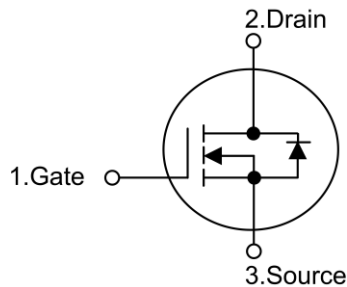


Description

The HS3710T is the N-Channel logic enhancement mode power field effect transistors are produced using high cell density, DMOS trench technology. This high density process is especially tailored to minimize on-state resistance.

Pin configuration

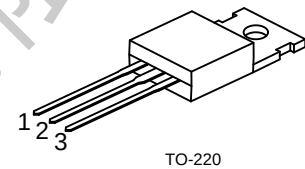
Order Number	Package
HS3710T	TO-220



Features

VDS	100V
RDS(on)Max.	17mΩ
ID	65A

- Super high density cell design for extremely low RDS(ON)
- Exceptional on-resistance and maximum DC current capability



Maximum Ratings (Tc = 25°C unless otherwise noted*)

Parameter		Symbol	Ratings	Units
Drain-Source Voltage		VDSS	100	V
Gate-Source Voltage		VGSS	± 20	V
Continuous Drain Current	Tc=25℃	ID	65	A
	Tc=70℃		55	A
Pulsed Drain Current		IDM	250	A
Power Dissipation	Tc=25℃	PD	200	W
	Tc=70℃		140	
Operating Junction and Storage Temperature Range		TJ,Tstg	-55~+175	℃

* Calculated continuous current based on maximum allowable junction temperature. Package limitation current is 80A.

Thermal Characteristics

Parameter	Symbol	Ratings	Units
Thermal resistance, case to sink typ.	RthCS	0.5	°C/W
Thermal resistance junction to case.	RthJC	0.75	°C/W
Thermal resistance junction to ambient.	RthJA	62.5	°C/W

