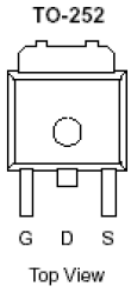
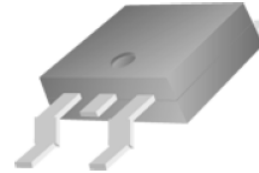


LN15N10D2

N-Channel Logic Level Enhancement Mode Field MOSFET

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

- DC-DC Conversion

3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LN15N10D2	15N10	2500pcs/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25°C)

Parameter		Symbol	Limits	Unit
Drain-to-Source Voltage		VDS	100	V
Gate-to-Source Voltage		VGS	±20	V
Continuous Drain Current(Note 1)	TC=25°C	ID	17	A
	TC=100°C		11	A
Pulsed Drain Current(Note 2)		IDM	68	A
Avalanche Current(L = 0.1mH)		IAS		A
Avalanche Energy(L = 1.0mH)		EAS		mJ
Power Dissipation(Note 1)	TC=25°C	PD	50	W
	TC=100°C		20	
Operating Junction and Storage Temperature Range		Tj/Tstg	-55~+150	°C

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
Junction-to-Ambient(Note 1)	RθJA	75	°C/W
Junction-to-Case	RθJC	2.5	

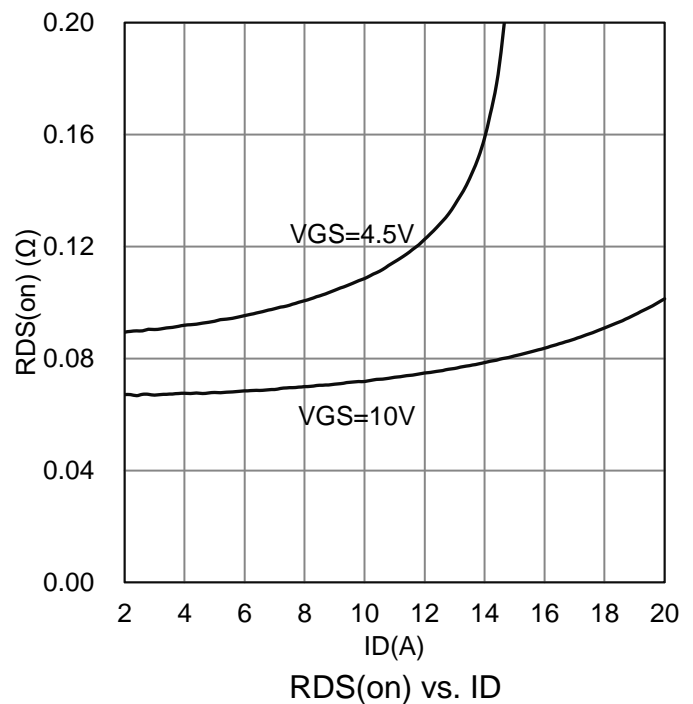
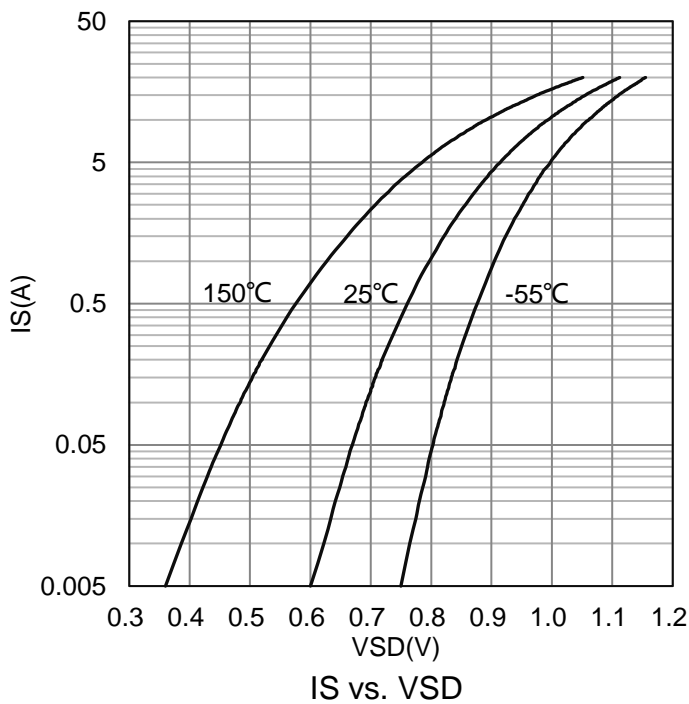
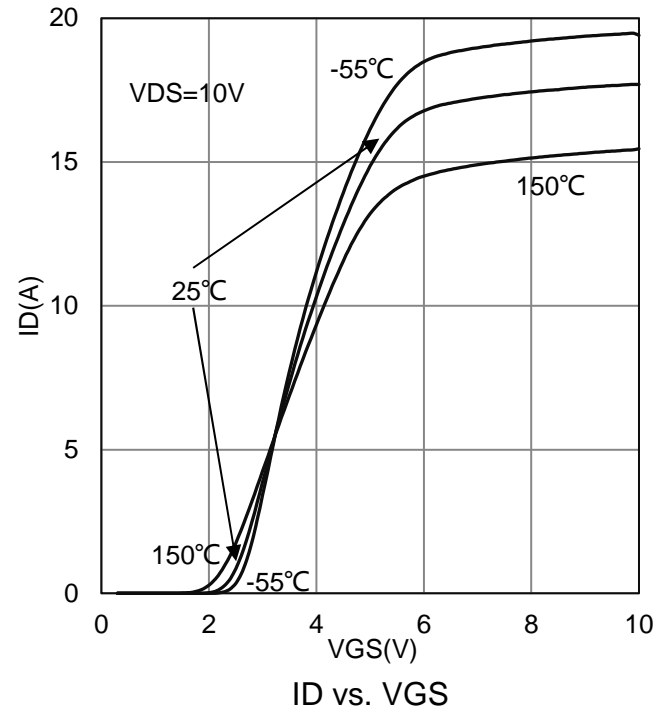
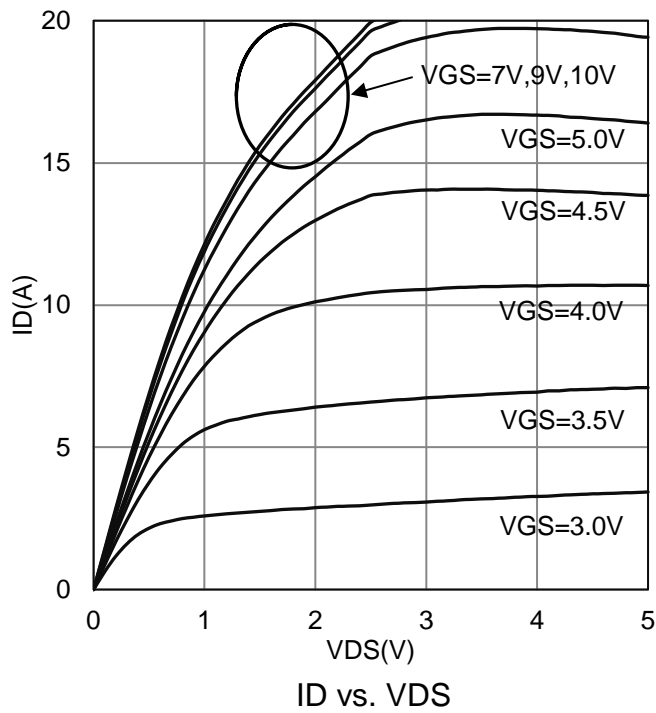
1.Surface mounted on "1.5 x 1.5" FR4 board using 1 sq in pad, 2 oz Cu.

