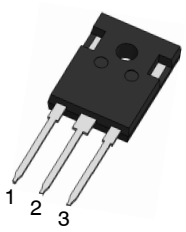
LN095N65CP

650V N-Channel MOSFET



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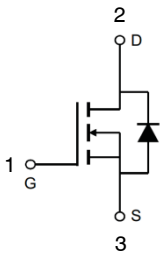
1. FEATURES

- Super high dense cell design for extremely low RDS(on).
- High power and current handing capability.
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

2. APPLICATIONS

- Sever and telecom power supplies
- String PV inverters



3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
LN095N65CP	095N65CP	1500/Tube

4. MAXIMUM RATINGS(Ta = 25ºC)

Parameter		Symbol	Limits	Unit
Drain-to-Source Voltage		VDS	650	V
Gate-to-Source Voltage		VGS	± 30	V
Continuous Drain Current(Note 1)	TC=25℃	ID	27	A
	TC=100℃		17	
Pulsed Drain Current (Note 2)		IDM	67	A
Power Dissipation(Note 1)	TC=25℃	PD	245	W
	TC=100℃		98	
Operating Junction and Storage Temperature Range		Tj/Tstg	-55~+150	℃

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
Junction-to-Ambient(Note 1)	RθJA	30	℃/W
Junction-to-Case	RθJC	0.51	

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

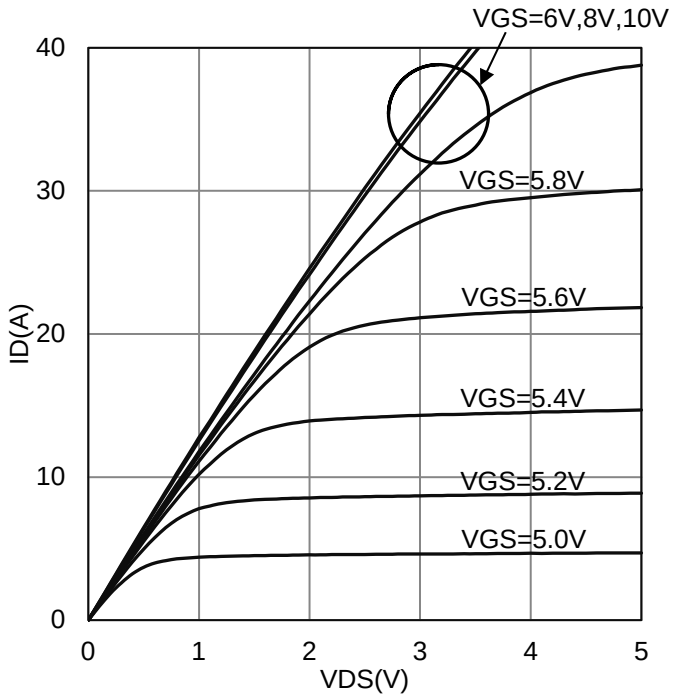
2.Pulse width limited by maximum junction temperature.