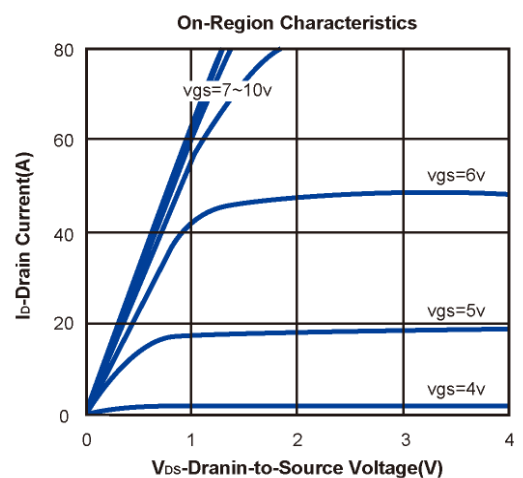
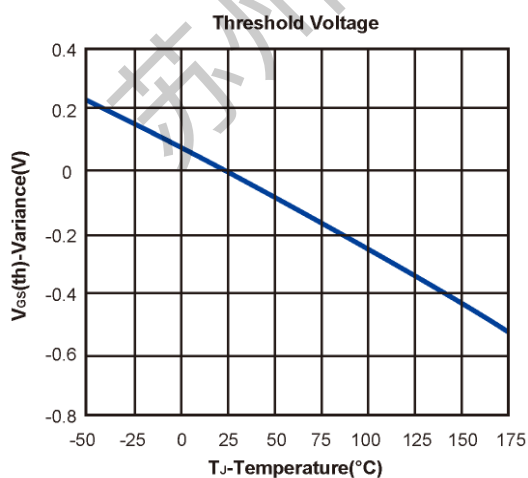
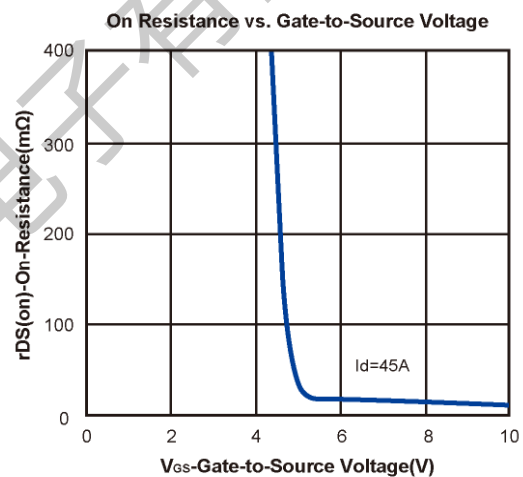
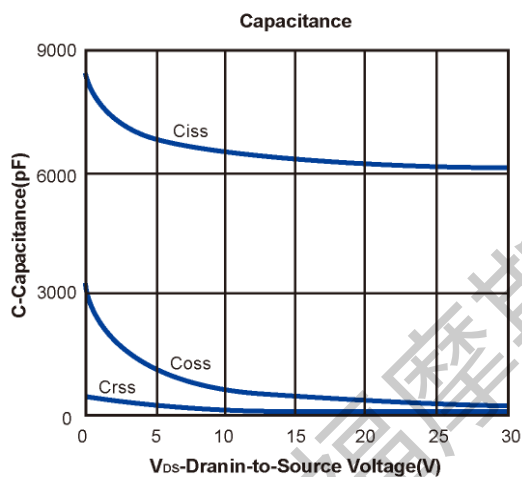
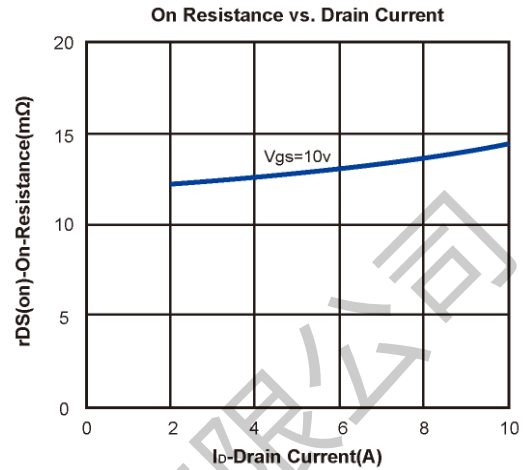
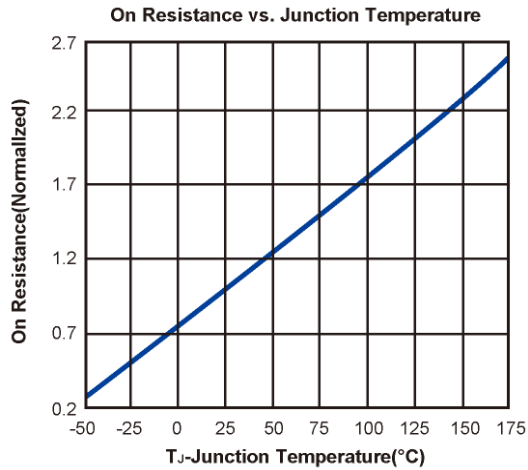
Electrical characteristics (TA =25℃ Unless Otherwise Specified)

