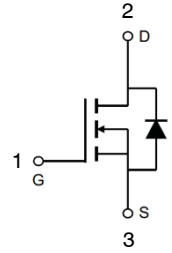
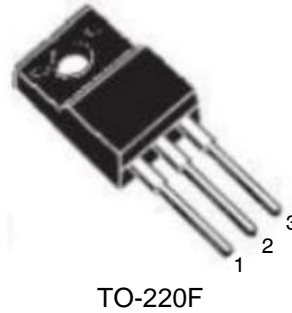


LN08N65AF3

650V N-Channel Super Junction MOSFET

1. FEATURES

- $R_{DS(ON)} \leq 280m\Omega @ V_{GS}=10V$.
- Fast switching capability.
- We declare that the material of product compliance with RoHS requirements and Halogen Free.



2. APPLICATIONS

- LED Lighting Power
- High Performance Charger / Adapter
- Load/Power switch for portables

3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
LN08N65AF3	08N65AF	

4. MAXIMUM RATINGS($T_a = 25^\circ C$)

Parameter	Symbol	Limits	Unit	
Drain-to-Source Voltage	V _{DS}	650	V	
Gate-to-Source Voltage	V _{GS}	± 30	V	
Continuous Drain Current (Note 1)	I _D	TC=25°C	8	A
		TC=100°C	5	
Pulsed Drain Current (Note 2)	I _{DM}	20	A	
Avalanche Energy (V _{DD} =50V, V _{GS} =10V, L=10mH)	E _{AS}	100	mJ	
Power Dissipation (Note 1)	P _D	TC=25°C	83	W
		TC=100°C	33	
Operating Junction and Storage Temperature Range	T _j /T _{stg}	-55~+150	°C	

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
Junction-to-Ambient (Note 1)	R _{θJA}	45	°C/W
Junction-to-Case	R _{θJC}	1.5	