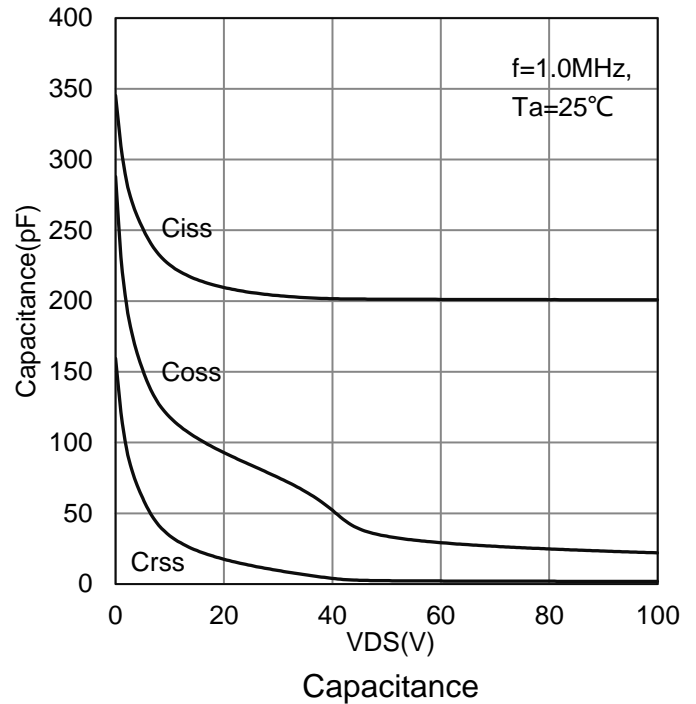
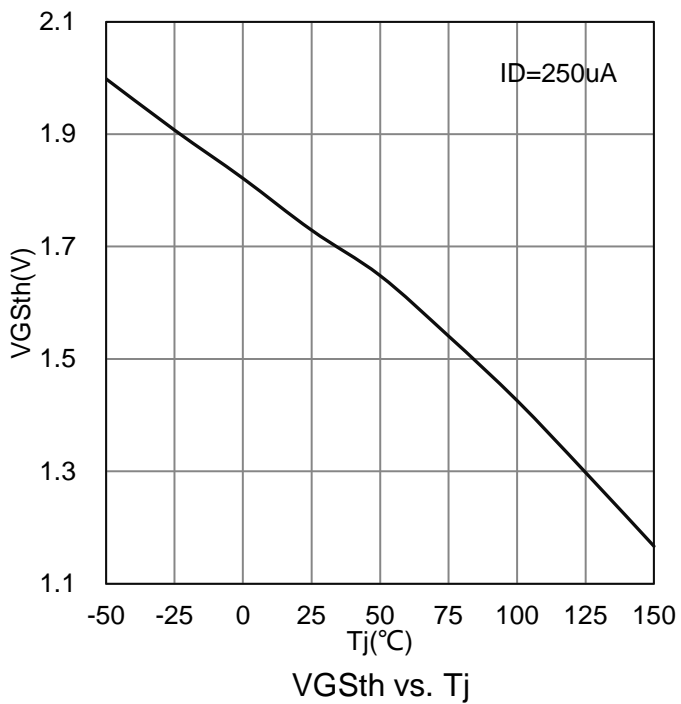
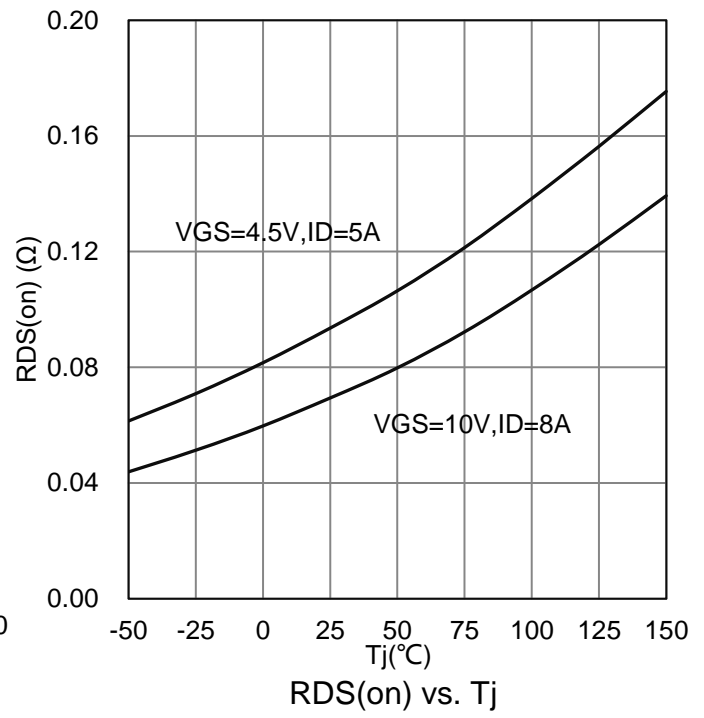
