

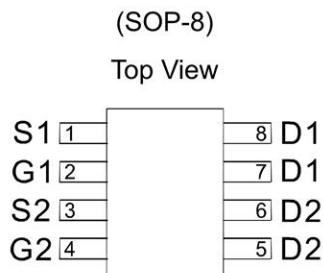
GENERAL FEATURES

- $R_{DS(ON)} \leq 16 \text{ m}\Omega @ V_{GS}=10\text{V}$
- $R_{DS(ON)} \leq 20 \text{ m}\Omega @ V_{GS}=4.5\text{V}$
- Super high density cell design for extremely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability

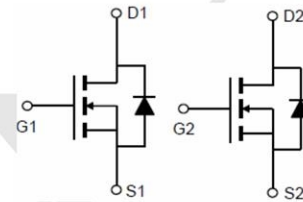
Application

- Power Management in Note book
- Portable Equipment
- Battery Powered System
- DC/DC Converter
- Load Switch
- DSC
- LCD Display inverter

Package and Pin Configuration

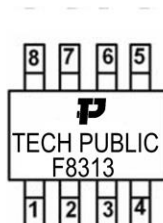


Circuit diagram



Schematic diagram

Marking:



Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Maximum Ratings	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	$T_A=25^\circ\text{C}$	10
		$T_A=70^\circ\text{C}$	8.3
Pulsed Drain Current	I_{DM}	38	A
Maximum Power Dissipation	P_D	$T_A=25^\circ\text{C}$	2
		$T_A=70^\circ\text{C}$	1.2
Operating Junction Temperature	T_J	-55 to 150	$^\circ\text{C}$
Thermal Resistance-Junction to Ambient*	$R_{\theta JA}$	52.0	$^\circ\text{C}/\text{W}$

Electrical Characteristics (TA=25°C Unless Otherwise Specified)

Symbol	Parameter	Limit	Min	Typ	Max	Unit
STATIC						
BVDSS	Drain-Source Breakdown Voltage	VGS=0V, ID=250 μA	30			V
VGS(th)	Gate Threshold Voltage	VDS=VGS, ID=250 μA	1		3	V
IGSS	Gate Leakage Current	VDS=0V, VGS=±20V			±100	nA
IDSS	Zero Gate Voltage Drain Current	VDS=24V, VGS=0V			1	μA
RDS(ON)	Drain-Source On-Resistance ^a	VGS=10V, ID= 10A		11.2	16	mΩ
		VGS=4.5V, ID= 8A		15.6	20	
VSD	Diode Forward Voltage	IS=8.2A, VGS=0V		0.8	1.2	V
DYNAMIC						
Rg	Gate Resistance	f=1MHz		1		Ω
Qg	Total Gate Charge	VDS=10V, VGS=4.5V, ID=8.2A		9.5		nC
Qgs	Post-Vth Gate-Source Charge			3.6		
Qgd	Gate-Drain Charge			3.4		
Ciss	Input Capacitance	VDS=25V, VGS=0V, f=1MHz		841		pF
Coss	Output Capacitance			250		
Crss	Reverse Transfer Capacitance			71		
td(on)	Turn-On Delay Time	VDD=15V, RL =15Ω ID=1A, VGEN=10V, RG=6Ω		14		ns
tr	Turn-On Rise Time			12		
td(off)	Turn-Off Delay Time			43		
tf	Turn-Off Fall Time			4		

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

b. Matsuki Electric/ Force mos reserves the right to improve product design, functions and reliability without notice



