

TO-251 N

N-CHANNEL MOSFET in a TO-251 Plastic Package.

$V_{DS} (V) = 100V$ $I_D = 37A$ ($V_{GS} = \pm 20V$)

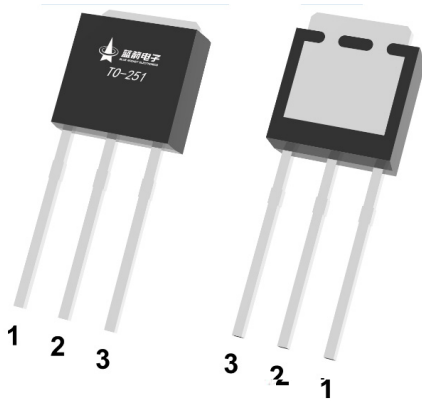
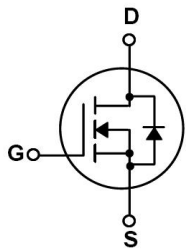
$R_{DS(ON)} @ 10V \leq 25mR$ (Typ. 20mR)

$R_{DS(ON)} @ 4.5V \leq 35mR$ (Typ. 25mR)

HF Product.

LED

Boost converters and synchronous rectifiers for consumer, telecom, industrial power supplies and LED backlighting.



PIN1 G

PIN 2 D

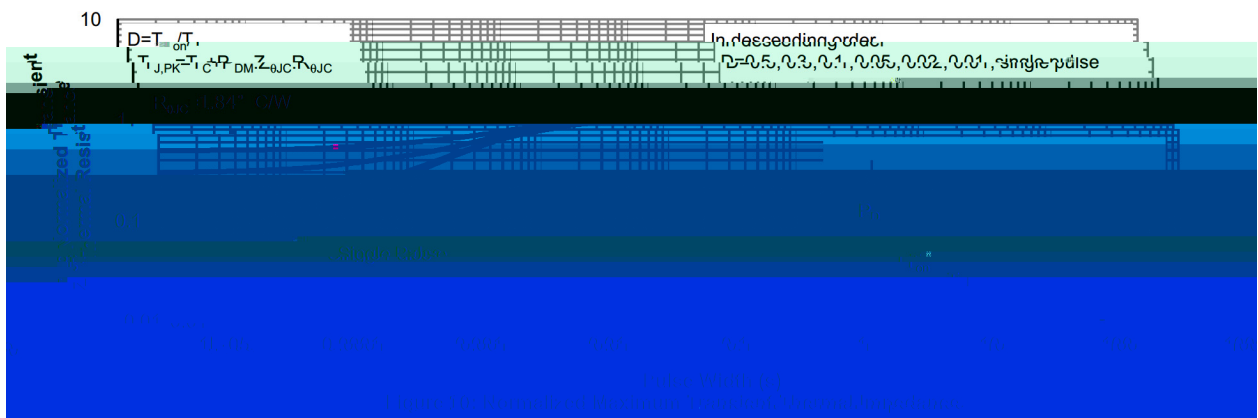
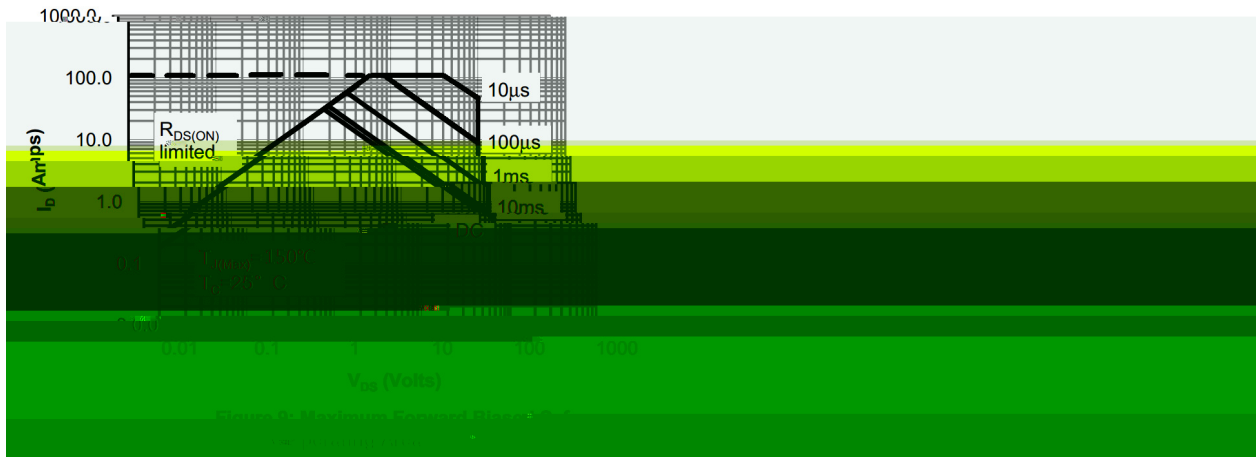
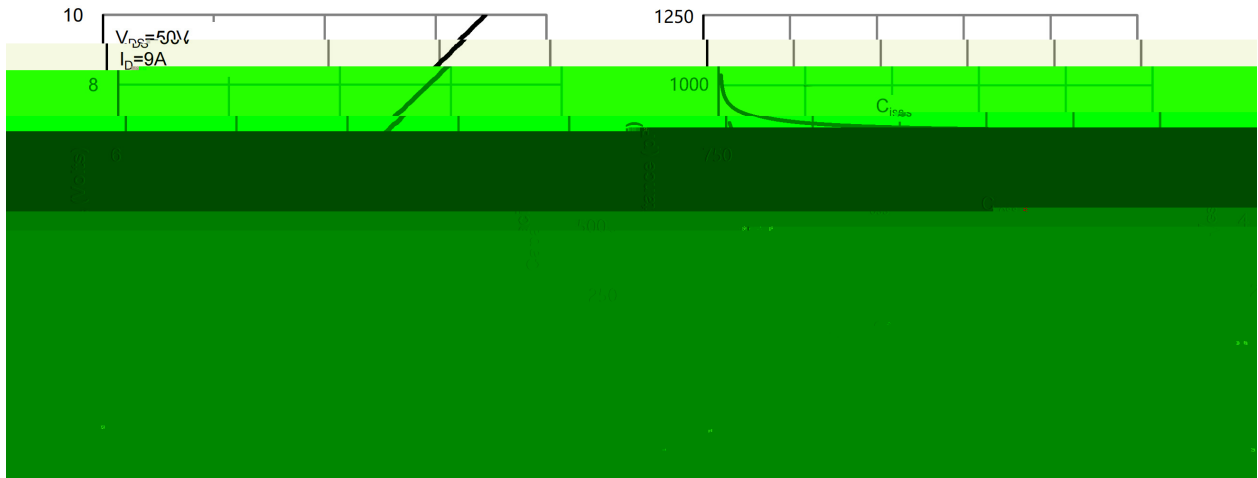
PIN 3 S