6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

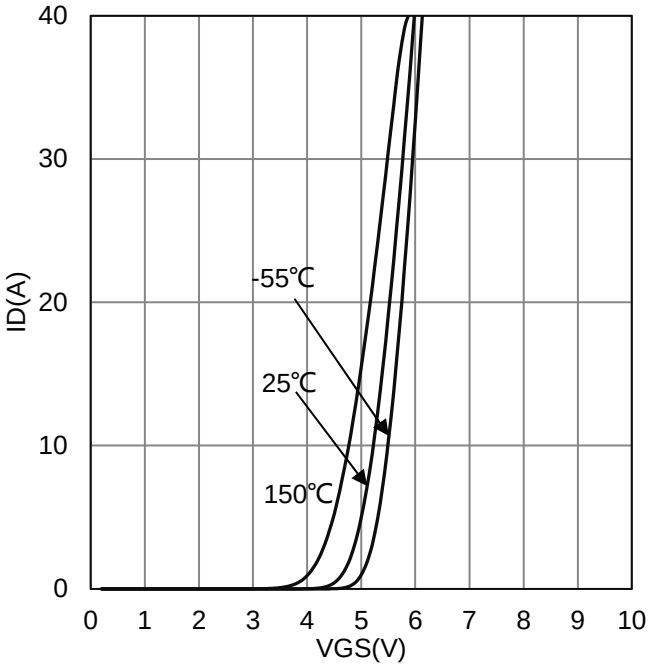
Characteristic		Symbol	Min.	Typ.	Max.	Unit
Static						
Drain–Source Breakdown Voltage (VGS = 0 V, ID = 250 μA)		VBRDSS	650	-	-	V
Gate Threshold Voltage (VDS = VGS , ID = 250 uA)		VGS(th)	2.5	-	4.5	V
Gate-Body leakage current (VDS = 0 V, VGS = ± 30 V)		IGSS	-	-	±100	nA
Zero Gate Voltage Drain Current (VDS = 650 V, VGS = 0 V)		IDSS	-	-	1	uA
Drain-to-Source On-Resistance (Note 3) (VGS = 10 V, ID = 20 A)		RDS(ON)	-	80	95	mΩ
Diode Forward Voltage (IS = 20 A, VGS = 0 V)		VSD	-	-	1.5	V
Dynamic						
Total Gate Charge	(VDS = 520 V, VGS = 10 V,ID = 20 A)	Qg	-	69	-	nC
Gate to Source Charge		Qgs	-	12	-	
Gate to Drain Charge		Qgd	-	30	-	
Turn-on Delay Time	(VDD = 520 V, ID = 20 A, RGEN = 6 Ω, VGS = 10 V)	td(on)	-	37	-	nS
Rise Time		tr	-	17	-	
Turn-Off Delay Time		td(off)	-	95	-	
Fall Time		tf	-	9	-	
Input Capacitance	(VDS = 150 V, VGS = 0 V, f = 100KHz)	Ciss	-	3040	-	pF
Output Capacitance		Coss	-	110	-	
Reverse Transfer Capacitance		Crss	-	5	-	