TECH PUBLIC

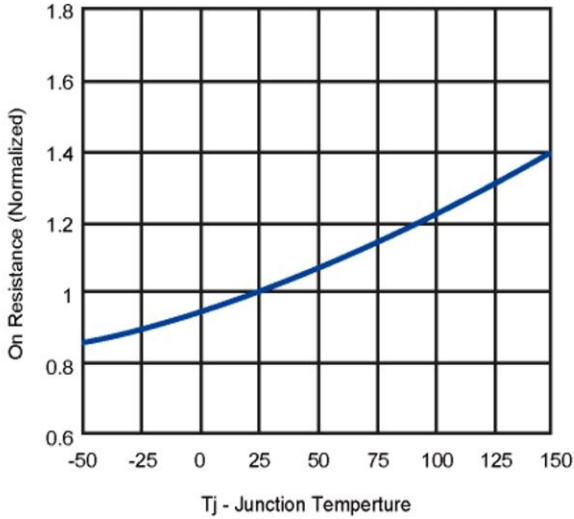
台丹电子

IRF8313TRPBF

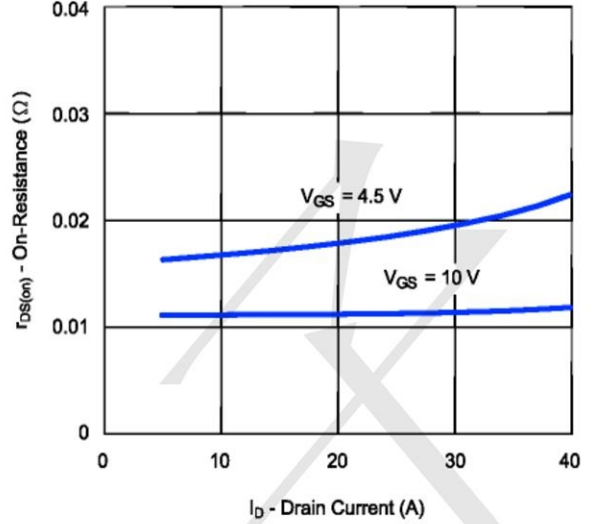
Dual N-Channel Enhancement Mode Power MOSFET

