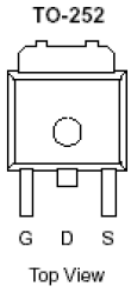
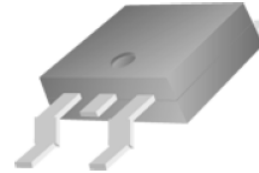


LN15N10D2

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	

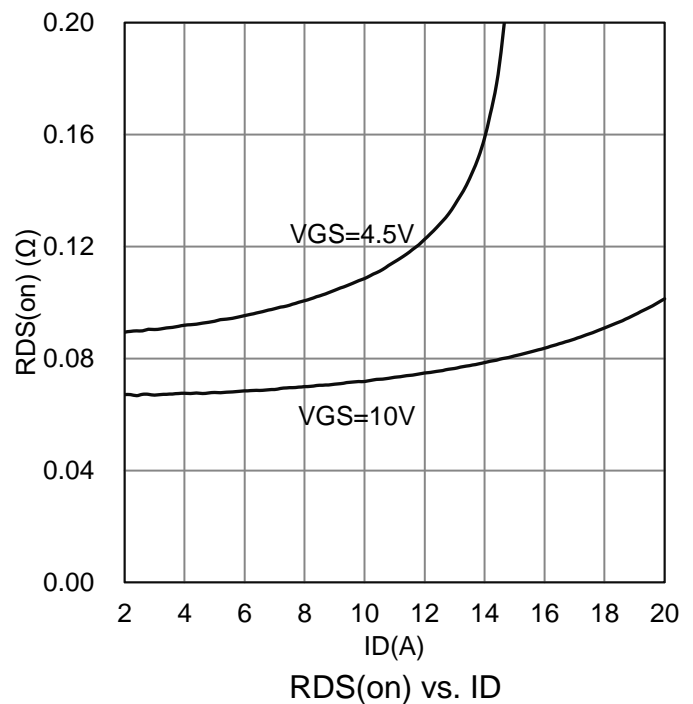