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

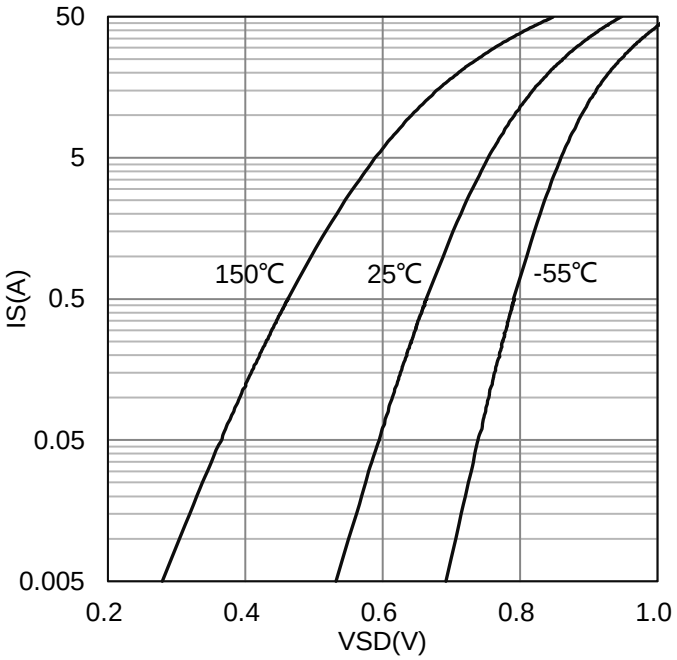
7. ELECTRICAL CHARACTERISTICS CURVES



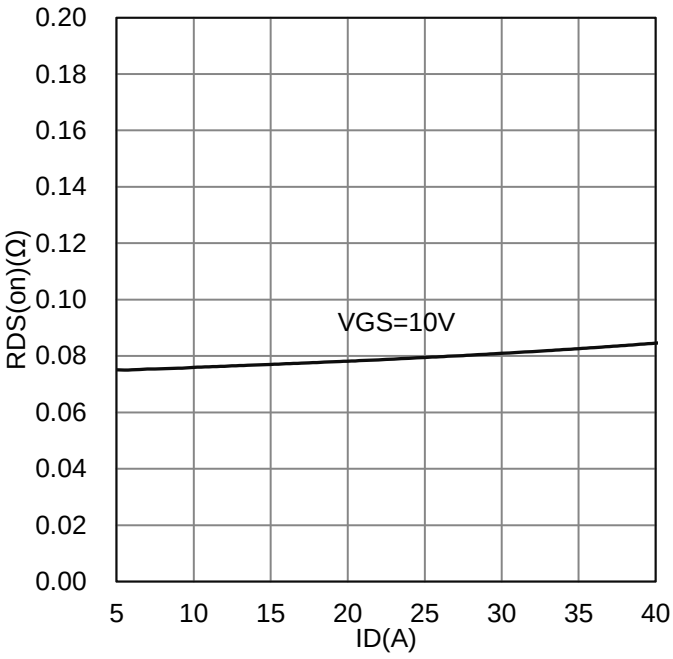
ID vs. VDS



ID vs. VGS