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

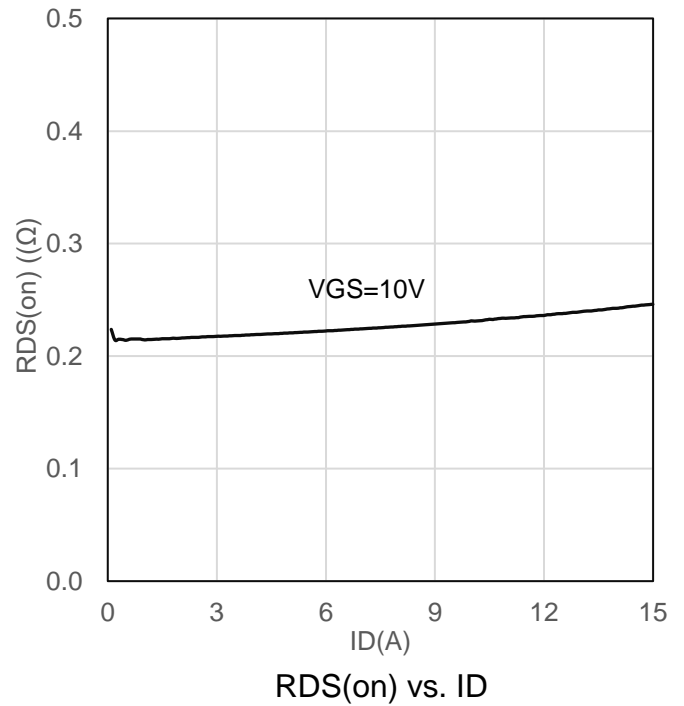
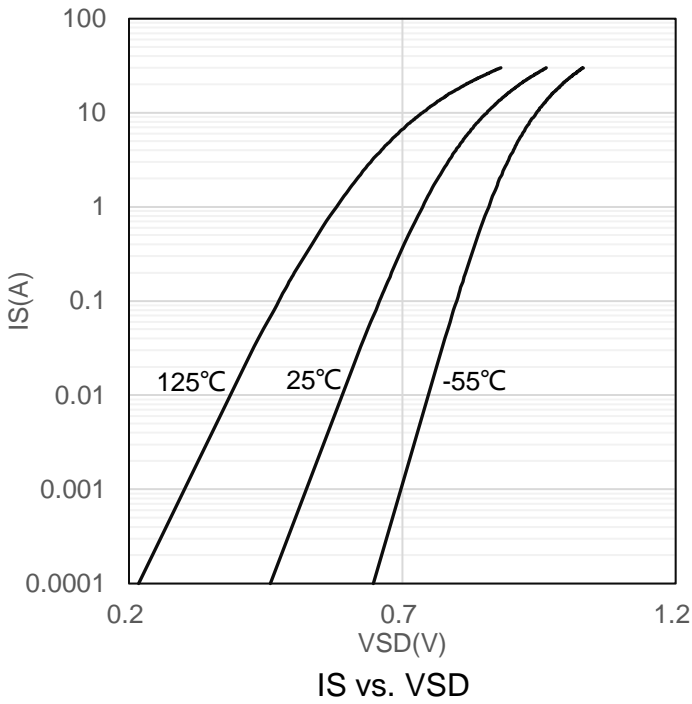
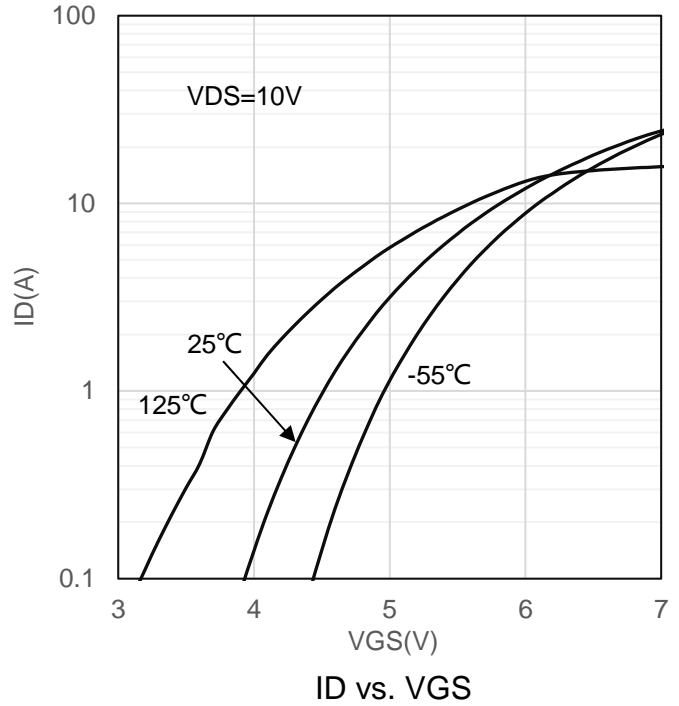
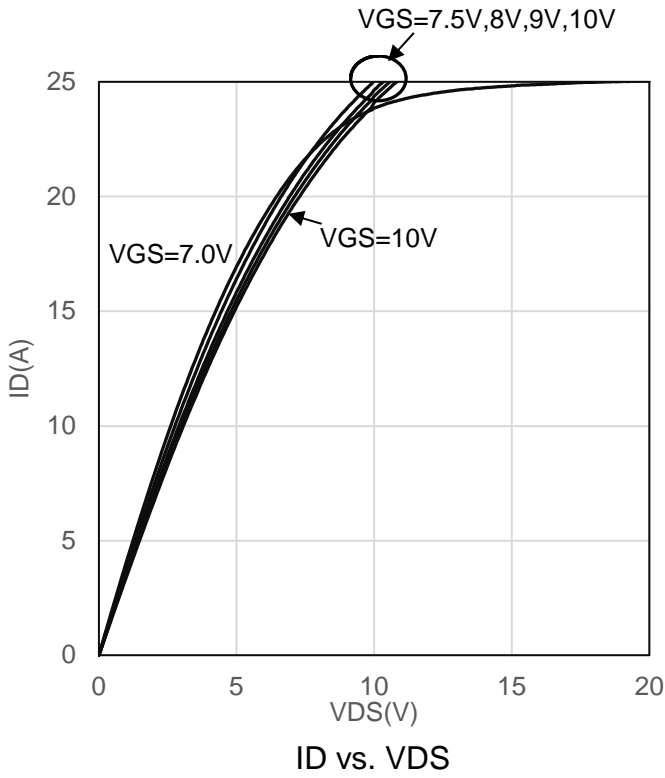
2. Pulse width limited by maximum junction temperature

