

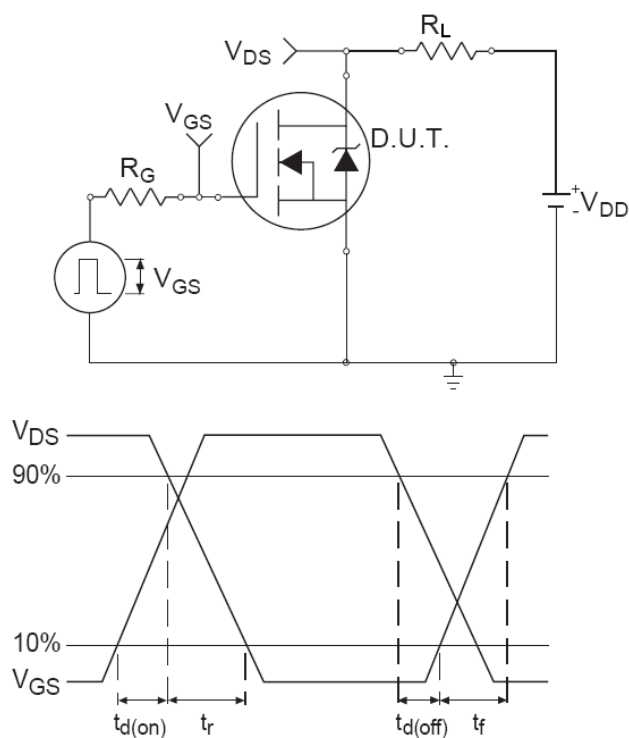
Features

- $V_{DS}=100V/V_{GS}=\pm 25V/I_D=140A$
 $R_{DS(ON)}=7.2m\Omega(max.)@V_{GS}=10V$
- Low Dense Cell Design
- Reliable and Rugged
- Advanced trench process technology

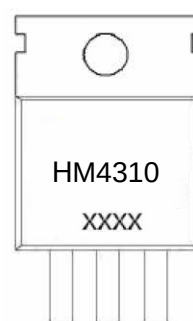
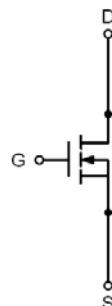
Applications

- Synchronous Rectification
- Power Management in Inverter System

Switching Time Test Circuit and Waveforms



Pin Description



Marking and pin Assignment



TO-220-3L top view

Package Marking and Ordering Information

Device Marking	Device	Device Package	Reel Size	Tape width	Quantity
HM4310	HM4310	TO-220-3L	-	-	-

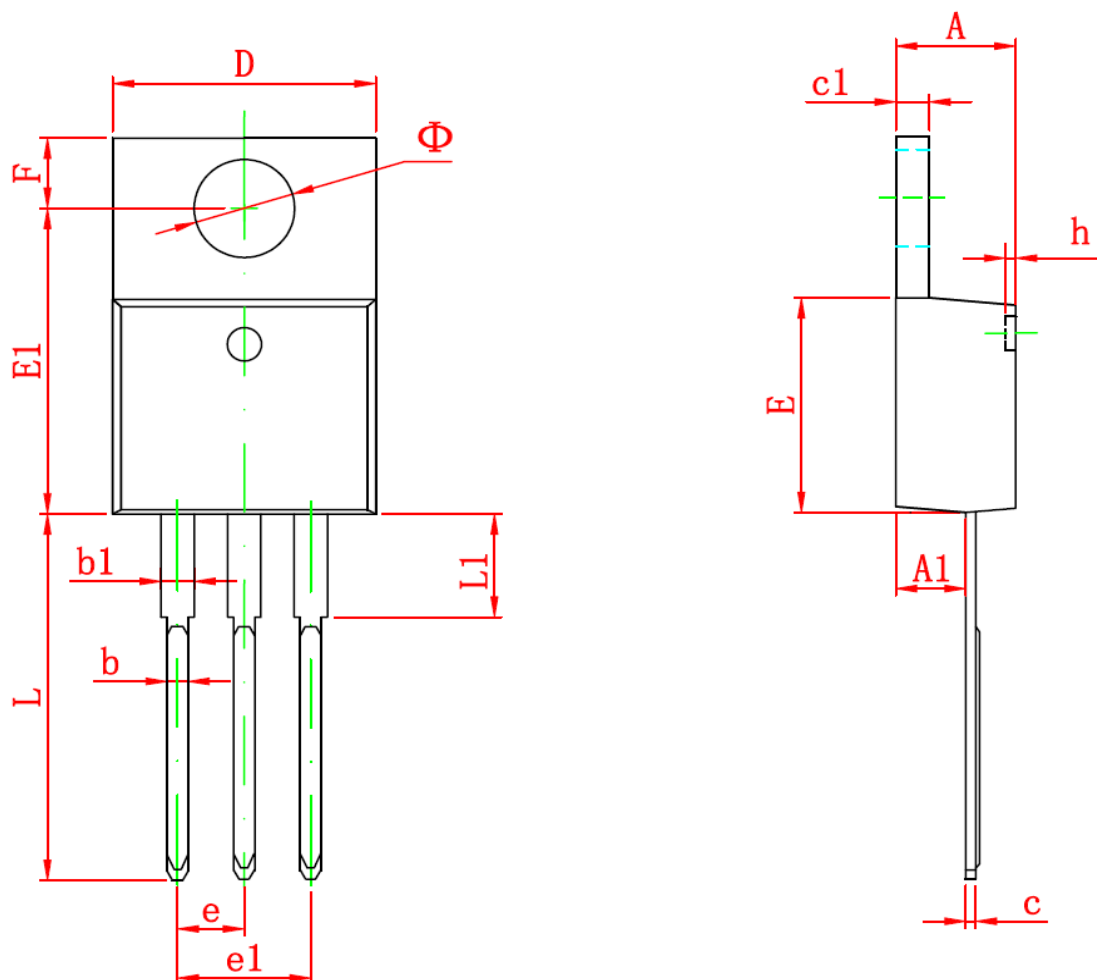
Electrical Characteristics of CP Test (TA=25°C unless otherwise noted)

Symbol	Parameter	Test Conditions	Min.	Typ	Max.	Unit
Static Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250uA	100			V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =80V, V _{GS} =0V			1	uA
		T _J =85°C			30	
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =250uA	2	2.8	4	V
I _{GSS}	Gate Leakage Current	V _{GS} =±25V, V _{DS} =0V			±100	nA
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V, I _D =40A		6.2	7.2	mΩ
V _{SD}	Diode Forward Voltage	I _{SD} =30A, V _{GS} =0V			1.3	V
R _G	Gate Resistance	V _{GS} =0V, V _{DS} =0V, Frequency=1MHz		1.7		Ω

Note: 1: Pulse test ; pulse width ≤ 300ns, duty cycle ≤ 2%.

2: Guaranteed by design, not subject to production testing.

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