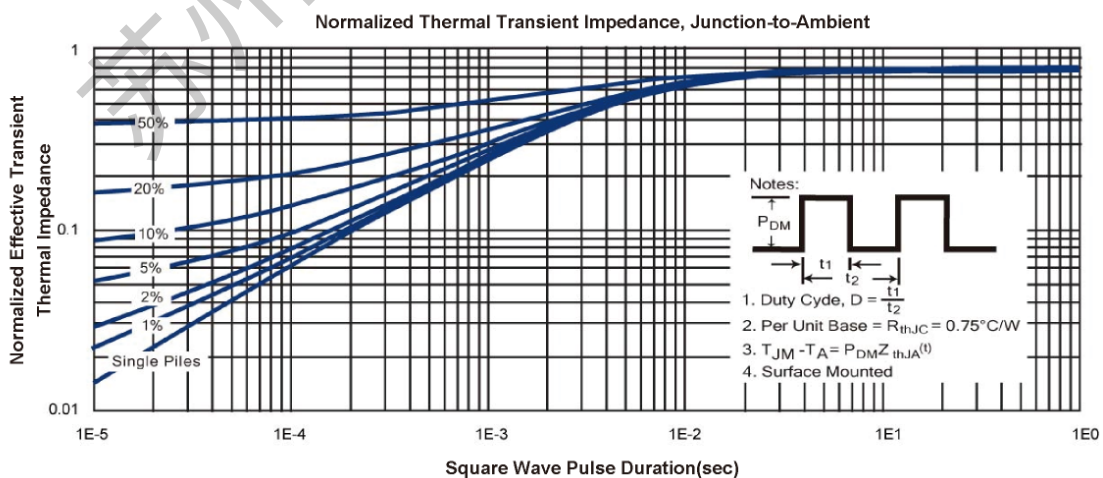
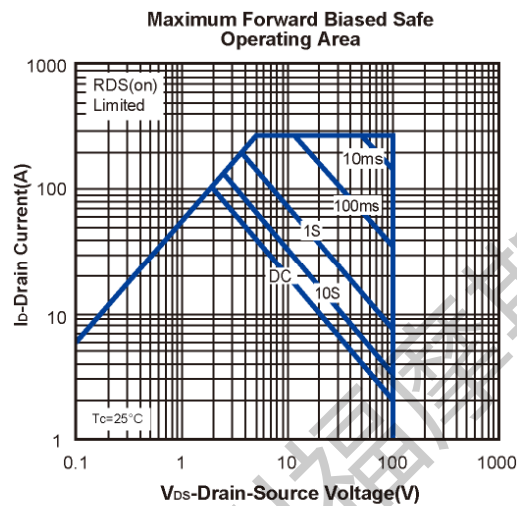
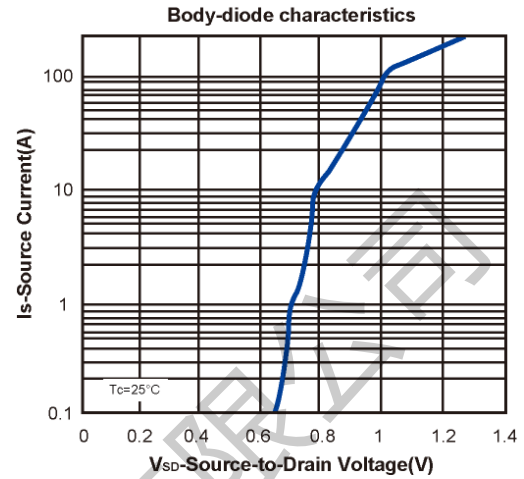
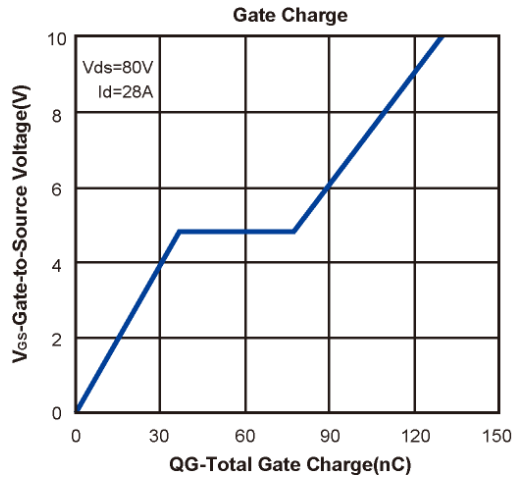
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
STATIC						
BVDSS	Drain-Source Breakdown Voltage	VGS=0V, ID=250μA	60	—	—	V
VGS(th)	Gate Threshold Voltage	VDS=VGS, ID=250μA	2	—	4	V
IGSS	Gate-Body Leakage	VDS=0V, VGS=±20V	—	—	±100	nA
IDSS	Zero Gate Voltage Drain Current	VDS=100V, VGS=0V	—	—	1	μA
RDS(ON)	Drain-Source On-Resistance	VGS=10V, ID=45A	—	14	17	mΩ
VSD	Diode Forward Voltage	IS=45A, VGS=0V	—	—	1.2	V
DYNAMIC						
Qg	Total Gate Charge	VDD=80V, VGS=4.5V, ID=28A	—	34.4	—	nC
Qgs	Gate-Source Charge		—	35.8	—	
Qgd	Gate-Drain Charge		—	48.7	—	
Ciss	Input Capacitance	VDS=15V, VGS=0V, f=1MHz	—	6280	—	pF
Coss	Output Capacitance		—	438	—	
Crss	Reverse Transfer Capacitance		—	110	—	
td(on)	Turn-On Delay Time	VGS =10V, RL=30Ω VDD=28V, RG=6.8Ω ID=66A	—	45	—	ns
tr	Turn-On Rise Time		—	77	—	
td(off)	Turn-Off Delay Time		—	100	—	
tf	Turn-Off Fall Time		—	15.5	—	