6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

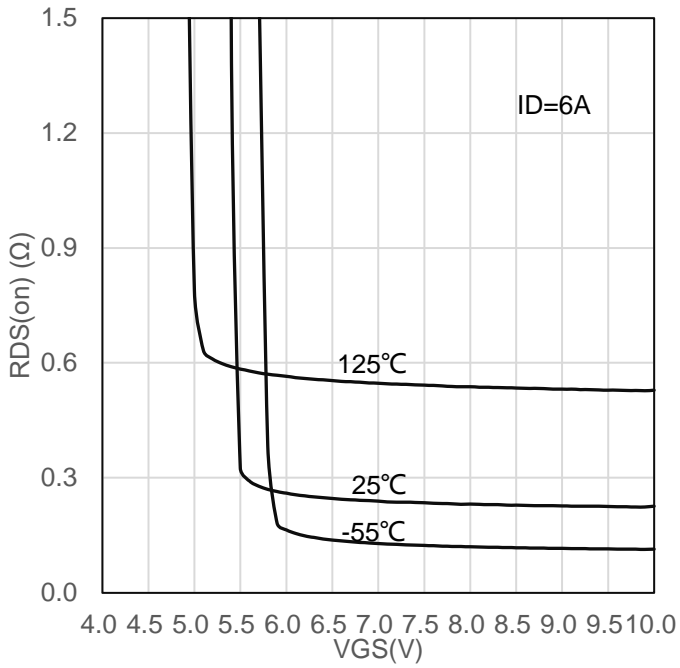
Characteristic	Symbol	Min.	Typ.	Max.	Unit	
Static						
Drain-Source Breakdown Voltage (VGS = 0 V, ID = 250 μA)	VBRDSS	650	-	-	V	
Gate Threshold Voltage (VDS = VGS, ID = 250 μA)	VGS(th)	2	-	4	V	
Gate-Body leakage current (VDS = 0 V, VGS = ±30 V)	IGSS	-	-	±100	nA	
Zero Gate Voltage Drain Current (VDS = 650 V, VGS = 0 V)	IDSS	-	-	1	μA	
Drain-to-Source On-Resistance (Note 3) (VGS = 10 V, ID = 2 A)	RDS(ON)	-	-	280	mΩ	
Diode Forward Voltage (IS = 1 A, VGS = 0 V)	VSD	-	-	1	V	
Dynamic						
Total Gate Charge	(VDS = 400 V, VGS = 10 V, ID = 7.5 A)	Qg	-	44.5	-	nC
Gate to Source Charge		Qgs	-	12	-	
Gate to Drain Charge		Qgd	-	15.5	-	
Turn-on Delay Time	(VDS = 400 V, ID = 7.5 A, VGS = 10 V, RG = 10Ω)	td(on)	-	7.5	-	nS
Rise Time		tr	-	9.6	-	
Turn-Off Delay Time		td(off)	-	47.5	-	
Fall Time		tf	-	7	-	
Input Capacitance	(VDS = 400 V, VGS = 0 V, f = 1 MHz)	Ciss	-	1100	-	pF
Output Capacitance		Coss	-	40	-	
Reverse Transfer Capacitance		Crss	-	4.5	-	
Reverse Recovery Time (IF = 1 A, di/dt = 100 A/μs, VR = 400 V)	trr	-	150	-	nS	
Reverse Recovery Charge (IF = 1 A, di/dt = 100 A/μs, VR = 400 V)	Qrr	-	1150	-	nC	
Peak Reverse Recovery Current (IF = 1 A, di/dt = 100 A/μs, VR = 400 V)	IRRM	-	14	-	A	
Gate-Resistance (VDS = 0 V, VGS = 0 V, f = 1.0 MHz)	Rg	-	4.3	-	Ω	