www.sot23.com.tw

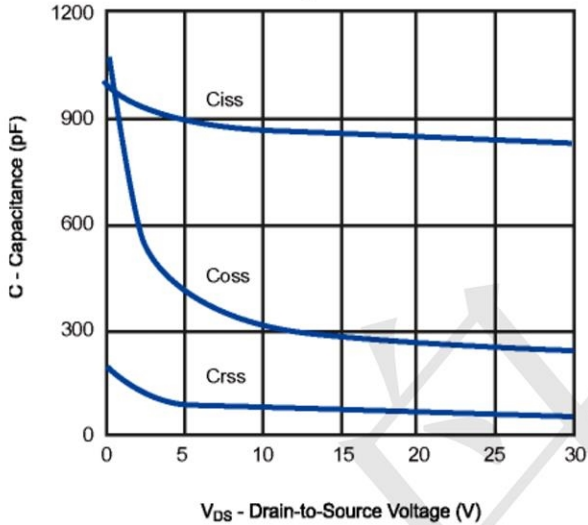
On Resistance vs. Junction Temperature



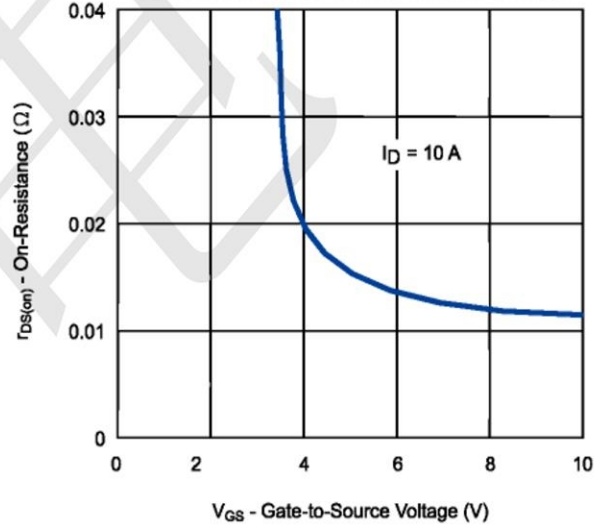
On-Resistance vs. Drain Current



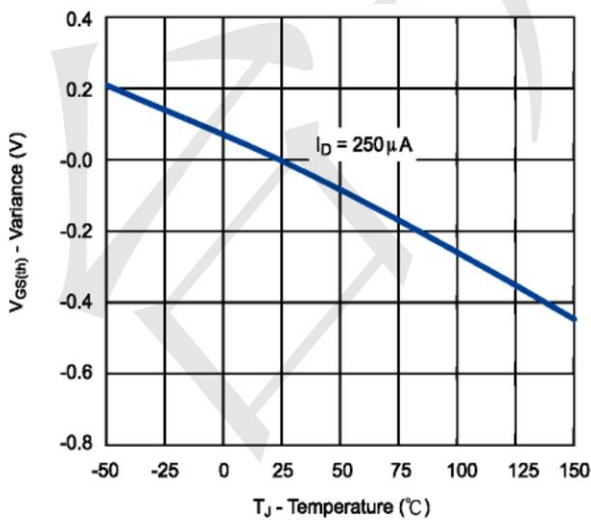
Capacitance



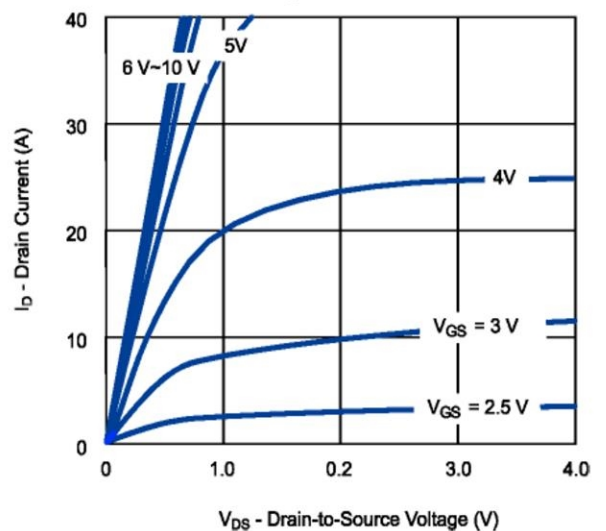
On-Resistance vs. Gate-to-Source Voltage