Notes :a. Pulse test:pulse width 300 us,duty cycle 2% ,Guaranteed by design,not subject to production testing.

b. HOMSEMI reserves the right to improve product design,functions and reliability without notice.

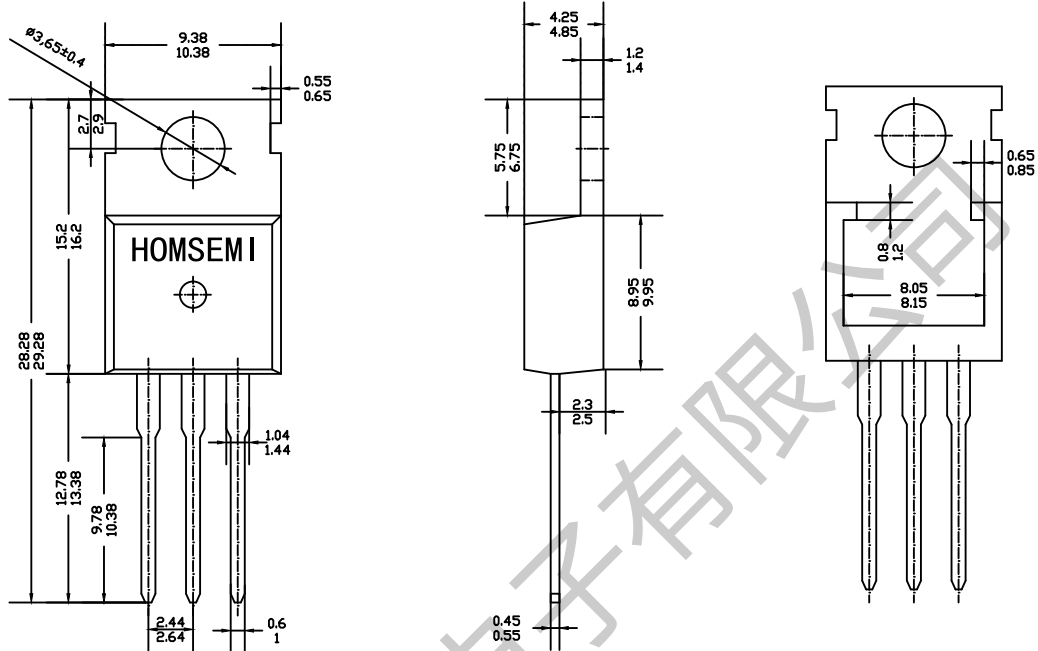
Typical Characteristics (T_J =25°C Noted)





Mechanical Dimensions

Unit: mm



Making