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

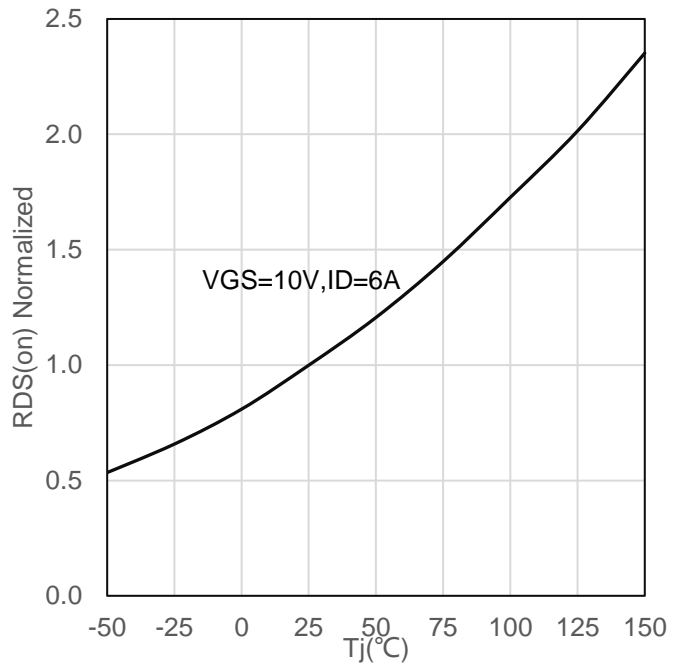
7. ELECTRICAL CHARACTERISTICS CURVES



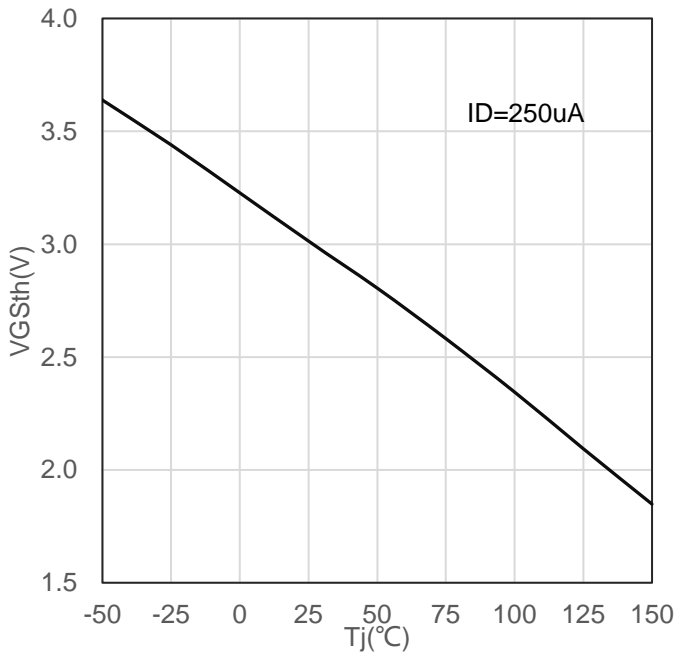
7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