Threshold Voltage



On-Region Characteristics





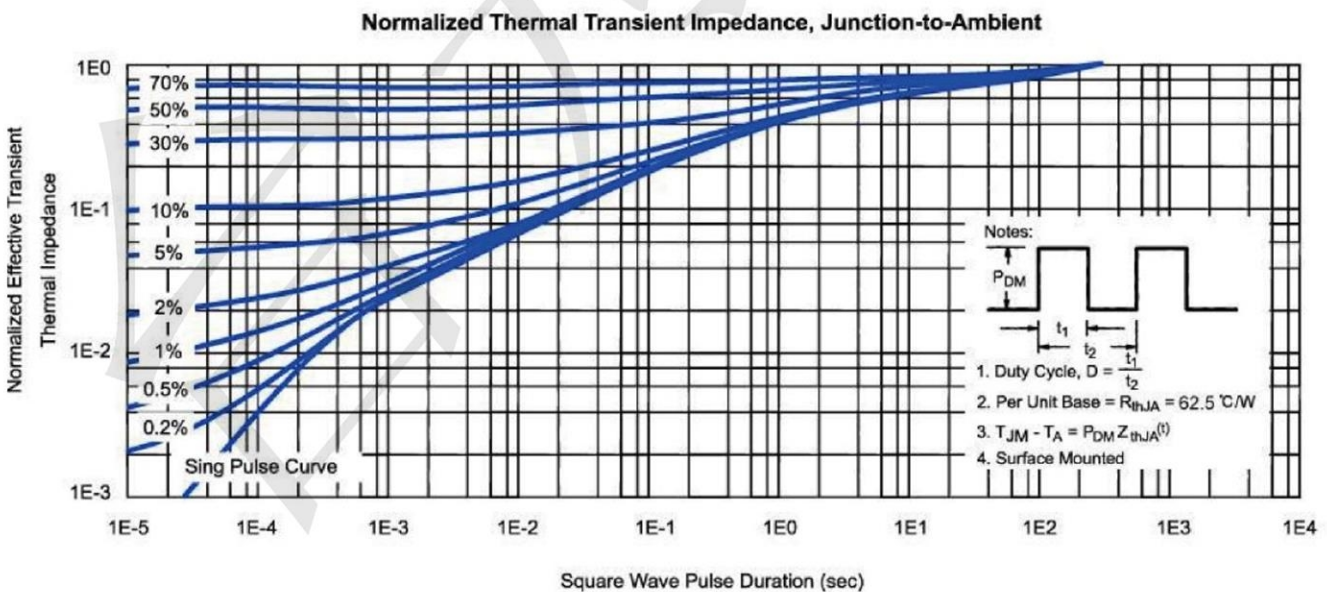
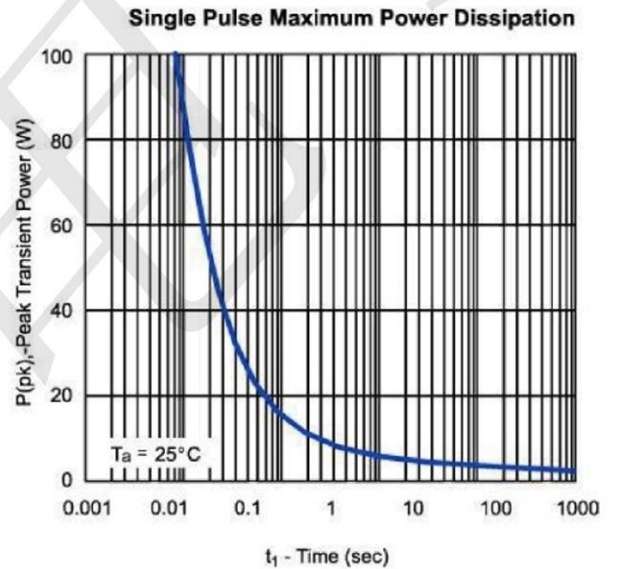
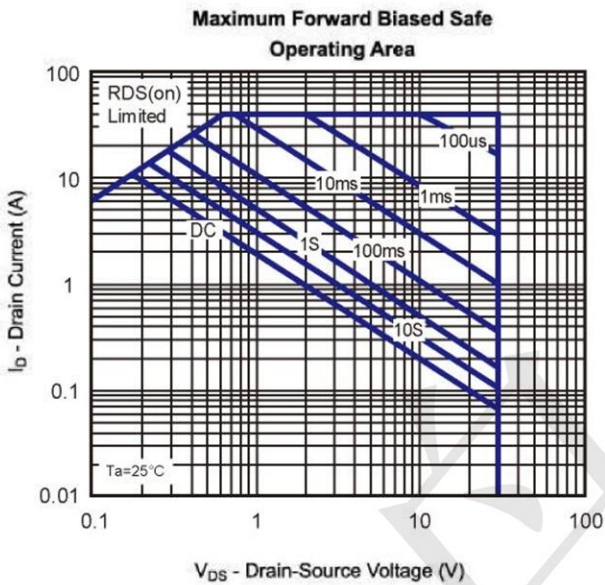
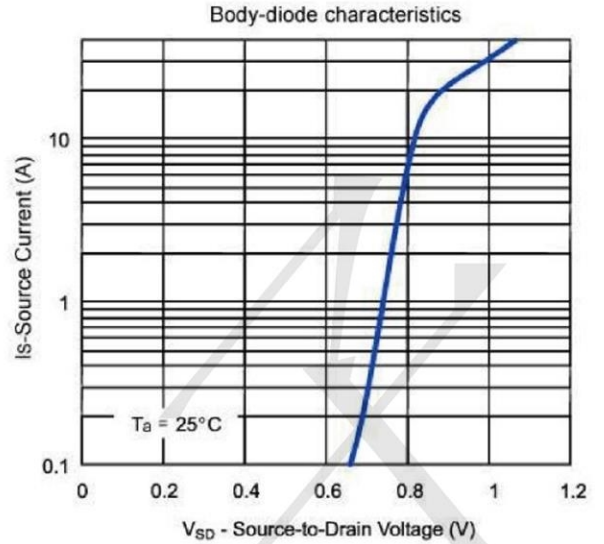
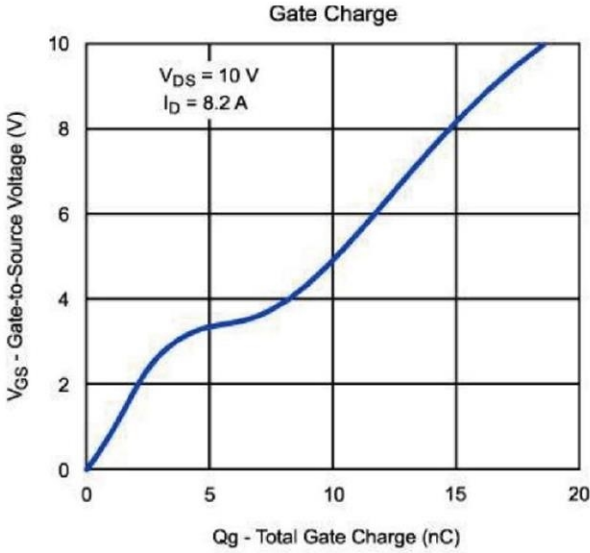
TECH PUBLIC

