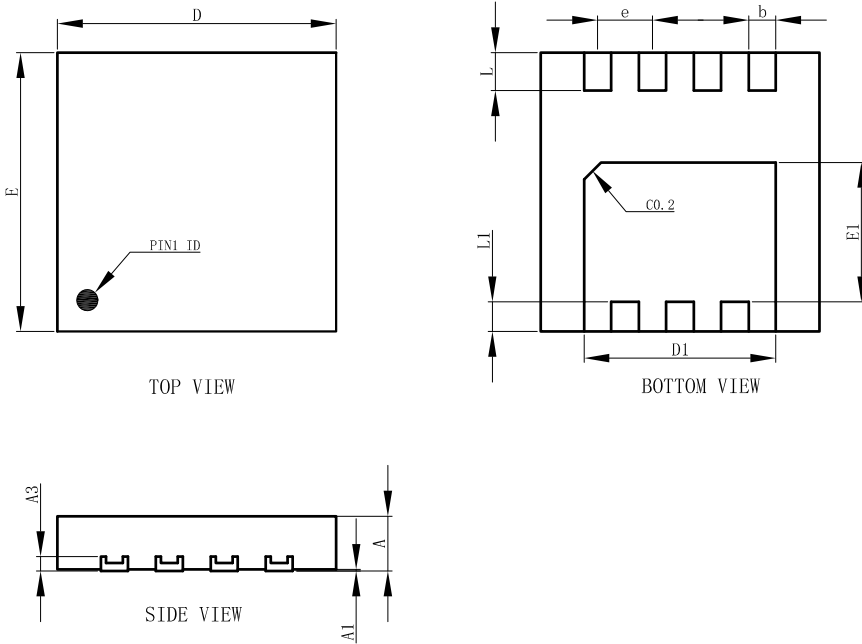


7.ELECTRICAL CHARACTERISTICS CURVES(Con.)

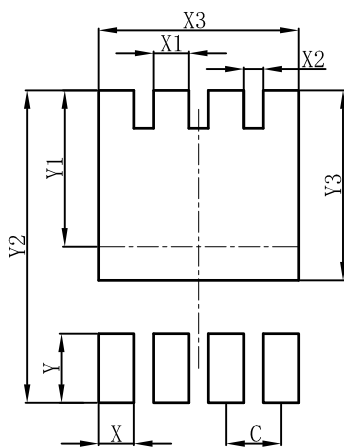


7.ELECTRICAL CHARACTERISTICS CURVES(Con.)



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