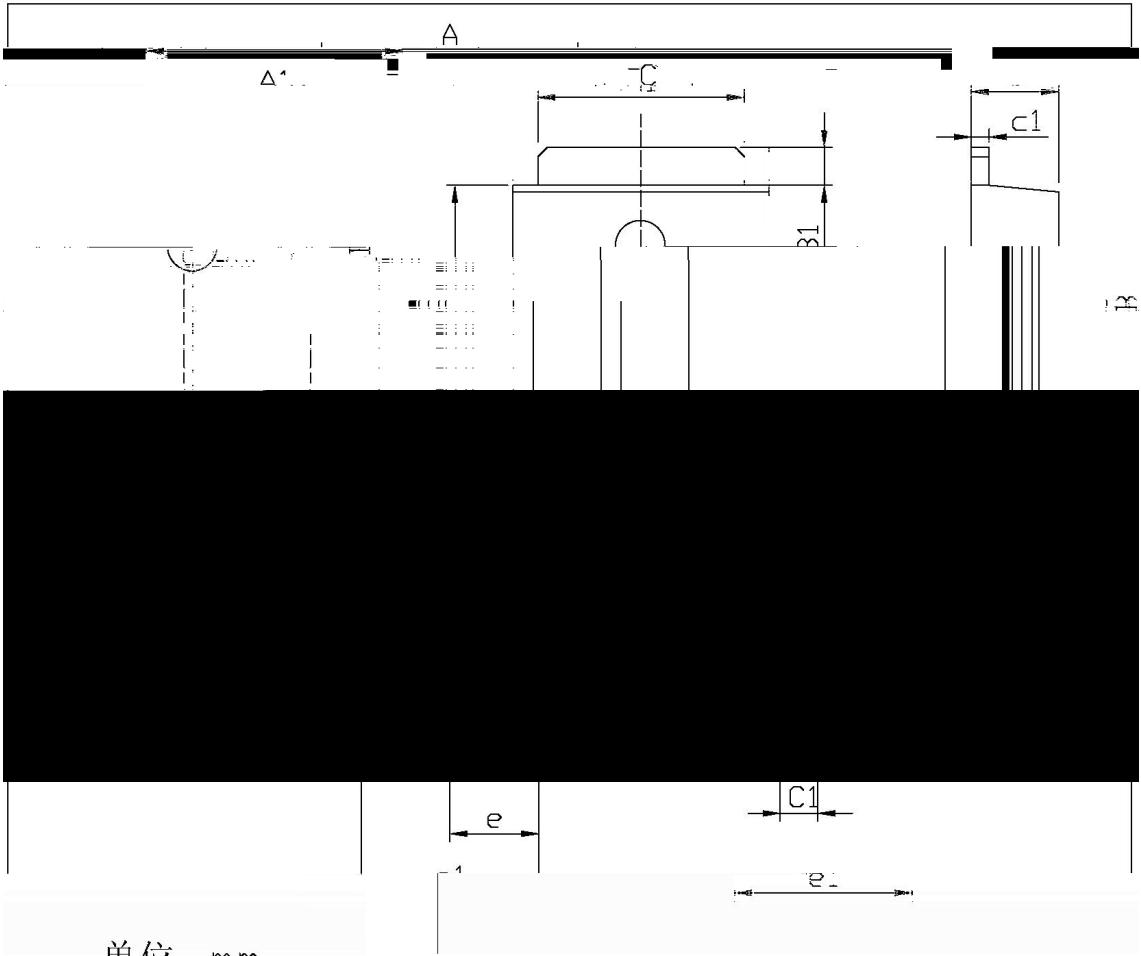
See Marking Instructions.

