

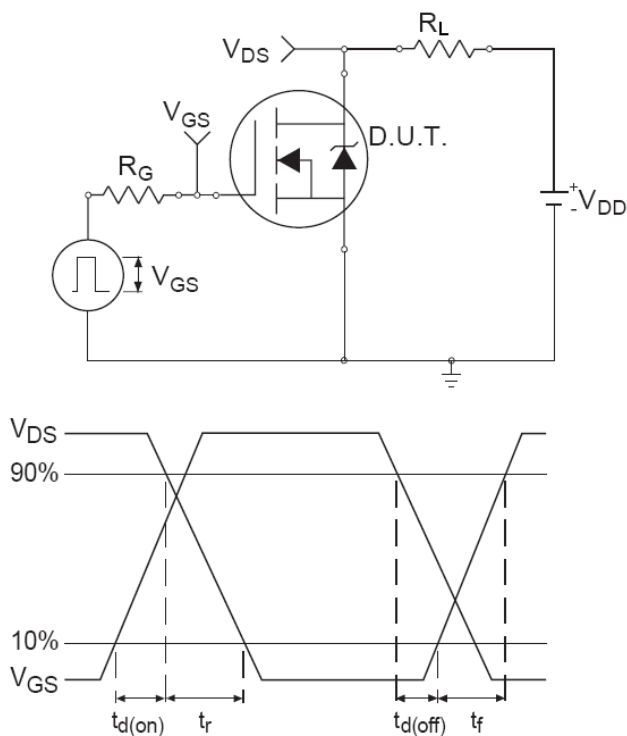
Features

- $V_{DS}=700V/V_{GS}=\pm 30V/I_D=9A$
 $R_{DS(ON)}=5m\Omega(max.)@V_{GS}=10V$
- Low Dense Cell Design
- Reliable and Rugged
- Advanced trench process technology

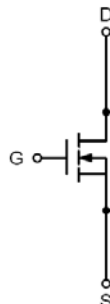
Applications

- Synchronous Rectification
- Power Management in Inverter System

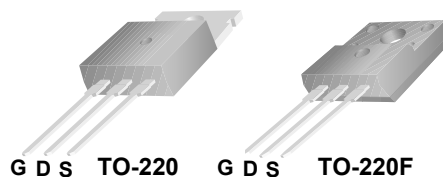
Switching Time Test Circuit and Waveforms