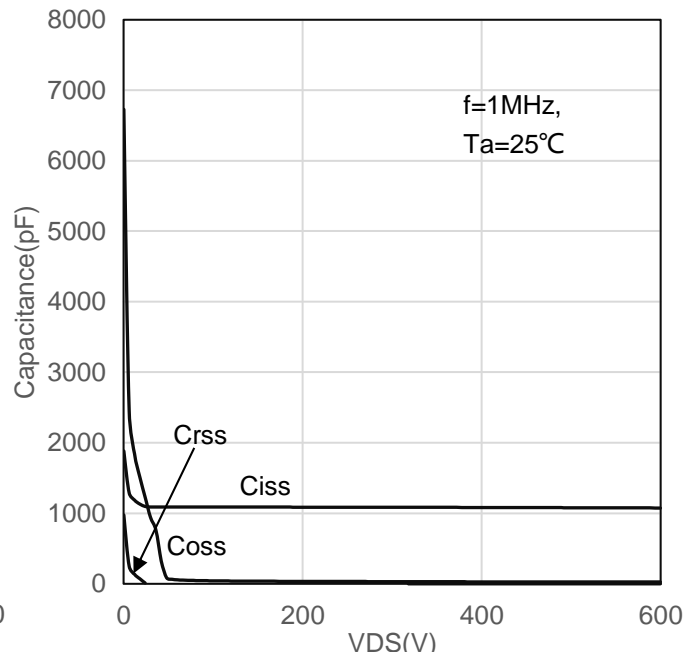
$R_{DS(on)}$ vs. V_{GS}



$R_{DS(on)}$ vs. T_J