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DSS}	100	V
Drain Current		$I_D(T_c=25^\circ\text{C})$	37	A
Drain Current - Pulsed		I_{DM}	117	A
Gate-Source Voltage		V_{GS}	± 20	V
Avalanche Current		I_{AS}	7	A
Single Pulsed Avalanche Energy		E_{AS}	14.4	mJ
Power Dissipation		$P_D(T_c=25^\circ\text{C})$	68	W
Storage Temperature Range		T_{stg}	-55 ~ 150	
Thermal Resistance-Junction to Ambient	$t \leq 10\text{s}$	$R_{\theta JA}$	20	/W
	Steady-State		50	
Thermal Resistance-Junction to Case	Steady-State	$R_{\theta JC}$	1.84	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	100	109		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=100V$ $V_{GS}=0V$			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	1.0	1.6	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=20A$		20	25	m Ω
		$V_{GS}=4.5V$ $I_D=10A$		25	35	m Ω
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=1A$			1.2	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		820		pF
Output Capacitance	C_{oss}			475		
Reverse Transfer Capacitance	C_{rss}			35		
Gate resistance	R_g	$V_{GS}=0V$ $V_{DS}=0V$ $f=1MHz$		1.9		Ω
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10V$ $V_{DS}=50V$ $I_D=9A$		17		nC
Total Gate Charge	$Q_{g(4.5V)}$			9		
Gate Source Charge	Q_{gs}			3		
Gate Drain Charge	Q_{gd}			3.5		

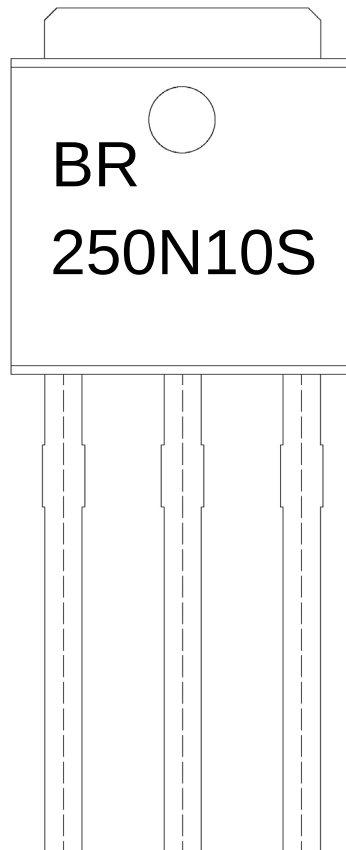
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=50V$ $R_L=5.5\Omega$ $R_{GEN}=3.0\Omega$		5		ns
Turn-On Rise Time	t_r			3.2		
Turn-Off Delay Time	$t_{d(off)}$			21		
Turn-Off Fall Time	t_f			3		





Dimensions (mm)				Dimensions (mm)			
Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
5.90	6.25	9.00	9.40	5.90	6.25	9.00	9.40
5.95	6.25	0.45	0.55	5.95	6.25	0.45	0.55
B1	0.95	1.25	c1	0.45	0.55		
C	2.20	2.40		2.24	2.34		
C1	0.95	1.15	e1	4.43	4.73		

TO-251



BR

250N10S

Note:

BR: Company Code

250N10S: Product Type Code

****: Lot No. Code, code change with Lot No



- 1

25 150

60 90sec;

2

255±5

5±0.5sec;

3

2 10

/sec.
- Note:

1.Preheating:25~150 , Time:60~90sec.

2.Peak Temp.:255±5 , Duration:5±0.5sec.

3. Cooling Speed: 2~10 /sec.

270±5

10±1 sec.

Temp.:270±5

Time:10±1 sec

/ BULK

Package Type	Units					Dimension (unit mm ³)		
TO-251	1,000	10	10,000	5	50,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180