Pin Description



Pin Description



Package Marking and Ordering Information

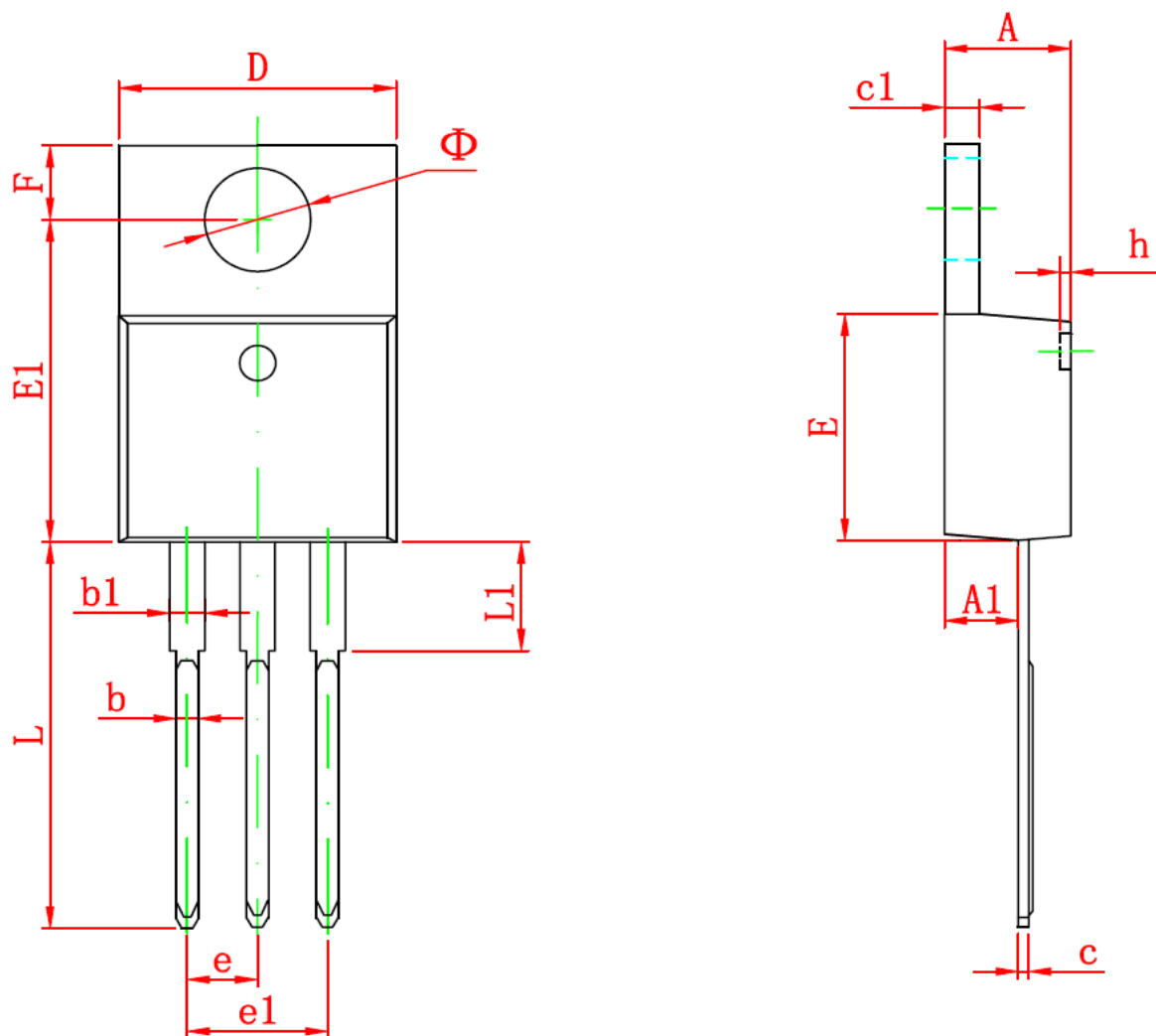
Device Marking	Device	Device Package	Reel Size	Tape width	Quantity
HM9N70	HM9N70	TO-220/F	-	-	-

Key Electrical Characteristics (TO-220 package)

Parameter	Description	Min	Typ	Max	Test condition
BV _{DSS} , V	Drain-to-Source Breakdown Voltage	700	-	-	V _{GS} =0 V, I _D =250 μA
I _D , A	Continuous Drain Current	-	-	9*	T _j = 25 °C
R _{DS(on)} , Ohm	Static Drain-to-Source On Resistance	-	1,1	1,2	V _{GS} =10 V, I _D =4,5 A
V _{GS(th)} , V	Gate Threshold Voltage	2,0	-	4,0	V _{DS} = V _{GS} , I _D =250 μA
I _{DSS} , μA	Drain-to-Source Leakage Current	-	-	10	V _{DS} = 700 V, V _{GS} = 0 V
I _{GSS} , nA	Gate-to-Source Leakage Current	-	-	±100	V _{GS} = ± 30 V, V _{DS} = 0 V
T _j , T _{STG} , °C	Operating Junction and Storage Temperature Range	- 55 ~ +150			