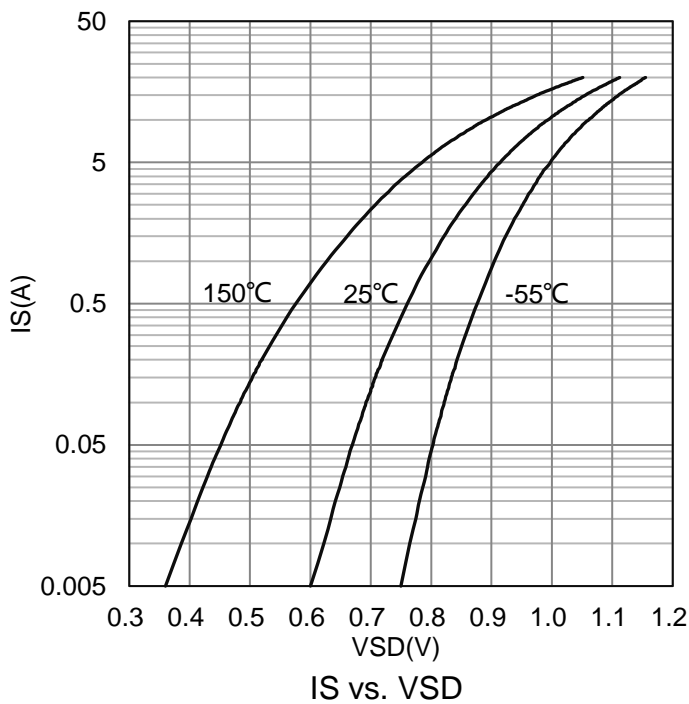
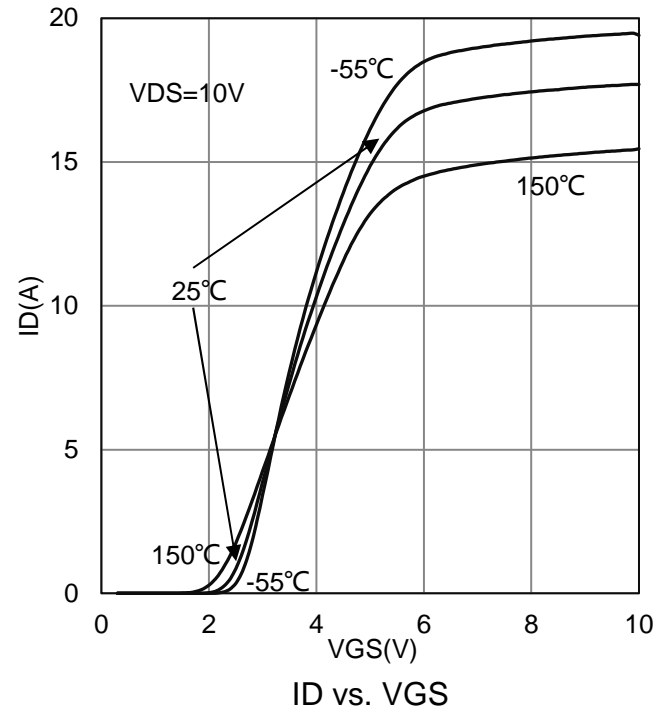
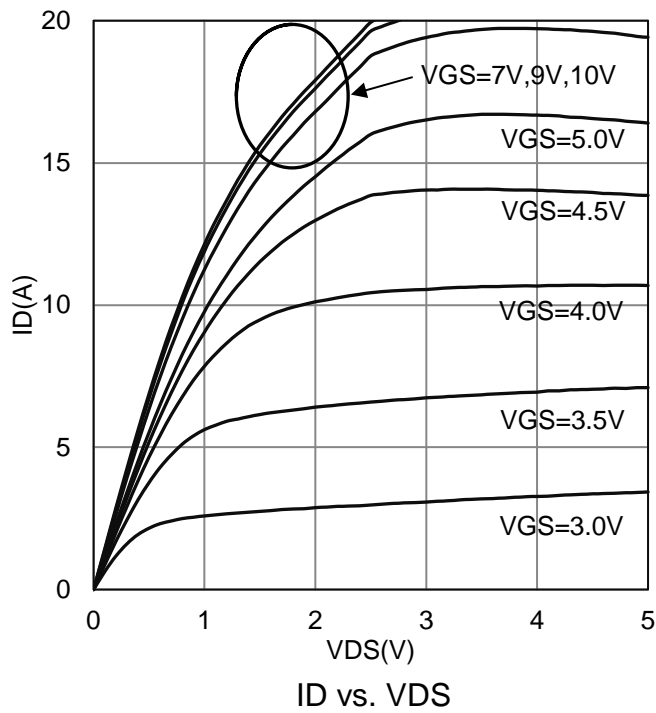
1.Surface mounted on "1.5 x 1.5" FR4 board using 1 sq in pad, 2 oz Cu.