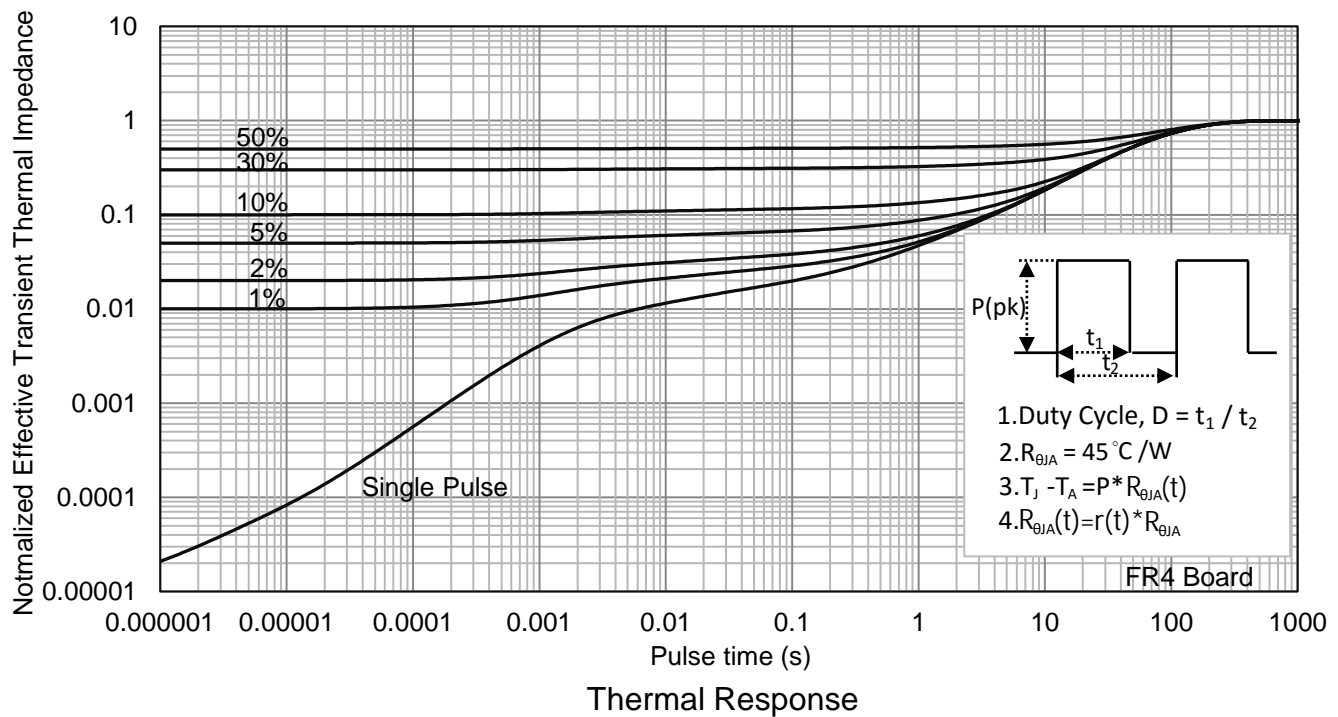
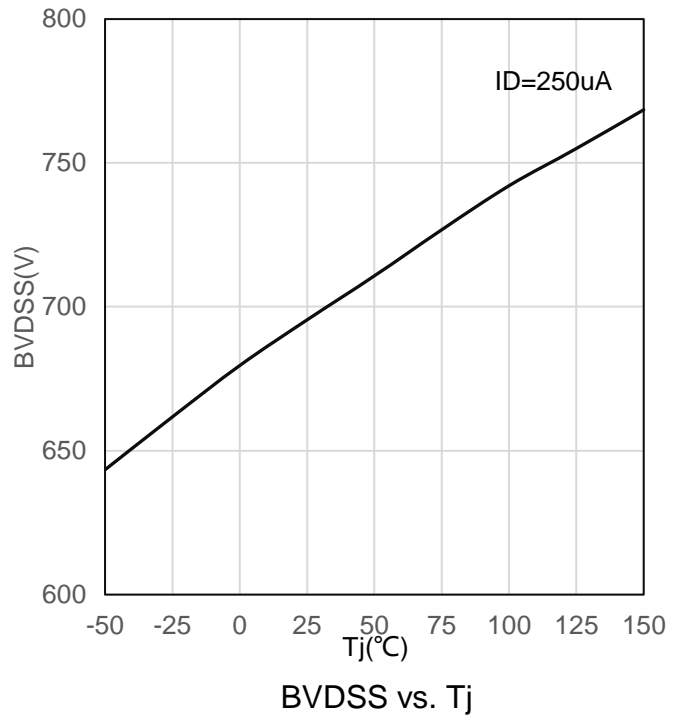
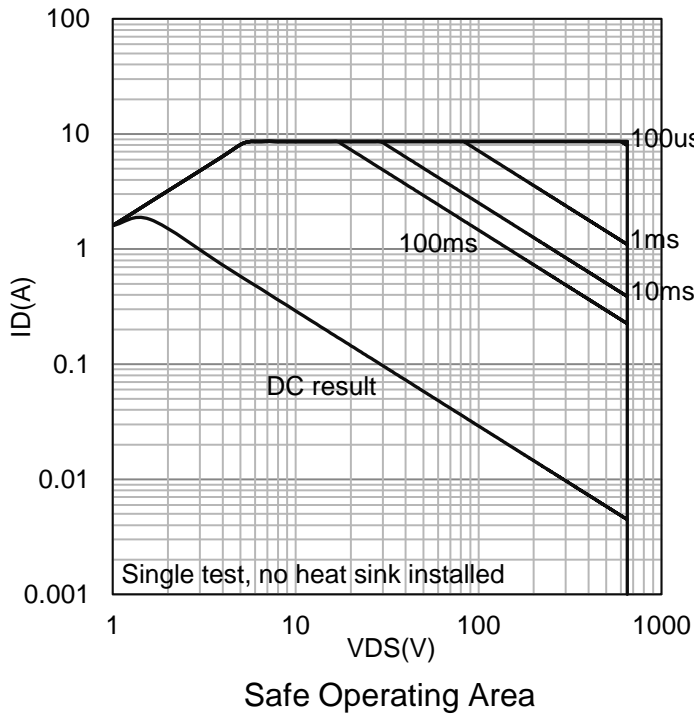