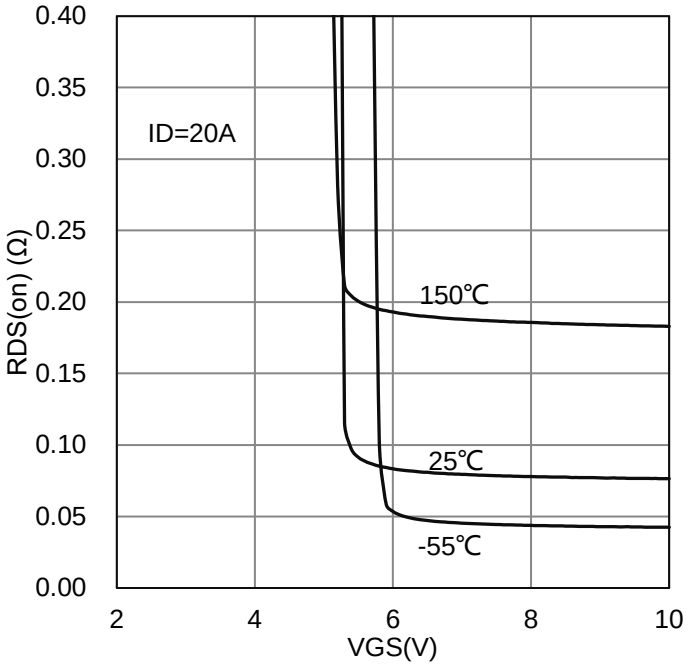


IS vs. VSD

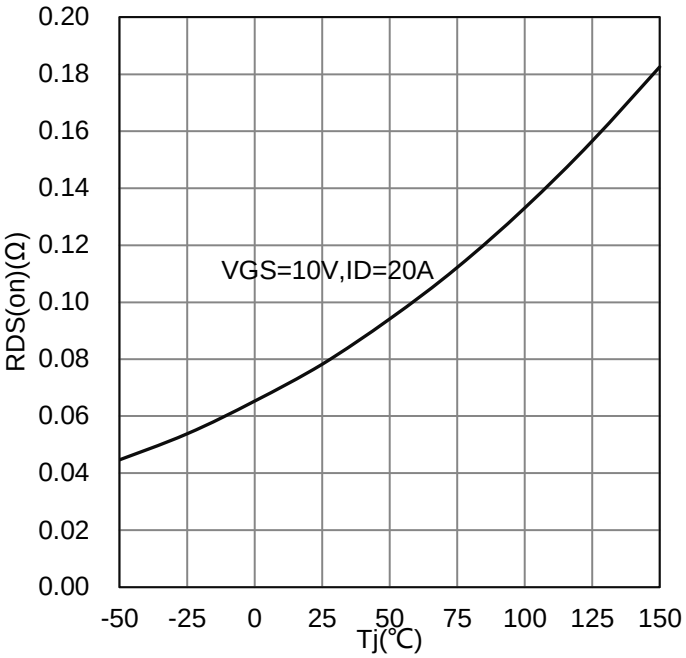


RDS(on) vs. ID

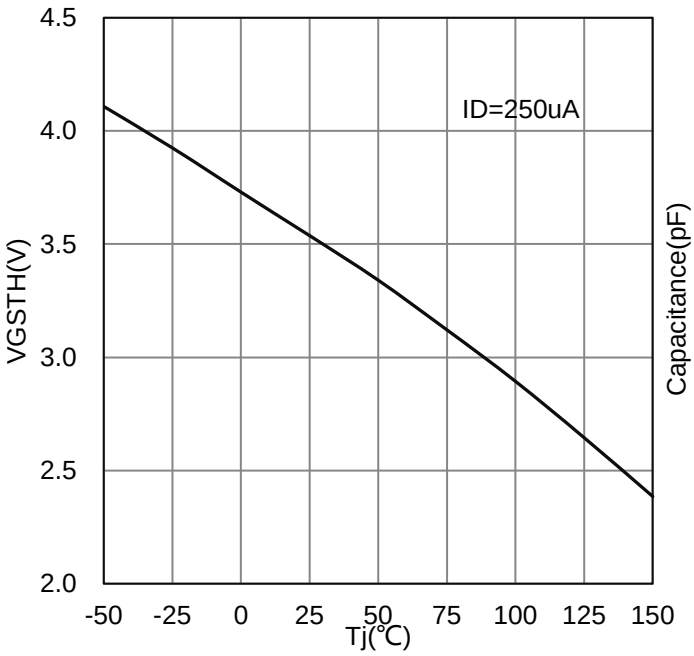
7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