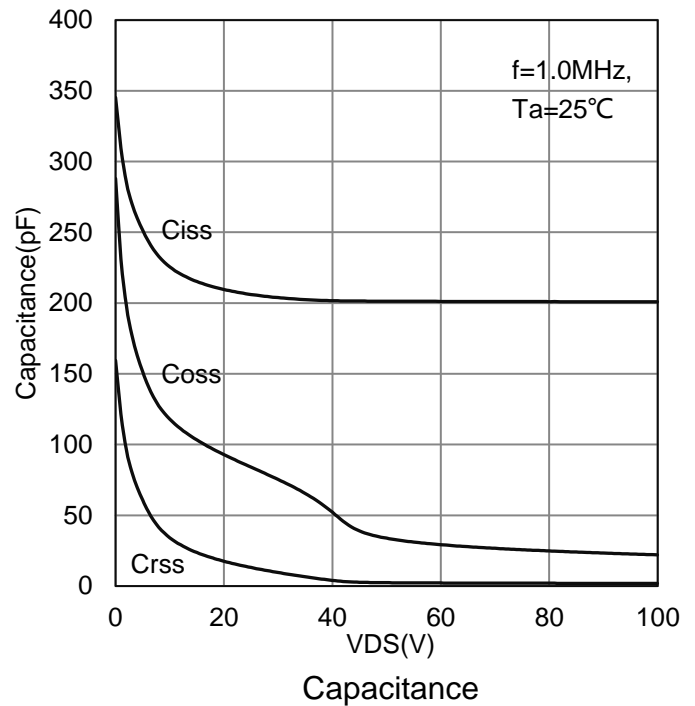
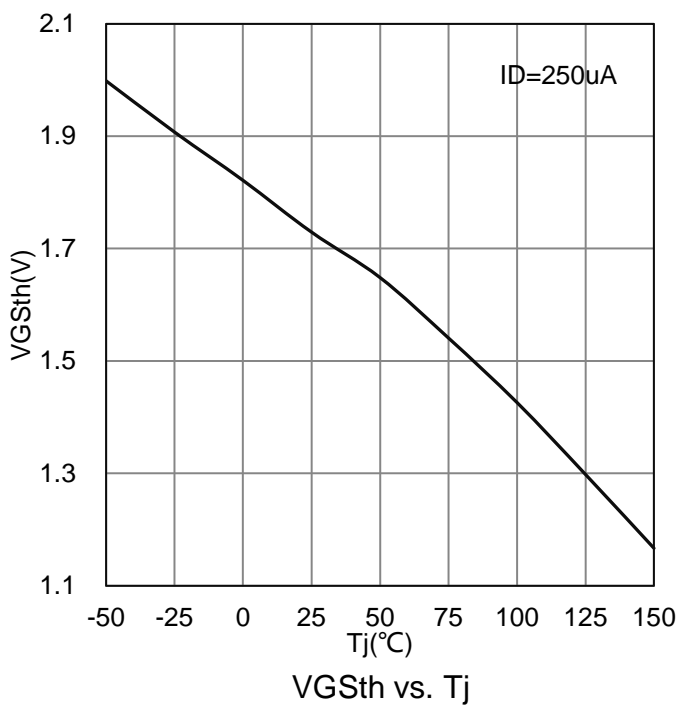
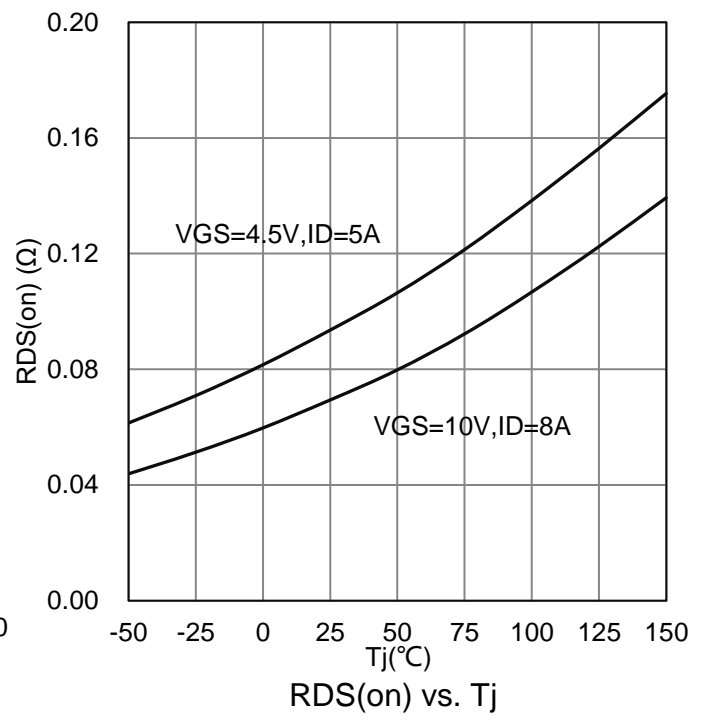
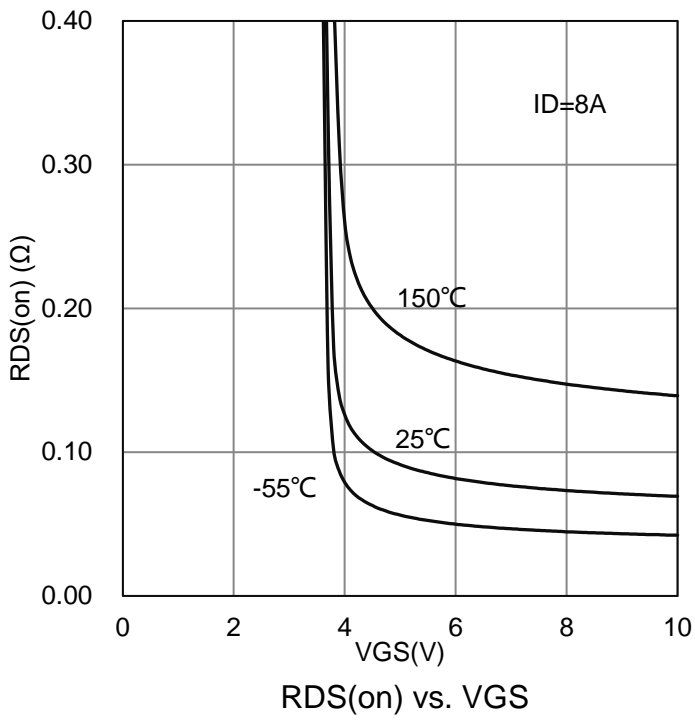
2.Pulse width limited by maximum junction temperature