台丹电子

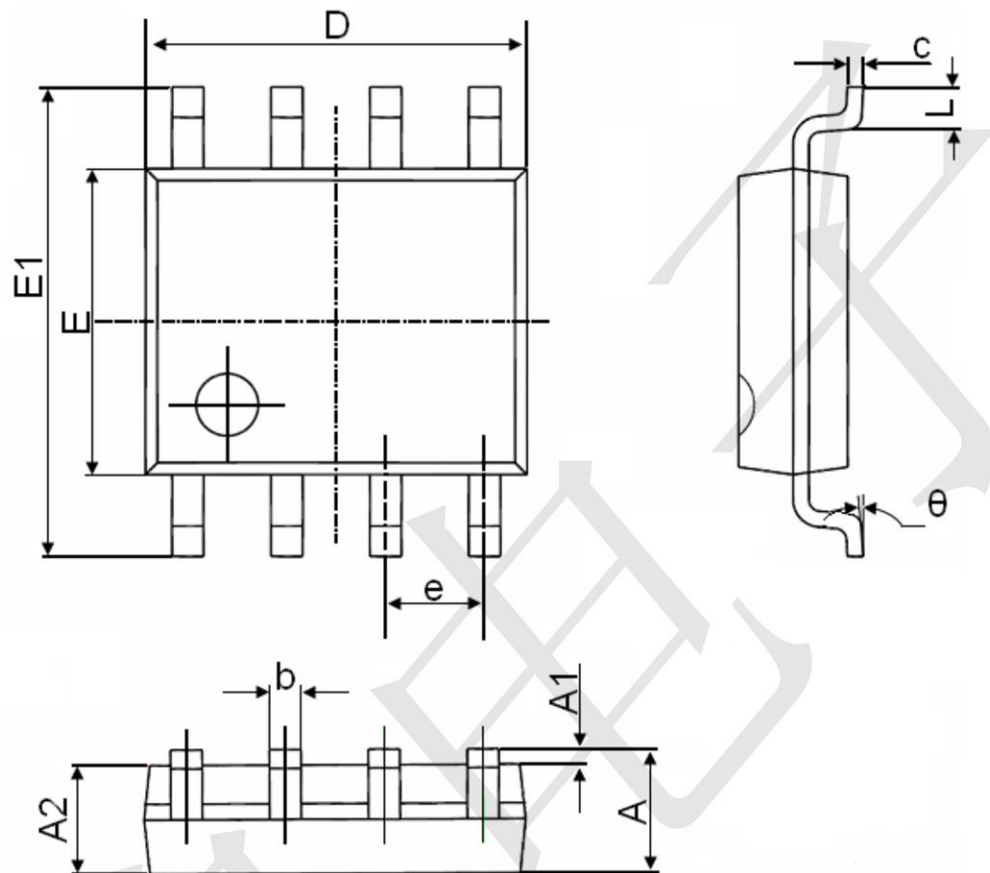
IRF8313TRPBF

Dual N-Channel Enhancement Mode Power MOSFET

www.sot23.com.tw



SOP-8 Package Information



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°

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [MOSFET](#) category:

Click to view products by [TECH PUBLIC](#) manufacturer:

Other Similar products are found below :

[614233C](#) [648584F](#) [MCH3443-TL-E](#) [MCH6422-TL-E](#) [NTNS3A92PZT5G](#) [IRFD120](#) [IRFF430](#) [JANTX2N5237](#) [2N7000](#) [AOD464](#)
[2SK2267\(Q\)](#) [2SK2545\(Q,T\)](#) [405094E](#) [423220D](#) [MIC4420CM-TR](#) [VN1206L](#) [614234A](#) [715780A](#) [SSM6J414TU,LF\(T](#) [751625C](#)
[IPS70R2K0CEAKMA1](#) [BSF024N03LT3 G](#) [PSMN4R2-30MLD](#) [TK31J60W5,S1VQ\(O](#) [2SK2614\(TE16L1,Q\)](#) [DMN1017UCP3-7](#)
[EFC2J004NUZTDG](#) [FCAB21350L1](#) [P85W28HP2F-7071](#) [DMN1053UCP4-7](#) [NTE2384](#) [NTE2969](#) [NTE6400A](#) [DMC2700UDMQ-7](#)
[DMN2080UCB4-7](#) [DMN61D9UWQ-13](#) [US6M2GTR](#) [DMN31D5UDJ-7](#) [SSM6P54TU,LF](#) [DMP22D4UFO-7B](#) [IPS60R3K4CEAKMA1](#)
[DMN1006UCA6-7](#) [DMN16M9UCA6-7](#) [STF5N65M6](#) [IRF40H233XTMA1](#) [IPSA70R950CEAKMA1](#) [IPSA70R2K0CEAKMA1](#) [STU5N65M6](#)
[C3M0021120D](#) [DMN6022SSD-13](#)