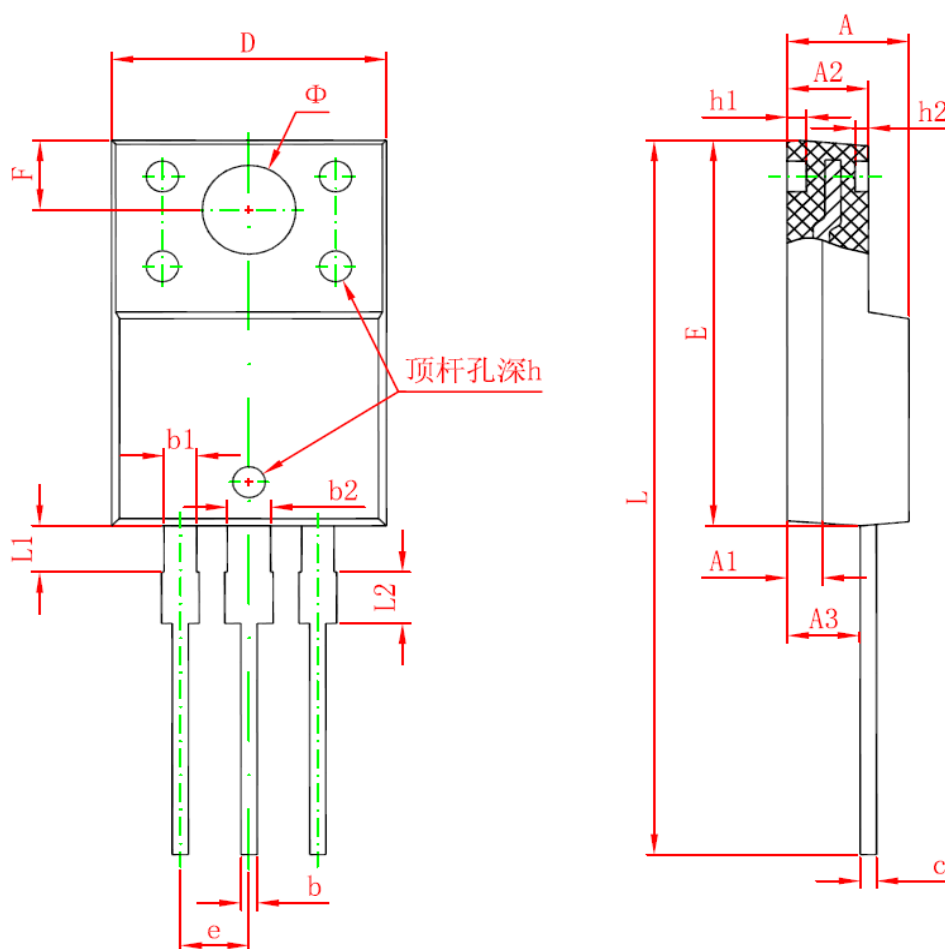
* Drain current limited by junction temperature

TO-220-3L PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.470	4.670	0.176	0.184
A1	2.520	2.820	0.099	0.111
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.310	0.530	0.012	0.021
c1	1.170	1.370	0.046	0.054
D	10.010	10.310	0.394	0.406
E	8.500	8.900	0.335	0.350
E1	12.060	12.460	0.475	0.491
e	2.540 TYP		0.100 TYP	
e1	4.980	5.180	0.196	0.204
F	2.590	2.890	0.102	0.114
h	0.000	0.300	0.000	0.012
L	13.400	13.800	0.528	0.543
L1	3.560	3.960	0.140	0.156
Φ	3.735	3.935	0.147	0.155

TO-220F PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.300	4.700	0.169	0.185
A1	1.300 REF.		0.051 REF.	
A2	2.800	3.200	0.110	0.126
A3	2.500	2.900	0.098	0.114
b	0.500	0.750	0.020	0.030
b1	1.100	1.350	0.043	0.053
b2	1.500	1.750	0.059	0.069
c	0.500	0.750	0.020	0.030
D	9.960	10.360	0.392	0.408
E	14.800	15.200	0.583	0.598
e	2.540 TYP.		0.100 TYP.	
F	2.700 REF.		0.106 REF.	
Φ	3.500 REF.		0.138 REF.	
h	0.000	0.300	0.000	0.012
h1	0.800 REF.		0.031 REF.	
h2	0.500 REF.		0.020 REF.	
L	28.000	28.400	1.102	1.118
L1	1.700	1.900	0.067	0.075
L2	1.900	2.100	0.075	0.083

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