6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

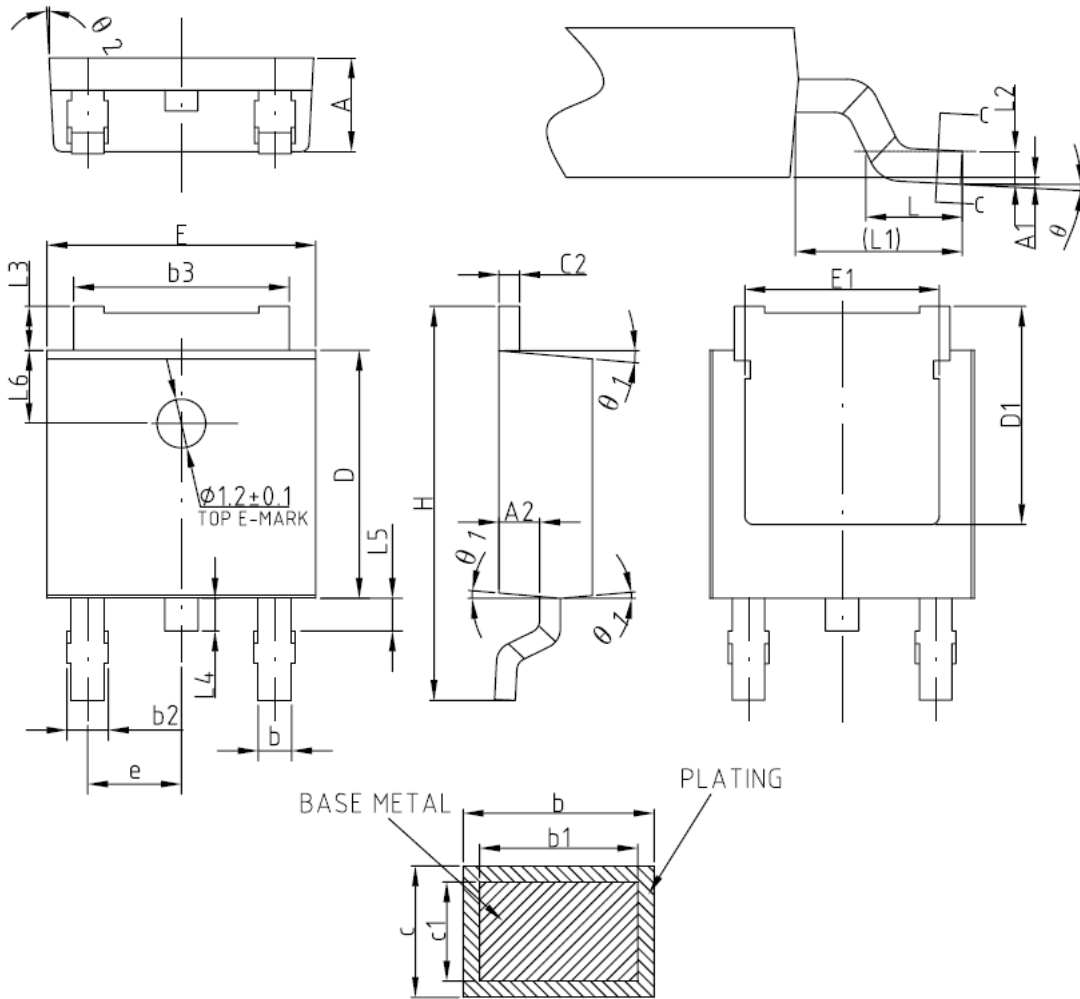
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Static					
Drain to Source Breakdown Voltage (VGS = 0V, ID = 250μA)	VDSS	100	-	-	V
Gate Threshold Voltage (VDS = VGS, ID = 250 uA)	VGS(th)	1	1.8	3	V
Gate-Body leakage current (VDS = 0V, VGS = ±20V)	IGSS	-	-	± 100	nA
Zero Gate Voltage Drain Current (VDS = 80 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		
theta	0°	-	8°
theta 1	3°	5°	7°
theta 2	1°	3°	5°

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- All information contained in this document is current as of the issuing date and subject to change without any prior notice. Before purchasing or using LRC's Products, please confirm the latest information with a LRC sales representative.

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