

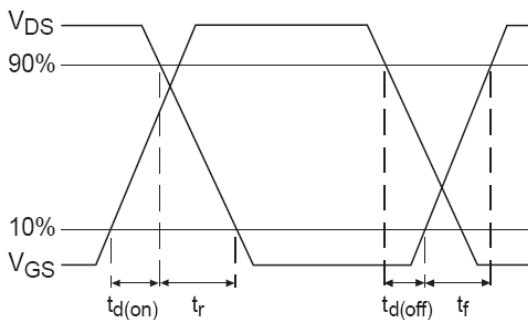
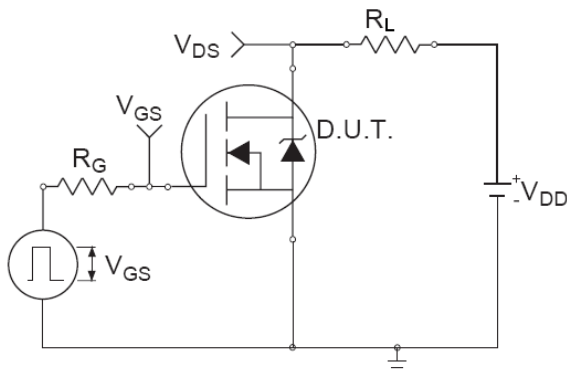
Features

- $V_{DS}=-30V / V_{GS}=\pm 20V / I_D=-12A$
 $R_{DS(ON)}=14m\Omega(max.)@V_{GS}=-10V$
 $R_{DS(ON)}=22m\Omega(max.)@V_{GS}=-4.5V$
- Low Dense Cell Design
- Reliable and Rugged
- Advanced trench process technology

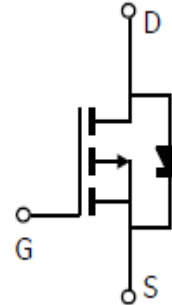
Applications

- Synchronous Rectification
- Power Management in Inverter System

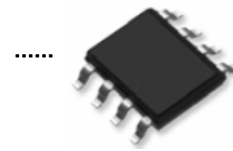
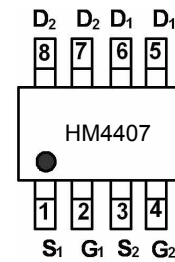
Switching Time Test Circuit and Waveforms



Pin Description



Marking and pin Assignment



SOP-8 top view

Package Marking and Ordering Information

Device Marking	Device	Device Package	Reel Size	Tape width	Quantity
HM4407	HM4407	SOP-8	-	-	-

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	-1.65	-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 =-12A			14	mΩ
		V _{GS} =-4.5V, I _D =-8A			22	
V _{SD}	Diode Forward Voltage	I _{SD} =-8A, V _{GS} =0V			-1.3	V
R _G	Gate Resistance	V _{GS} =0V, V _{DS} =0V, Frequency=1MHz		6		Ω

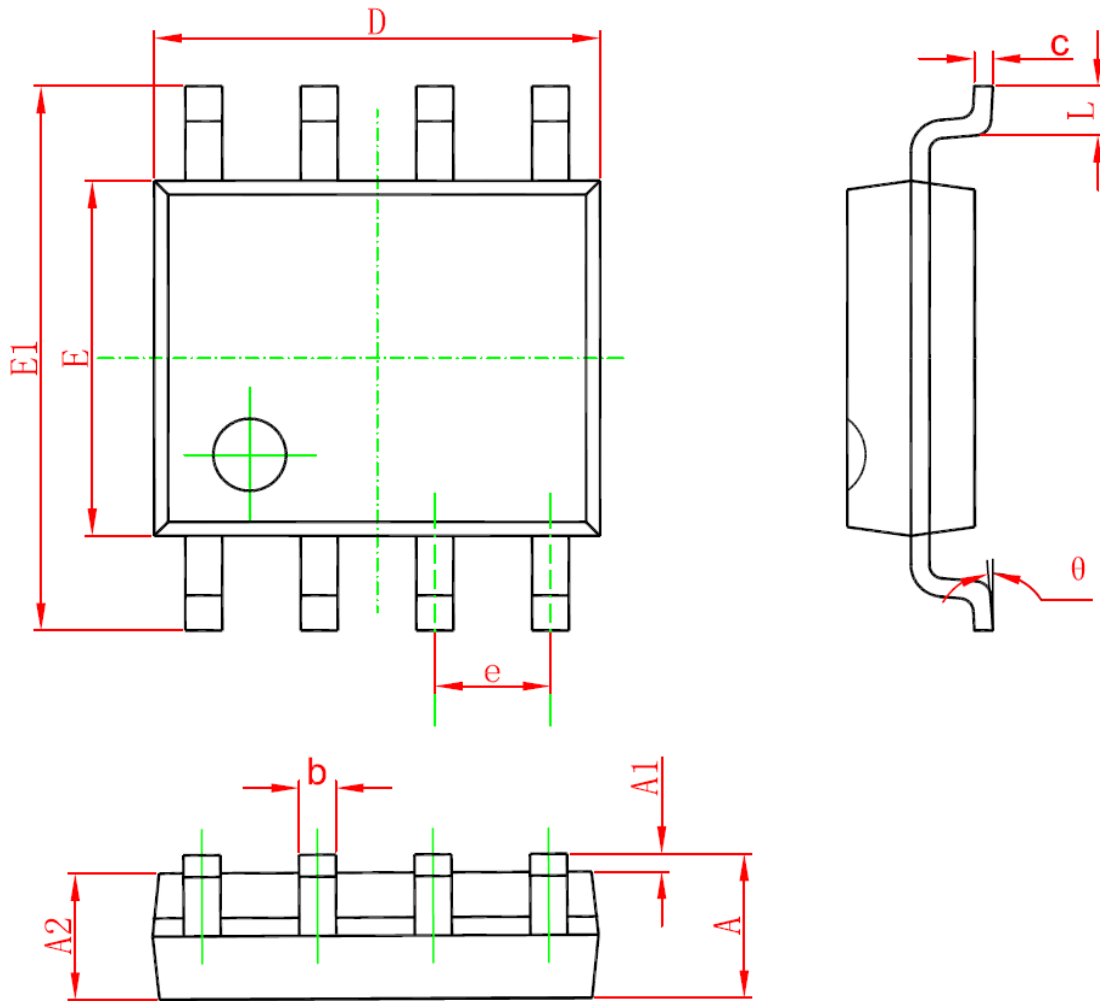
Note: 1: Pulse test ; pulse width ≤ 300ns, duty cycle ≤ 2%.

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

FT Test Program

ITEM	Condition	Unit	Min	Max
1	V _{th} at I _{ds} =-250uA	Volt	-3	-1
2	V _{th} at I _{ds} =-1mA	Volt	-3	-1
3	I _{gs} at V _{gs} =-20V	nA		-100
4	I _{sg} at V _{gs} =+20V	nA		100
5	B _{vdss} at I _d =-250uA	Volt	-40	-30.5
6	B _{vdss} at I _d =-1mA	Volt	-40	-30.5
7	R _{dson} at I _d =-12A, V _{gs} =-10V	mohm		14
8	R _{dson} at I _d =-8A, V _{gs} =-4.5V	mohm		22
9	I _{dss} at V _{ds} =-24V	nA	0	100
10	V _{sd} at I _s =-3.5A, V _{gs} =0V	Volt	0	-1.3

SOP8 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.006	0.010
D	4.700	5.100	0.185	0.200
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.270 (BSC)		0.050 (BSC)	
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

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