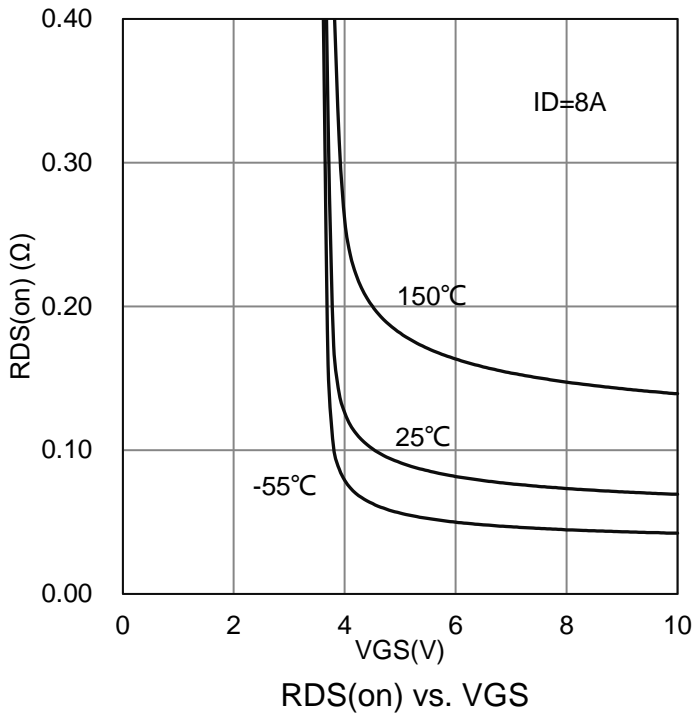
2.Pulse width limited by maximum junction temperature