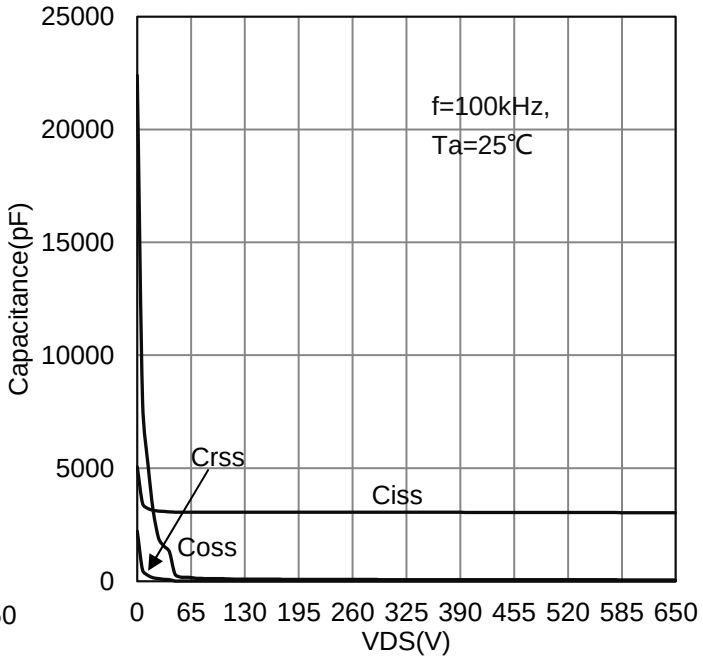
RDS(on) vs. VGS



RDS(on) vs. Tj

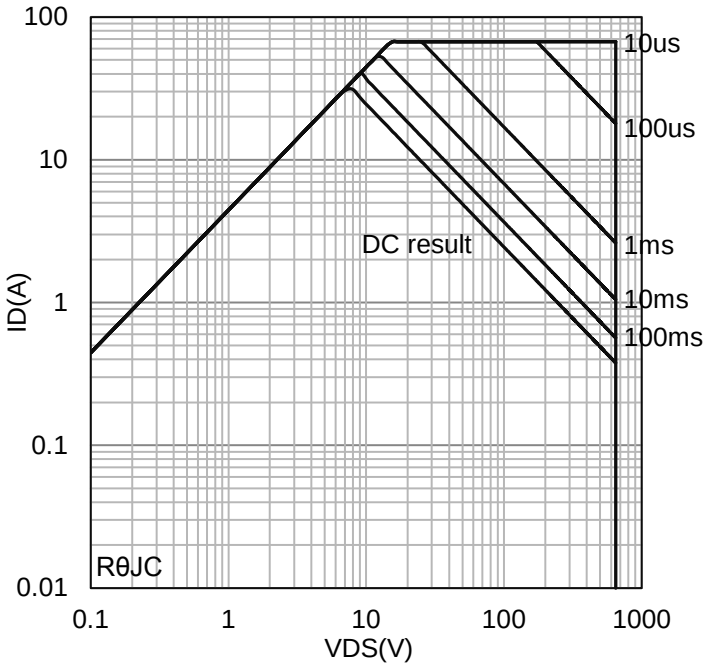


VGSth vs. Tj

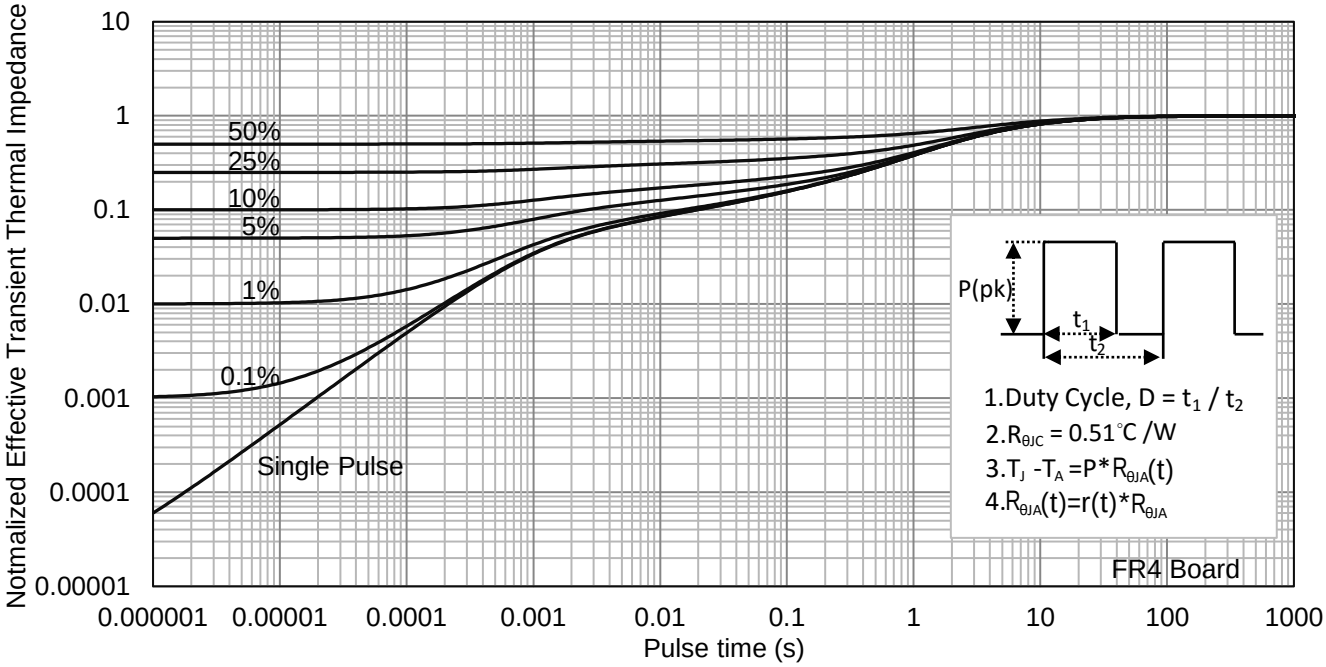


Capacitance

7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



Safe Operating Area



Thermal Response

8.OUTLINE AND DIMENSIONS

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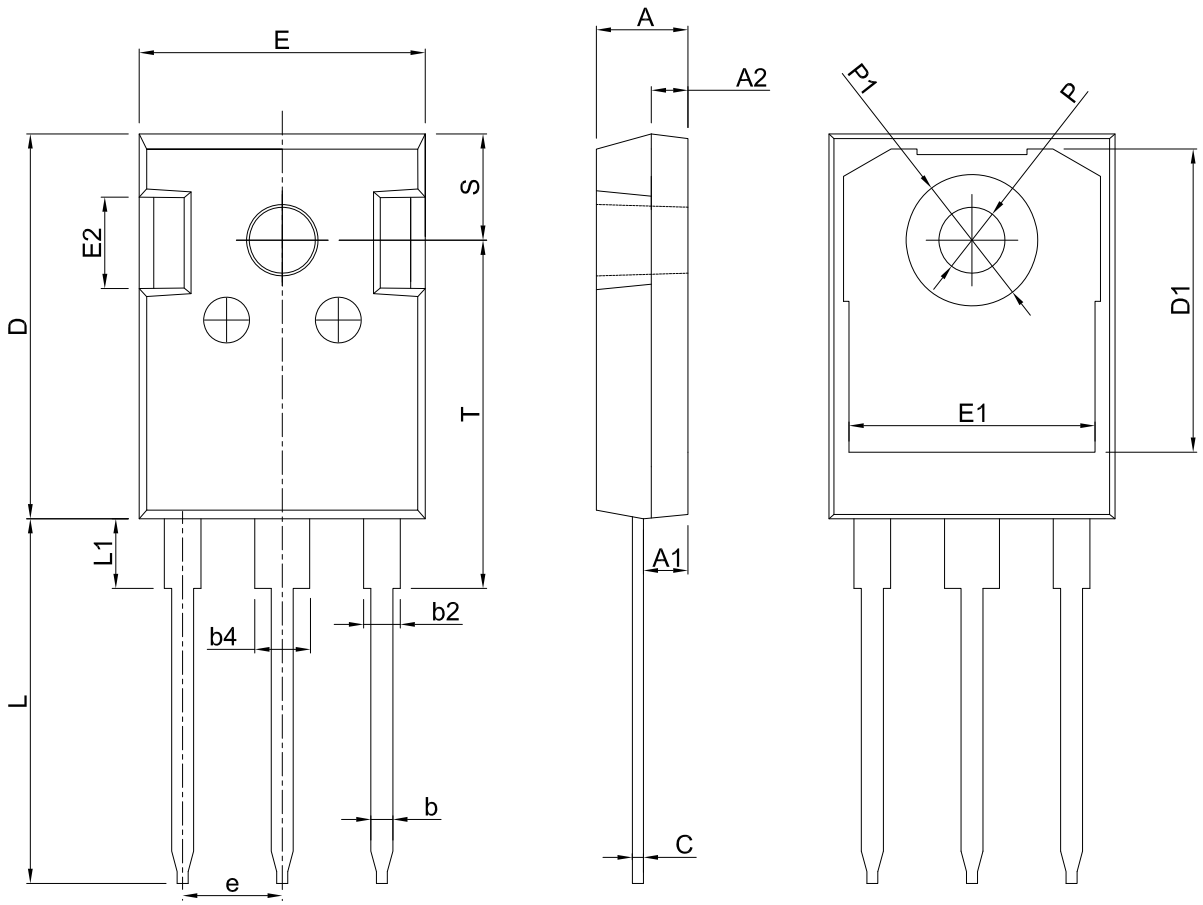

SYMBOL	UNIT:mm		
	MIN.	NOM.	MAX.
A	4.80	5.00	5.20
A1	2.20	2.40	2.60
A2	1.85	2.00	2.15
b	1.10	1.21	1.35
b2	1.90	2.01	2.20
b4	2.90	3.01	3.20
C	0.51	0.61	0.71
D	20.80	21.00	21.20
D1	16.25	16.55	16.85
E	15.60	15.80	16.00
E1	13.10	13.40	13.70
E2	4.60	4.80	5.00
e	5.44 BSC		
L	19.72	19.92	20.12
L1	-	3.80	4.30
P	3.40	3.60	3.80
P1		7.10	7.30
S	6.15 BSC		
T	19.00 BSC		

DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.

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