V_{GSth} vs. T_J



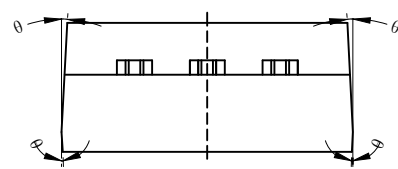
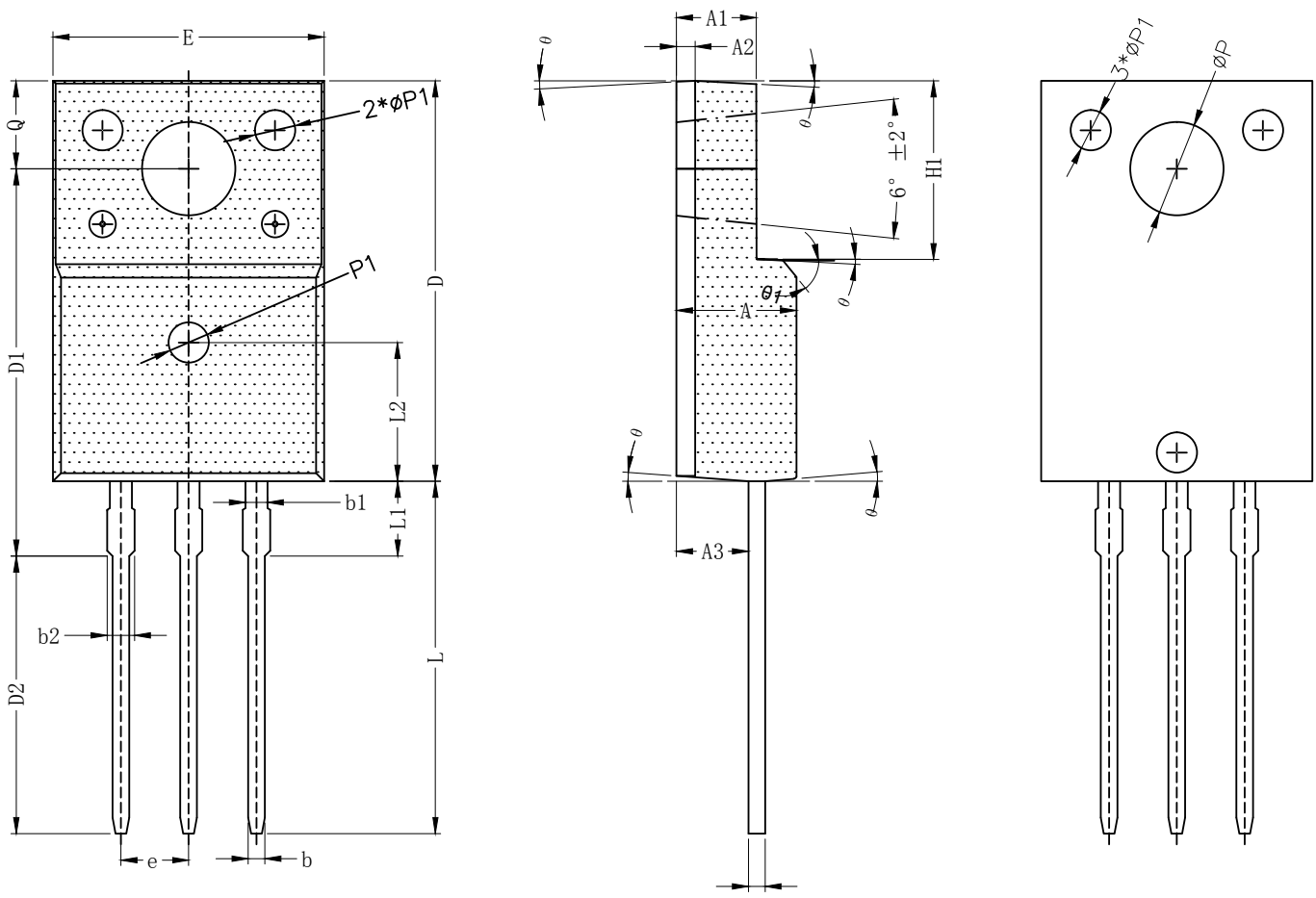
Capacitance

7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



8. OUTLINE AND DIMENSIONS

TO-220F



NOTES: 1. PKG SURFACE IS MATTE Ra1.2~1.4; OTHERS IS POLISHED Ra0.15;

SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	4.50	4.70	4.83
A1	2.34	2.54	2.74
A2	0.70REF		
A3	2.56	2.76	2.93
b	0.70	---	0.90
b1	1.18	---	1.38
b2	---	---	1.47
c	0.45	0.50	0.60
D	15.67	15.87	16.07
D1	15.55	15.75	15.95
D2	9.60	9.80	10.00
E	9.96	10.16	10.36
e	2.54BSC		
H1	6.48	6.68	6.88
L	12.68	12.98	13.28
L1	3.10	3.20	3.30
L2	6.50REF		
φP	3.08	3.18	3.28
φP1	1.40	1.50	1.60
Q	3.20	---	3.40
θ	1°	5°	7°
θ 1	42°	45°	48°

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.
- Before you use our Products for new Porject, you are requested to carefully read this document and fully understand its contents. LRC shall not be in any way responsible or liable for failure, malfunction or accident arising from the use of any LRC's Products against warning, caution or note contained in this document.
- 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.

单击下面可查看定价，库存，交付和生命周期等信息

[>>LRC\(乐山无线电\)](#)