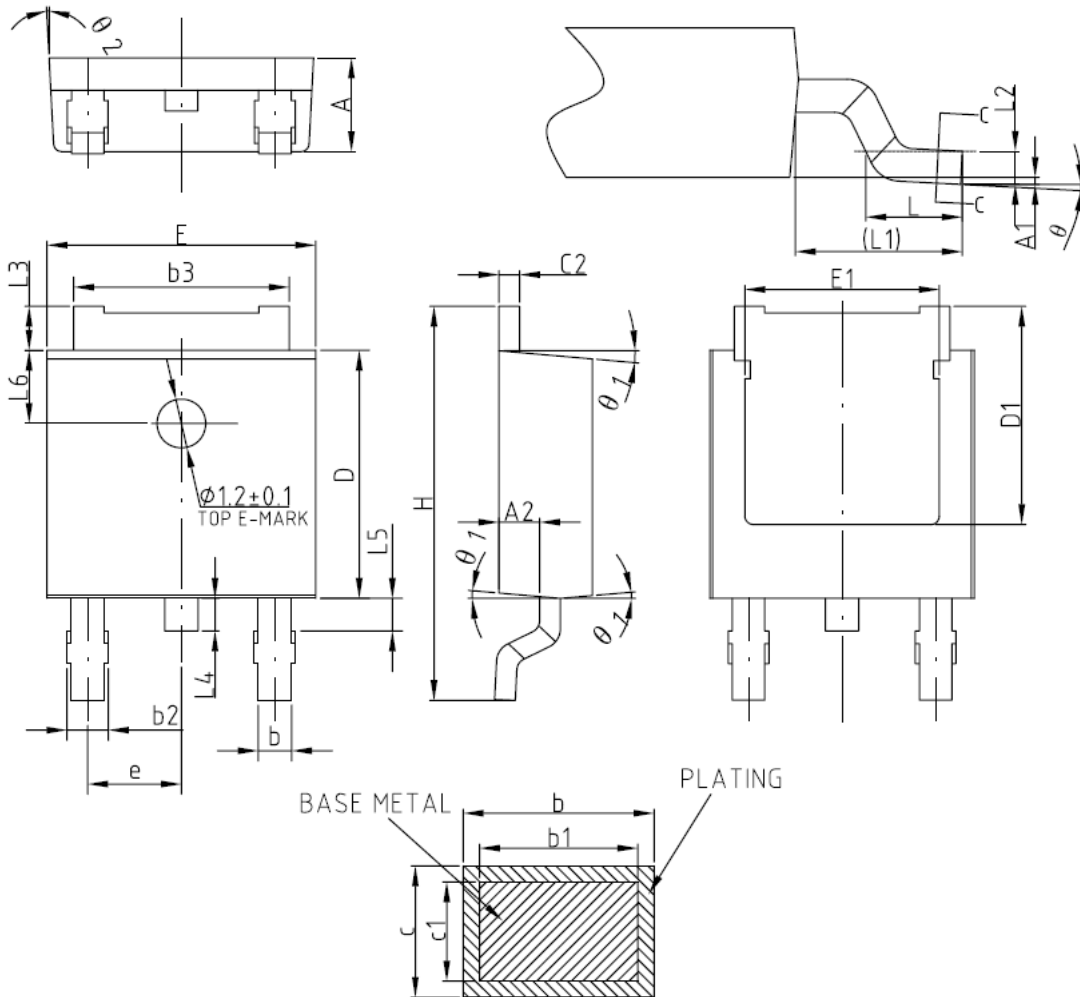
6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Static					
Drain to Source Breakdown Voltage (VGS = 0V, ID = 250μA)	VDSS	100	-	-	V
Gate Threshold Voltage (VDS = VGS, ID = 250 uA)	VGS(th)	1	1.8	3	V
Gate-Body leakage current (VDS = 0V, VGS = ±20V)	IGSS	-	-	± 100	nA
Zero Gate Voltage Drain Current (VDS = 80 V, VGS = 0 V)	IDSS	-	-	1	μA
Drain-to-Source On-Resistance(Note 3) (VGS = 10 V, ID = 12 A) (VGS = 4.5 V, ID = 8 A)	RDS(ON)	- -	90 100	100 125	mΩ
Diode Forward Voltage (IS = 1 A, VGS = 0 V)	VSD	-	-	1.3	V
Dynamic					
Total Gate Charge	(VDS = 80 V, VGS = 10 V, ID = 12 A)	Qg	-	13	nC
Gate to Source Charge		Qgs	-	3	
Gate to Drain Charge		Qgd	-	4.6	
Turn-on Delay Time	(VDS = 50V, VGS = 10V, ID = 1A, RGS = 6Ω)	td(on)	-	10	nS
Rise Time		tr	-	12	
Turn-Off Delay Time		td(off)	-	20	
Fall Time		tf	-	15	
Input Capacitance	(VDS = 25 V, VGS = 0 V, f = 1 MHz)	Ciss	-	715	pF
Output Capacitance		Coss	-	54	
Reverse Transfer Capacitance		Crss	-	24	
Gate Resistance (VDS = 0V, VGS = 0V, f = 1.0MHz)	Rg	-	2.5	-	Ω

3. Pulse test; pulse width ≤ 300μs, duty cycle ≤ 2%

7. ELECTRICAL CHARACTERISTICS CURVES


7. ELECTRICAL CHARACTERISTICS CURVES(Con.)


8.OUTLINE AND DIMENSIONS


SYMBOL	MIN	NOM	MAX
A	2.20	2.30	2.38
A1	0	—	0.10
A2	0.90	1.00	1.10
b	0.77	—	0.89
b1	0.76	0.81	0.86
b2	0.77	—	1.10
b3	5.23	5.33	5.43
c	0.47	—	0.60
c1	0.46	0.51	0.56
c2	0.47	—	0.60
D	6.00	6.10	6.20
D1	5.25	—	—
E	6.50	6.60	6.70
E1	4.70	—	—
e	2.28BSC		
H	9.80	10.10	10.40
L	1.40	1.50	1.70
L1	2.90REF		
L2	0.51BSC		
L3	0.90	—	1.25
L4	0.60	0.80	1.00
L5	0.90	—	1.50
L6	1.80REF		
θ	0°	—	8°
θ_1	3°	5°	7°
θ_2	1°	3°	5°

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