

Features

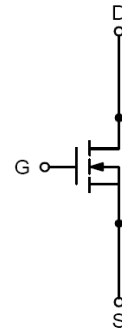
- $V_{DSS}=30V/V_{GS}=\pm 20V/I_D=20A$
 $R_{DS(ON)}=20m\Omega(max.)@V_{GS}=10V$
- Low Dense Cell Design
- Reliable and Rugged
- Advanced trench process technology

Applications

- Synchronous Rectification
- Power Management in Inverter System

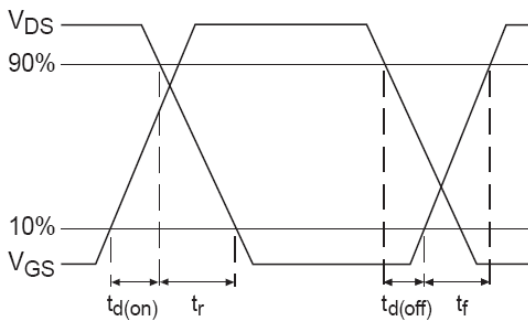
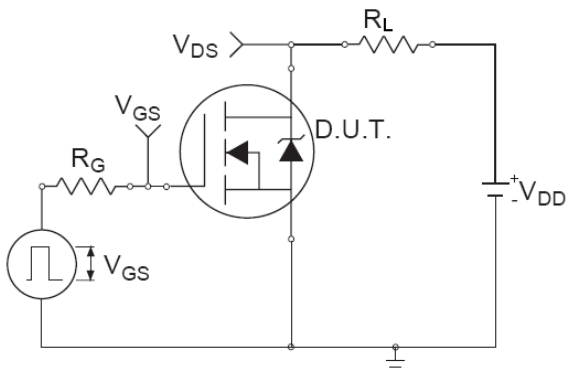
Pin Description

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Marking and pin Assignment

Switching Time Test Circuit and Waveforms



Package Marking and Ordering Information

Device Marking	Device	Device Package	Reel Size	Tape width	Quantity
HM20N03K	HM20N03K	TO-252	-	-	-

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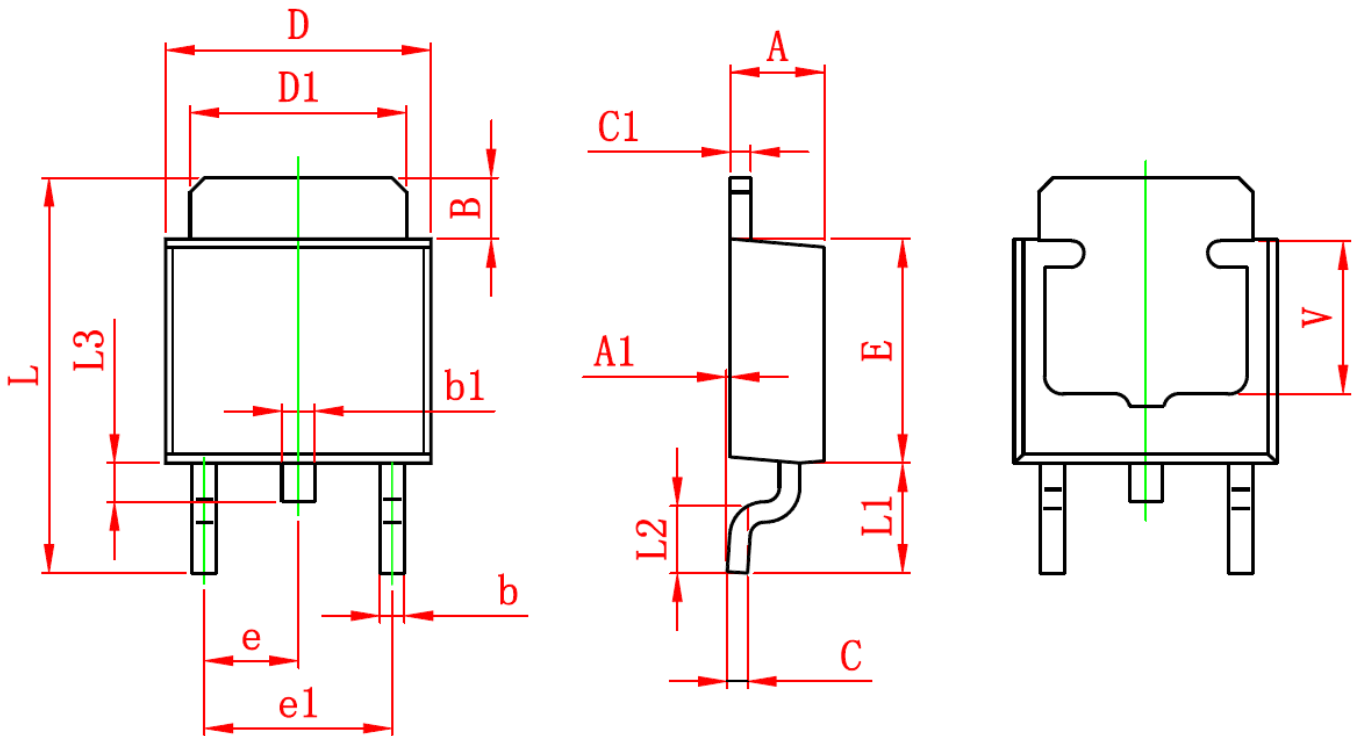
Electrical Characteristics of CP Test (TA=25°C unless otherwise noted)

Symbol	Parameter	Test Conditions	Min.	Typ	Max.	Unit
Static Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250uA	30			V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =24V, V _{GS} =0V			1	uA
		T _J =85°C			30	
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =250uA	1	1.5	3	V
I _{GSS}	Gate Leakage Current	V _{GS} =±20V, V _{DS} =0V			±100	nA
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V, I _D =20A		16	19	mΩ
		V _{GS} =4.5V, I _D =20A		20	25	
V _{SD}	Diode Forward Voltage	I _{SD} =20A, V _{GS} =0V			1.3	V
R _G	Gate Resistance	V _{GS} =0V, V _{DS} =0V, Frequency=1MHz		2.5		Ω

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

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

TO-252-2L PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
B	1.350	1.650	0.053	0.065
b	0.500	0.700	0.020	0.028
b1	0.700	0.900	0.028	0.035
c	0.430	0.580	0.017	0.023
c1	0.430	0.580	0.017	0.023
D	6.350	6.650	0.250	0.262
D1	5.200	5.400	0.205	0.213
E	5.400	5.700	0.213	0.224
e	2.300 TYP.		0.091 TYP.	
e1	4.500	4.700	0.177	0.185
L	9.500	9.900	0.374	0.390
L1	2.550	2.900	0.100	0.114
L2	1.400	1.780	0.055	0.070
L3	0.600	0.900	0.024	0.035
V	3.800 REF.		0.150 REF.	

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